## Religious Groups and Distance Education in Nigeria

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### **Abstract**

In Nigeria today, some of the most expensive educational institutions, from primary to tertiary, belong to religious groups. When examined against the background of the 19<sup>th</sup> century missionary enterprise, it is obvious that while the missionary institutions were giving to the masses, the institutions today are taking from them. This paper aims at showing how the religious institutions in Nigeria can offer quality and accessible education through open and distance learning (ODL). Adopting an inter-disciplinary approach, and drawing lessons from historical methodologies and content analysis of relevant materials, the paper discusses: contributions of religion to education before and now; dynamics and benefits of open and distance learning; legal framework for ODL in Nigeria, and making recommendations on how religious institutions can participate in open and distance education.

**Keywords:** Religion, Social Justice, Distance Education, Nigeria

#### Introduction

The General Assembly of the United Nations proclaimed February 20 annually as "World Day of Social Justice" in 2007, which started in 2009 recognizing the need to promote efforts to tackle issues such as poverty, exclusion and unemployment (UN 2007).UNESCO reports that the World Day of Social Justice is an opportunity to highlight the role of Education for Sustainable Development in building a world based on principles of justice, equity, participation and transparency. So education for sustainable development means learning to establish social justice in the world. Social justice is based on equal rights for all peoples and the ideal that benefits from economic and social progress are for all people without discrimination. Education for sustainable development is one

way to achieve these objectives; it is the catalyst for a new responsible citizenship. It offers the possibility of reducing poverty, increasing access to employment that provides a living wage, preventing conflict between social groups, and building tolerance, acceptance and peace (UNESCO 2012). In order to achieve these, different governments made a commitment to create a framework of action for social justice at different levels of domain pledging to promote the equitable distribution of income and greater access to resources through equity and equality and opportunity for all.

The key player in providing resources, coordination and regulations for education in pursuit of social justice is the Government. But Government alone cannot fund and coordinate education. Religious bodies and private sectors have important roles to play to make education accessible and affordable to all. So, this paper addresses the topic: "Religious groups and Distance Education in Nigeria."

Problem Statement, Purpose, and Methodology

In Nigeria today, some of the most expensive educational institutions, from primary to tertiary, belong to religious groups. When examined against the background of the 19<sup>th</sup> century missionary enterprise, it is obvious that while the missionary institutions were giving to the masses, the institutions today are taking from them. The National Universities Commission's (NUC) statistics show, as at January 2013, that Nigeria has (128) Universities, including 40 federal universities, 38 state universities, and 50 private universities (NUC 2013). Most of these private universities are owned by religious bodies. Each year over a million candidates apply for admission into tertiary institutions. Less than 50 percent are admitted, coupled with the fact that among the few that are admitted, some could not enrol because of cost related issues. A number of media posts highlight the expensive nature of private universities, including those owned by religious organizations, namely: they charge exorbitant fees; not affordable to the poor; too elitist; even members who donated toward their establishments cannot afford to send their children there; does not show much concern for the poor masses as the mission schools of yesteryears did; etc (Christianity Today 2012; The Guardian Nigeria 2013). On the other hand, the operators of these religious institutions counter that quality education is not cheap anywhere in the world; that Fees charged by mission schools are moderate compared to the quality they offer; most mission schools are better equipped than public schools, and students outperform their public

counterparts on tests; mission schools also offer flexible payments and scholarships to orphans, which conveys their Christian values; and that former mission schools were able to offer free education because some people were paying for it from abroad (Christianity Today 2012). In the light of the above, this paper would like to address the following questions:

- Is it possible to provide easily accessible, cost-effective and qualitative education in Nigeria?
- What are the dynamics and benefits of open and distance education in enhancing access to quality education in Nigeria?
- How can religious bodies in Nigeria offer quality and accessible education through open and distance learning?

The purpose of this paper is to show how the religious institutions in Nigeria can offer quality and accessible education through the gains of open and distance learning (ODL). It argues that religious groups in Nigeria today can surpass the contributions of the 19<sup>th</sup> century missionary enterprise through the adoption of ODL, in making quality education accessible to the restricted and excluded masses, who are their adherents. Adopting an inter-disciplinary approach, and drawing lessons from historical methodologies and content analysis of relevant materials, the paper discusses: contributions of religion to education before and now; dynamics and benefits of open and distance learning; legal framework for ODL in Nigeria, and making recommendations on how religious institutions can participate in open and distance education.

One of the guiding principles for establishing the National Open University of Nigeria (NOUN) is the understanding that access to education is the right of every citizen and not a privilege for a selected few. Thus, the Federal Government of Nigeria established NOUN as a veritable avenue for providing accessible, cost-effective, and qualitative education to every Nigerian citizen (Ambe-Uva 49). According to Peter Okebukola (2013:2), "NOUN was to serve as the lead agency for capacity building using open and distance learning and for bridging human resource and skill gaps in disciplines where the conventional universities lacked strength." The growing enrolments in the distance learning programmes of NOUN in the few years of operation, coupled with the large number of graduands at the second convocation ceremony of the Institution in January 2013, where over 7000 (seven thousand) graduands received certificates, diplomas and degrees from over 30 (thirty) programmes, are clear indicators of the great potential of NOUN

in offering more opportunities for qualitative university education, to the teeming masses of Nigerians, if well resourced, coordinated and properly regulated (NOUN 2013; Okebukola 2013). There is no gainsaying of the fact that open and distance education coupled with other regular modes of education can contribute to economic development, community health and social welfare.

Access to quality education is the right of every citizen and not a privilege for a selected few. So, this paper focuses on principles of fairness, equity, participation and transparency for every citizen in accessing literacy and employment for improved living. Distance education is a label for panoply of systems which include open and distance education, e-learning, flexible learning, distributed learning and a host of other brands of non-conventional education (Okebukola 21). Religious groups here refer to associations. institutions organizations, whose philosophies and programmes are shaped by the tenets of their faith in a supernatural being. Nigeria is a multi-religious and multi-racial country where most citizens claim to be associated with Christianity, Islam or traditional religions. Apart from the mission oriented schools in the colonial era which were funded by foreign agencies, most religious institutions in Nigeria today are funded internally by either Christians or Muslims.

## Contributions of Religion to Education Before and Now

This section evaluates the three types of educational traditions in Nigeria prior to 19<sup>th</sup> Century up to 1970; Government takeover and return of mission schools from 1970, and the emergence of Private Universities funded by religious groups in Nigeria.

Three Educational Traditions in Nigeria

Nigeria has experienced three types of educational traditions namely, indigenous, Islamic and Western. Prior to the advent of colonialism, and the 19<sup>th</sup> Century missionary enterprise, there existed a type of education which was not orchestrated by any outside agency. That was indigenous education, the earliest type of education, which was offered in the preliterate era, within the community, by community members who possessed specialised skills or abilities in various fields of human endeavour. Here, boys were mentored by their fathers, or other masters in learning various vocations and etiquette like farming, trading, craftwork, fishing, cattle rearing, wine tapping, traditional medicine and black-smiting, etc. Whilegirls were expected to stay back at home to

learn domestic and other chores such as cooking, sweeping, weeding the farmlands, hair weaving, decorations of the body, dye production; and the like from their mothers(Mkpa 2013). As it were, this type of education, which was traditional in nature (from ATR) was accessible to everyone, and the case of unemployment was absent, unless if the person in question was lazy and did not follow the societal tradition of the time. The second type of educational tradition, Islamic learning had been established in Nigeria before the arrival of the Western type of education in the 19<sup>th</sup>Century (Fafunwa 1974:53). In the early 14<sup>th</sup>Century, Islam was brought into Hausa land by traders and scholars who came from Wangarawa to Kano in the reign of Ali Yaji (1349 - 1385). Before long, most of what later became the Northern Nigeria was islamised. Islamic education brought along with it Arabic learning, since Arabic is the language of the Quran and was therefore perceived as having great spiritual value. Arabic and Islam were taught simultaneously in primary schools. As a result of the political and social influence which Islam and Quranic learning conferred on those who possessed it, many rulers employed Islamic scholars as administrators (Mkpa 2013). The efforts of Uthman Dan Fodio helped to revive, spread and consolidate Islamic studies and extend access to education also to women. Islamic studies also penetrated the Western parts of Nigeria following this time. Support for Islamic education came from some Northern Nigerian leaders. especially Abdullahi Bayero (Emir of Kano), who, on his return from Mecca in 1934, introduced new ideas by building a Law School for training teachers of Islamic subjects and Arabic as well as English and Arithmetic (Mkpa 2013). Islamic education was more or less informal in nature under the tutelage of mallams or ulama, scholars who specialized in religious learning and teaching. By 1914, it was estimated that about 25,000 Quranic schools were already in existence all over Northern Nigeria.

Western-style education was the third educational tradition thatcame to Nigeria championed by the Christian missionaries in the mid-nineteenth century. The development of this western type of education in Nigeria preceded the political unity of the nation in 1914 and subsequent independence in 1960. Wesleyan Methodist missionaries arrived in 1842, establishing a mission and a school, and in 1878, established first boys' school at Lagos and a girls' school by 1895. The Church Missionary Society (CMS) established schools at Abeokuta, Badagry, Lagos and Ibadan from 1846-1949. The Holy Ghost Fathers (The Catholic Mission)

open schools at Onitsha on the east of the Niger and convent schools at Abeokuta in 1886-1892. The United Free Church of Scotland (CSM – Presbyterian) founded the famous Hope Waddell Training Institute at Calabar in 1895 in the south east. They also had an extensive educational system that covered most of the middle and lower Cross River valley in the 1900s. The Presbyterians were consistent in believing that "concerns about equality of opportunity and about the rights of individuals, not least the rights of the child, are fully consistent with the ideals that are at the heart of Christianity" (Taylor 1996: 236). In 1904 the Sudan United Mission (SUM) operated alongBenue River in the north, the longest tributary of the Niger. They focussed on evangelism, using education and medicine as handmaids of the gospel. The different Christian missions used school as an organ of religious instruction, character formation, skill acquisition and initiation into the three basic elements of reading, writing and arithmetic. Among other crucial roles of the missionary enterprise were the establishment of mission hospitals and leprosy settlements; agriculture and farm settlements and providing worthwhile training and jobs for Africans in Nigeria. The missionary team included white missionaries, a medical man, an ordained educationalist and a horticulturalist (African Missions 2010).

Takeover of Mission Schools and Emergence of Private Universities

After the Nigerian Civil War in 1970, the federal government took over and nationalised all schools that were originally owned by the missions in an attempt to defuse tribalism. Recall, since 19th century, mission schools have been there as the purveyor of Western education that was offered free in most cases. Many of today's Nigerian leaders benefitted from the free education offered by the missionaries. Most people argue that the sudden takeover of the schools by the government brought about the collapse of education in schools that were hitherto reputed for high standards; morality and character building also collapsed (The Guardian Nigeria 2013). Given the central importance of formal education, it soon became "the largest social programme of all governments of the federation," absorbing as much as 40 percent of the budgets of some state governments. Thus, by 1984-85 more than 13 millionpupils attended almost 35,000 public primary schools. Universal primary education became official policy for the federation in the 1970s. The goal has not been reached despite pressure throughout the 1980s to do so (OnlineNigeria).

This period witnessed both an explosion in population of people scrambling for education, with its attendant paucity of infrastructure. Economic hardship among teaching staff produced engagement in non academic moonlighting activities. Added to these difficulties were such factors as the lack of books and materials, no incentive for research and writing, the use of outdated notes and materials, and the deficiency of replacement laboratory equipment. Other problems included incessant strike actions by teachers and mass exodus of lecturers to greener pastures abroad. By 1990 the crisis in education was such that it was predicted that by the end of the decade, there would be insufficient personnel to run essential services of the country (OnlineNigeria). The failure of government to adequately fund education and improve the condition of the schools created burden. So there was a mounting pressure by interest groups on the States to return the schools to their owners. Apparently, the state governments, which appeared overburdened, found the demand for handover of schools a ready escape route from the statutory responsibility of catering for the schools. Thus, by handing over hundreds of schools to their owners, they have lesser burden to carry on the education front. They thought this would be a solution but it created new problems.

Establishment of private universities received legal backing in 1999. By 31 December 2010, there were 41 private universitiesmostly owned by religious organizations, both Christian and Moslem. One of them was owned by an ethnic organization, while five belonged to private individuals (Okafor 2011:389). The high fees charged by private universities actually made it a private institution for the rich only, thereby excluding the poor and the less privileged; pointing to funding problems as the reason for that.

So this paper is constrained to ask if it is possible to provide easily accessible, cost-effective and qualitative education in Nigeria. Let us consider the dynamics and benefits of Open and distance learning as a veritable tool in ensuring access to quality education.

# Dynamics, Benefits and Policy for Open and Distance Learning in Nigeria

This section discusses the operations of ODL; outlines the benefits of ODL; and evaluates the policies for ODL for an educational revolution in Nigeria.

Open learning and distance education refer to approaches to learning that focus on freeing learners from constraints of time and place while offering flexible learning opportunities (COL 2000, Okebukola 2012). Attempting a distinction between open learning and distance education, Alaezi (2005) defined open learning as educational patterns, approaches and strategiesthat permit people tolearn with no barriers in respect of time, space, sex, age, and previouseducational background - no entry qualification, no age limit, no biases against any gender, race, tribe, state of origin, quota system etc. So, Open learning is shown as a new stage along the path of socio-educational revolution. While distance education is seen as the type of education that reaches a broader students'audience and which better addresses students' needs, save money, and more importantly uses the principles of modern learning pedagogy (Ajadi 2009).UNESCO (2002) defined open and distance learning as an approach that focuses on openingaccess to education and training provision, freeing learners from the constraints of time and place, offering flexible learning opportunities to individuals and/or group of learners.UNISA (2008) presents Open distance learning as a multidimensional concept aimed at bridging the time, geographical, economic, social, educational and communication distance between student and institution, student and academics, student and courseware and student and peers. Open distance learning focuses on removing barriers to access flexibility of learning provision, student-centredness, supporting students and constructing learning programmes with the expectation that students can succeed.

An overview of different definitions above on Open and Distance learning present the following:

- Open access
- Lifelong learning
- Flexible teaching and learning
- Professional development
- Affordable
- Beyond geographical limitation
- Technologically driven
- Equity and equality

Some of the benefits of Open and Distance learning are summarized below.

Open Access. It offers educational opportunities to individuals who were hitherto excluded from education because of entry requirements, funding, race, gender, location and age. It places the ball on the court of the learner, left with the only option to learn and grow. The restrictions posed by entrance examination in pursuit of higher education are avoided here, and the student has the freedom of pursuing a preferred course or programme.

Economic Growth. Employers of labour gainbecause it offers theirworkers opportunities of upgrading their knowledge and skill in different areas of assignments thereby increasing productivity and income. Workers gain too because ODL offers them lifelong learning and possible promotion at workplace. Above all, the government will gain because when more people are educated, they are empowered economically, and poverty level is reduced.

No geographical limitation. Learners are not constrained to appear in a particular location since they can learn from where they are. Teachers too have freedom to disseminate instructional materials through the help of modern technology.

Affordable. Since the learning is not necessarily on-campus, students do not grapple with the cost of accommodation, transportation and other logistics. Tuition or registration fees are highly subsidized by Government; example: the NOUN experience.

*Employment*. Declining quality of education, training and skill acquisition is an impediment to the employability of the labour force in Nigeria. According to Okebukola (2013: 39), "Open education has huge capabilities to deliver entrepreneurial education at formal and non-formal settings for boosting employment."

Technology driven. ODL thrives with technology in breaking boundaries and reaching the distance learners. Hence, in National OpenUniversity of Nigeria, the ongoing developments in information and communication technology (ICT) has created library without walls giving access to thousands of learners across the nation and beyond (Igwe 2008).

The National Universities Commission (NUC) is the statutory quality assurance agency in the Nigerian university system, to streamline the practice of distance learning by stipulating a code of good practice in line with global delivery of ODL. The agency opened a department of Open and Distance Education on 26<sup>th</sup> July 2011 to tackle the perennial challenge of inadequate access in the Nigerian University system through the promotion and enthronement of best practices in the delivery of

quality education using the instrument of the ODL mode. In order to achieve this, NUC issued specific guidelines or policies for the operation of ODL programs in Nigeria summarized in fiveheadings: entry requirements; nature of ODL; delivery; general guidelines and accreditation (NUC 2011).

Entry Requirements. According to this provision, "all entrants into degree programmes offered by ODL must meet the minimum national requirements for university registration." This implies that ODL delivery system in Nigeria is still limited in access.

*Nature of ODL*. Study materials were expected to be interactive enough, supplemented with CDROM: DVD: or USB sticks; ebooks, simulations, assessment, etc.

Delivery of ODL. This policy placed much responsibility on the part of ODL providers, ranging from provision of conducivestudy centres for proper coordination, access to ICT, assessment method, effective feedbacks, and collaboration between providers.

General Guidelines.ODL providers were expected to follow the guidelines necessary for best practice in ODL, covering the following aspects: Philosophy, objectives, admissions, curriculum, pedagogy, staffing, academic learner support, administration, and efficiency, etc.

Accreditation. Performance indicators concentrating on specific approved programmes as yardstick for evaluation were tabulated. To earn Full accreditation status, a programme must score at least 70% in each of the core areas provided.

## How Religious Institutions Can Participate in Quality Education through ODL

To ensure and protect the equal rights of all learners gaining access to education, we must appreciate the fact that government alone cannot fund and coordinate education. The law establishing private universities in Nigeria is a clear indication that government needs help. Similarly, the adoption of Public Private Partnership (PPP) by the federal government another indicator (Ward & Ariguzo, 2006).

Any religious institution operating in Nigeria should recognize the rich and diverse religious heritage of the country and should adopt a cooperative model that accepts therich heritage and the possibility of

creative interaction between schools and faith, protecting the youth from religious discrimination or coercion. Learning about religion in these schools should be different from the religious instruction and religious nurture provided by the home, family, and religious community. Religious institutions should explore ways of avoiding or curbing religious fanaticism or extremism. They should aim at creating an integrated and informed community that affirms unity in diversity.

19th century mission schools stood for social integration, provision of literacy, medical care and agriculture to the average person in the society with little or no contribution from the beneficiaries. But today's private universities owned by religious bodies are reputed for their high fees. The reasons are obvious. They do not receive subsidies from either state or federal governments; do not benefit from the Educational Trust Fund (ETF) to which Nigerian companies contribute 2% of their profits; and do not have well-established alumni, who historically make substantial donations to private universities. They rely on the private capital of the proprietor and student fees(Okafor2011:392). In the process, only the affluent can afford to attend, and the poor are excluded. Adoption of ODL by religious institutions could bridge the gap between social integration and the exclusive tendencies of traditional face to face educational delivery. The idea of using education as a money minting machine or for profiteering cannot help mass production of human resources and national development.

Most Nigerians claim to belong to one of the two largest religions in Nigeria: Christianity or Islam. If the private institutions owned by these religionsare really committed to the welfare of their teeming population or adherents, they should consider the ODL option of literacy and empowerment; the present traditional face to face method of education delivery is highly restrictive and discriminatory.

Religious institutions can understudy or collaborate with Government institutions that have embraced and implemented ODL like National Open University of Nigeria. Among other things to learn would include: Organization and Management of ODL; Operational Structures/Issues in ODL; Course Planning and Development; Course Delivery and Learner Support; Quality, Research, and Evaluation; etc (COL & ADB 1999).

#### Conclusion

This study has shown that the provision of easily accessible, costeffective and qualitative education in Nigeria is possible through the

adoption of Open and distance learning programme. In this way social integration and justice would be promoted. Tertiary institutions owned by religious groups in Nigeria occupy a very large percentage of all the tertiary institutions in the country. Their adoption of ODL would facilitate a mass production of human resources and national development. The paper suggested some of the ways they could adopt ODL including understudy and collaboration with government institutions that have embraced and implemented ODL, like National Open University of Nigeria. Taking a cue from a historical analysis of the contributions of mission schools in the 19<sup>th</sup> century, this paper concludes that religious groups in Nigeria today can surpass the contributions of the 19th century missionary enterprise through the adoption of ODL, in making quality education accessible to the restricted and excluded masses, who are their adherents.

#### References

- African Missions (2010), "African Missions, Education and the Road to Independence: The SUM in Nigeria, the Cameroons, Chad, Sudan and Other African Territories," <a href="http://www.ampltd.co.uk/collections\_az/sum-1/description.aspx">http://www.ampltd.co.uk/collections\_az/sum-1/description.aspx</a> accessed: 25/1/13.
- Ajadi, Timothy O. (2009), "Organization and Management of Open and DistanceEducation in Nigeria: A Case of National OpenUniversity of Nigeria (Noun)", European Journal of Scientific Research, Vol.38, No.4,577-582.
- Alaezi. O. A (2005): National Open University plan: Enhancing highereducation in Nigeriathrough open and distance learning (ODL) delivery system, Lagos: NOUN.
- Ambe-Uva, Terhemba N. (2012), "The right to education for internally displaced persons in Nigeria through Open and Distance Learning", in *WAJOFEL* vol.1, no.2, 48-55.
- Christianity Today (2012), "Fury Over Mission School Fees", <a href="http://www.christianitytoday.com/ct/2012/june/nigeria-fury-over-fees.html">http://www.christianitytoday.com/ct/2012/june/nigeria-fury-over-fees.html</a> Accessed: 25/1/13.
- COL & ADB (1999), "An Overview of Open and Distance Learning. The Trainer's Kit, Commonwealth of Learning and Asian Development Bank.

- COL (2000), "An Introduction to Open and Distance Learning", <a href="http://www.col.org/ODLIntro/introODL.htm">http://www.col.org/ODLIntro/introODL.htm</a> accessed 28/1/13 Accessed: 28/1/13.
- Fafunwa, A. B. (1974): History of Nigerian Education, London: George Alien & Unwin Ltd.
- Harnischfeger, Johannes (2006), "Islamisation and Ethnic Conversion in Nigeria", *Anthropos*, Bd. 101, H. 1, pp. 37-53.
- Igwe,Ukoha O. (2008), "Libraries without Walls and Open and Distance Learning in Africa: The Nigerian Experience", http://www.noun.edu.ng/ Accessed: 26/1/13.
- Kalu, O. U (1980): The History of Christianity in West Africa; London: Longman.
- Mkpa, M. A. (2013), "Overview of Educational Development: Pre-Colonial to Present Day", http://www.Onlinenigeria.com/education/ - Accessed: 27/1/13.
- NOUN (2013): List of Graduands, 2<sup>nd</sup> Convocation Brochure, Lagos: NOUN.
- NUC (2011), "Guidelines for Open and Distance Learning in Nigerian Universities", http://www.nuc.edu.ng/ Accessed: 28/1/13.
- NUC (2013), "List of Nigerian Universities and Years Founded." <a href="http://www.nuc.edu.ng/pages/universities.asp">http://www.nuc.edu.ng/pages/universities.asp</a> Accessed: 24/1/13.
- Okafor, Nduka (2011), "One and a Half Centuries of the Aspiration Towards, and the Development of, Private Universities in Nigeria, 1868 2010: A Historical Account", *European Journal of Educational Studies* 3(2), 375-398.
- Okebukola, Peter A. (2013): Open Education and the March to 20:2020; Can Nigeria Make it? NOUN 2<sup>nd</sup> Convocation Lecture, Lagos: NOUN.
- Online Nigeria (2013), "Education in Nigeria: A Historical Perspective", http://www.Onlinenigeria.com/education/ Accessed: 27/1/13.
- Taylor, William H. (1996): Mission to Educate: A History of the Educational Work of the Scottish Presbyterian Mission in East Nigeria, 1846-196, Leiden: E. J. Brill.
- The Guardian Nigeria (15 January 2013). "Mission Schools Before and Now."
  - http://www.ngrguardiannews.com/index.php?option=com\_conte nt&view=article&id=110468:onyekakeyah-mission-schools-

- <u>before-and-now&catid=38:columnists&Itemid=615</u> Accessed: 25/1/13.
- UN (2007), "World Day of Social Justice 20 February", <a href="http://www.un.org/en/events/socialjusticeday/">http://www.un.org/en/events/socialjusticeday/</a> Accessed: 24/1/13.
- UNESCO (2012), "World Day of Social Justice" <a href="http://www.unesco.org/new/en/.../wold\_day\_of\_social\_justice/">http://www.unesco.org/new/en/.../wold\_day\_of\_social\_justice/</a> Accessed: 23/1/13.
- UNISA (2008), "Open Distance Learning Policy, University of South Africa",
  - http://cm.unisa.ac.za/contents/departments/tuition\_policies/docs/ OpenDistancelearning Council3Oct08.pdf - Accessed: 26/1/13.
- Ward, Rupert R. A. and Ariguzo, Godwin (2006), "History of Public-Private Partnerships in Nigerian Universities", <a href="http://ssrn.com/abstract=1494113">http://ssrn.com/abstract=1494113</a> Accessed: 25/1/13