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WOMEN'S WAR IN NIGERIA, 1929**G. Anulata Devi**Assistant Professor, Department of Political Science, Manipur College, Imphal, Manipur

ABSTRACT

The study is an attempt is made to understand the trials and tribulations faced by the women under colonial regimes in Nigeria. Under the colonial system of indirect rule women of Nigeria were facing increasing exclusion from the decision making role in certain aspects of civic life which they enjoyed over the years. Not only had this they were also hard hit by the new economic policy unleashed by the colonial authorities of both the countries. Women of African countries had a tradition of giving a collective response as a whole whenever they felt that the powers that be were found to act against the issues concerning the state and society. The historical experiences of Nigeria clearly show the important role played by the women in the realm of economy of their respective countries and they were quick to react and respond to the policies initiated by the colonial regimes and its possible repercussions on societies. The study finds that in waging the wars, the women were not talking of their rights and interests, but they were talking of the issues which concerns and affects the society at large. Their collective voice was raised against injustices unleashed by the forces of colonialism.

Keywords: Nigeria, Igbo, Colonial rule, sitting, Women's war

INTRODUCTION

Though women are often described as second sex (Beauvoir, 1953), like other social groups they are found to have been frequently involved in collective actions equipped with their agenda, leadership, ideologies and organisation in order to have their dignified place in all aspects of life. Women as individuals and as a group are among the most discriminated sections of every society. In spite of the development of women's liberation, gender equality, etc., often are denied political, economic and cultural rights even today. There are still cases of denial of rights to inherit property along with her male siblings in many societies though inheritance laws speak otherwise. These situations are clearly seen in the less developed societies which had experienced colonial rule. Historical experiences also show that religion, polity and society have been so organized as to make their position vulnerable to any discriminatory trends in society. However, in spite of facing many obstacles in their progression as social group women are found taking a leading role in organizing many a movement to safeguard the common interests or rights of a given society against the unjust rule of the authority. Hence, an attempt is made to highlight some aspects of Women's War or agitation witnessed in Africa.

The most important impact of colonialism in Africa was the collapse of traditional authority. It dismantled the traditional check and balance that regulated political system of the pre colonial-independent era of the continent. Whereas traditional leaders answered to the political norms and customs of their individual societies or ethnic groups during the pre-colonial years, the creation of colonial state meant that the ultimate source of power became the European administrators. African women in comparison with their male counterpart were severely affected during the colonial rule. In general, the role and status of women deteriorated in the colonial period and continued to decline even after independence. In pre-colonial times African women often had effective control of economic resources. As their ethnic groups were brought into the gamut of cash economy, they were disadvantaged in money or land and they lost their traditional rights. They were either excluded from areas of production to which they had previously been involved and relegated to the domestic sphere, or the productive activities in which they continued to engage were altered and devalued in a new context. Such an unpleasant situation was strongly faced by the Nigerian women who in 1929 launched a movement known as Igbo Women's War in African history.

Igbo women, as a distinct group gained European scholars attention before their male counterparts. Among the pioneering studies on Igbo women, mention may be made of Ross (1965) and Green (1964) may be mentioned. However, these works were not necessarily motivated by a need to understand and study Igbo women in their own right. On a closer study it was found that the British colonial government commissioned the studies of Leith Ross and Green after the 1929 Women's War. The fact that these studies served government purposes is a major limitation on their value. The studies of Ross and Green were works of static anthropology and it, therefore, ignored the dynamics of change or the historical perspectives in their analyses. There was also the fact that those early works were by Europeans who possess very limited knowledge of the complexities of Igbo culture and language. However, inspite of the stated drawbacks and limitations, European scholars laid the foundation for the study of Igbo women. Recently many African and some western scholars such as Ekejiuba (1967), Mba (1992), Afigbo (1991), Ifeka-Moller (1975), Allen (1972, 1976), Okonjo (1976), Otenberg (1959),

Martin (1988) and Chuku (1999) have written on Igbo women. But most of these works except for Martin (1984) who has written a book on gender relation among the Nga tribe are found in the form of journal articles and chapters in books.

As witnessed in most of the pre-literate and semi-literate societies, writing was not widespread in pre-colonial sub-Saharan Africa. Thus scholars working on this period have very little information in the form of written and archival sources, and therefore, have to rely heavily on oral and ethnographic traditions. Oral tradition, as explained by Alagoa (1966) and Vansina (1961) refers to all orally transmitted testimonies about the past, especially those passed from generation to generation as well as a people's folklore. Oral tradition has often been criticised for its weaknesses such as the inherent problem of relying on human memory, question of chronology, distortion, individual biases and group prejudices. Historians, however, now accepted that all sources, including written ones, have their pitfalls, and that the viability of oral tradition is improved by applying to them the same critical yardsticks historians apply to all other sources. In spite of the weakness, oral tradition remain one of the major sources of reconstructing the life of Igbo women and their movements against the colonial government when the information collected is shifted and corroborated with available archival materials and other secondary sources.

Information on the Igbo women can be extracted from the accounts of early European visitors to the region. These are mostly accounts of explorers, missionaries, traders and colonial administrators. The most useful examples are Leonard (1898), Adams (1832), Crow (1830), Lander and Landers (1832), Laird and Oldfield (1837) and W.B. Baikie (1966). In addition to the above are works of such ethnographers and anthropologists as Basden (1982), Meek (1957), Forde and Jones (1950) Ottenberg (1959) and R.N. Henderson (1972).

One encounters three major problems in conducting research on Nigerian history in general and women in particular. They are - i) non availability of pre-20th century archival materials; ii) tracking down relevant materials itself is problematic and tedious; and iii) there are very few files which contain some information on Igbo women, especially in regard to the protest demonstrations being carried out by the womenfolk in the 1920s and 1930s. It is reported that a large number of archival files on Igbo women are lost during the Biafra-Nigeria war (Chuku, 2001). However, in spite of these limitations and problems an attempt is made to reconstruct the Nigerian women's war of 1929 based on some available unpublished materials, published articles in journals and magazines, newspaper publications, etc.

For a proper understanding of the women's war that took place in Nigeria in 1929 it is considered necessary to highlight the impact of colonial rule on Nigeria in general and Igbos in particular as the Igbo women took a leading part in the women's war.

FACTORS THAT LED TO WOMEN'S WAR

Rise against colonialism

The introduction of indirect rule by the colonial government caused a great deal of problems in eastern Nigeria. With the introduction of indirect system of administration, the colonial government appointed warrant chiefs. The appointment of warrant chiefs "increased the power of the chiefs far more than tradition allowed, thus promoting abuse of power and tyranny. Unpopular kings and chiefs could not be removed by their people, since they owed their appointments and income to the government (Falola, 1979). This system of administration had a tremendous impact on the Igbo political system, which had been more of a direct democracy. The appointment of local staff to support the native authorities such as messengers, court clerks, kings' and chiefs' followers also caused a lot of problems for both the colonial government and the Igbo people. This situation has been aptly described by Falola (1979) in the following words:

"These people interpreted their role as that of power wielders, rather than that of public servants. They demanded respect, collected bribes and offered services as favours. The most notorious were the court clerks, who recorded and translated proceedings from local languages to English in ways that influenced justices in favour of whichever party had greased their palms." This behaviour had a great and real impact on the Igbo people; it caused them to mistrust the colonial administration which was regarded as collaboration with the warrant chiefs and their staff.

The use of warrant chiefs by the colonial administration in the collection of taxes in Igbo communities destroyed the relationship that the chiefs had previously had with their people and caused a lot of protests in most part of Igbo land, resulting in lasting bitterness among the people (Falola, 1979). The appointment of the warrant chiefs by the colonial government in Igbo society also caused these 'chiefs' to identify with the colonial administration and turn against their people, when they were fighting for independence of the country. This had a tremendous impact on Igbo society in particular, and the Nigeria society as a whole, since it was felt that some

of these chiefs should have joined their fellow Nigerians in their fight for independence rather than collaborating with the colonial administration against their own people (Falola, 1979).

The introduction of portable coins and notes of various denominations to replace the indigenous cowries affected the mode of worship of traditional religion in some parts of Igboland such as Asaba, where the former traditional currencies (cowries) had been used for worship in the town (Falola, 1979). With the establishment of colonial administration in eastern Nigeria, certain modern social amenities such as electricity and pipe-water were introduced in many cities. This was one of the several reasons why many young people from Igboland left the villages for urban areas which had a tremendous impact on the rural areas (Falola, 1979).

Further, with the introduction of good roads, which came with the colonial administration, rural-urban migration became widespread in Igboland. Many of the young Igbo people now travelled to urban centres in search of good jobs in commercial institutions and colonial officers. Some of those who migrated to the cities became self-employed in local crafts as tailors, barbers and repairmen. This had a major effect on rural areas, as the local traditional crafts their attraction to young people (Falola, 1979).

The introduction of a new kind of native court in Igboland, and the colonial administration's use of warrant chiefs, who had no legal training, instead of western trained lawyers, affected the means of administering justice in these courts (Falola, 1979). The introduction of native courts was also believed to be destructive to the traditional Igbo marriage system, as the introduction of native courts was accompanied by an enormous increase in the divorce rate in the Igbo society. Cases that according to traditional ideas should have been settled at home were taken to the colonial court, which had a great effect on traditional Igbo marriages and increased the rate of divorce in the society.

With the establishment of the colonial government in Igboland, the Igbo indigenous language was affected. The previous effort by the missionaries to encourage the study of the Igbo language was neglected by the colonial government. This had a tremendous effect on the study of the Igbo language, when compared to other Nigerian languages such as Yoruba and Hausa (Afigbo, 1981).

The western system of education, which came with colonialism to the Igbo society, was destructive to the indigenous Igbo education. Modern education in Igbo society was the offshoot of missionary evangelisation. Before the advent of colonialism, indigenous Igbo education was seen as the acquisition of traditional behaviour and social values in the society. It was a process that started in childhood. It was the social and cultural inculcation of the psychological and cultural heritage in the society. But with the arrival of colonialism and western education, the Igbo indigenous system of education was affected as many of the young people were no longer interested in the indigenous system of education, some of the traditional Igbo values were lost.

INDIRECT RULE AND POLITICAL EXCLUSION OF WOMEN

The indirect rule system of administration is generally regarded as the major device through which the colonies were suppressed, and particularly through which the political activities of women were arrested. As noted by Ade Ajayi, its 'modus operandi' was the maintenance of status quo of the Nigerian tradition, geared towards the sustenance of the people's political and religious allegiance to a particular class, and its attendant effect of discouraging social and political awareness, and consequently, changes. The basic idea of indirect rule was to preserve as many of the traditional institutions as possible, and to use them as agents of colonial rule, to maintain stability by discouraging social change and encourage just enough economic development to produce revenue to run the administration (Ade, 1984-85).

Overt encouragement of the minimisation of women's political power was not the only way of changing the role that Igbo women had played in society. Rather, the colonial, out of sheer ignorance of the Igbo culture, excluded women from the political sphere. Even though women had not been completely integrated into Nigerian politics, there was a contrast between the status of the Nigerian women before and after the advent of the Europeans. Before the Europeans arrival, women not only participated in government in some communities but also controlled and led the entire population into a war. Later, the indirect system of administration operated to the advantage of the male members in the already male-dominated societies. In southern Nigeria, women under colonialism were not given any political offices. The introduction of indirect rule by the British affected the traditional political role of women in Igbo society. The only monarch recognised by the British administration was the male monarch, who worked hand in hand with the appointed warrant chiefs. Their female counterparts were relegated to the background, and the political role of these female rulers was eliminated. In some of the Igbo villages and towns, where the women had their own political organisations, authoritative political administration was put in the hands of men. Although some of the women-chaired organisations existed during the colonial era, only a few of them concluded a treaty with the British. Even

though there were some female participants in the early treaties and negotiations with the colonial government, some of whom were high-ranking chiefs, some of them were presented as the paramount chief of any kingdom (Mba,1982), and their inclusion in the signing of a treaty was seen as just a formality, not being of political importance. They sat and listened and made no contributions.

The introduction of native administration into the diffuse authority of Igbo society by the colonial government had two major consequences. In the first place the appointment of warrant chiefs implied that women were not represented among the leaders. Mohammad (1985) observed that “The British did not take into consideration that the appointment of one man to represent the village was an abrogation of Igbo concepts. And under the arbitrary rule of the warrant chiefs women suffered most. In the second place; the informal but stable balance between men’s and women’s authority was upset. ‘The British tried to introduce ideas of “native administration” into this system of diffuse authority, fluid and informal leadership, shared rights of enforcement and a more or less stable balance of male and female power (Mohammad,1985).

The unification of the northern and southern parts of Nigeria in 1914 by the British made Britain a colonial master to Nigeria. In this case for an effective administration to take place, the colonial administration had to introduce a uniform type of administrative system in Nigeria. If they had realised that the north, east and west of Nigeria had different administrative systems, the colonial government would either have encountered administrative difficulties or failed in its missions in Nigeria. Since it was not ready to accept failure, a unified system of administration was necessary. Analysing the second view, the colonial government’s introduction of the native administration established a stable administrative system, in which both men and women were to enjoy a balanced political system, but the men turned around and misused the political power given to them to repress many people, mostly women. For instance, women were not allowed to have any political post during the colonial era. Although the fact that the exclusive political power was taken over by the men might have been seen as an administrative mistake already during the colonial era, the colonial administration did not exclusively alter the power balance as a means of establishing a political subjugation of Nigerian women in general, and Igbo women in particular. Even though one can argue that implicitly it was the British ideology to exclude women from politics, the Igbo men who were entrusted with political power carried out the political suppression and manipulation of Igbo women. Although the Igbo men who had administrative power worked for the colonial government, they used their political power for their personal interest, because they did not care about the affairs of their people but only about their own personal interest, and this affected the women.

What one can argue in the case of the colonial administration in Igboland is that if the colonial government has had any interest in political quality in Igboland, it should have acted against the abuse of power by the warrant chiefs. Such an intervention, however, could have resulted in confrontations between colonial administrators and Igbo men. The colonial government could not risk a confrontation of this kind, and hence it sided with the authoritative, native male rulers the warrant chiefs. The effects of the failure of the colonial government to make some political interventions against the male dominated political power can be seen on the Nigerian political scene even to-day, as politics is predominantly men’s affairs. Besides, the feminist ideology had not yet affected the European political or cultural ideology by the time of the British introduction of colonial administration. From the above discussions it could be surmised that both the Igbo men (warrant chiefs) and the colonial administration played an important role in marginalising the Igbo women from the political scene.

In view of this the colonial government’s introduction of the indirect rule system of administration did not benefit the Nigerian women in general or the Igbo women in particular. The indirect rule took away the political power of women as no government responsibility was assigned to them. This naturally damaged the self-awareness and social prestige that the women had hitherto enjoyed. Moreover, cultural ideas about women’s submission to men were propounded to legalise the political ostracism of women.

As already indicated, there was no central government in Igboland, and political power in the society was diffuse. There were no specialised bodies or offices, in which legitimate power was vested, and no person, regardless of his status or ritual position had the authority to issue commands that others had an obligation to obey. In line with this diffusion of authority, the right to enforce decisions was also diffuse; there was no ‘state’ that held a monopoly of legitimate force to protect one’s interest or to make sure that a group decision was carried out which was considered legitimate for individuals and groups. Consequently, the colonial administration found it indispensable to create specialised political institutions, which commanded authority and monopolised force. In doing so, they took into account, eventually, those Igbo political institutions that were dominated by men (Allen, 1975). It meant that introduction of indirect rule system into a diffuse Igbo society exclusively empowered the men, especially the warrant chiefs. The question of women’s appointments to responsible political offices by the colonial administration was impracticable.

Although the introduction of indirect rule in Igboland was meant to provide Britain with a cheap system of administration that made use of native leaders, it was oppressive to Igbo women, as it categorically favoured the interests of men over women. One of the reasons for this outcome is that the colonial officials were of course not aware of how the “dual sex system” worked. They just assumed that women would make their voices heard in any mixed political assembly, as in England. But their assumption was proved wrong when women from different parts of south-eastern Nigeria rose against the colonial regime in 1929 and engaged in a series of direct confrontation.

COLONIALISM AND ECONOMIC EXPLOITATION OF THE PEOPLE

To realise their economic ambitions, the colonialists replaced the traditional barter system with the system of monetary exchange. Cocoa and palm products, mostly palm oil and kernel were the main items of export. While prices of export goods plummeted to meet the economic needs of colonial Britain in the economic depression of the 1920s, those of imported goods sky rocketed for the same purpose. Inflation led to the closure of small shops, retrenchment and unemployment. Nigerian urban workers went home to swell the number of oil palm farmers and increase the production of palm oil and kernel.

Increase in production was not matched with increase in income. The price paid by the colonialists for a four-gallon tin of palm oil fell from thirteen shillings to seven shillings four pence in 1928 and then to about six shillings in 1929. At the same time, the middle men exploited the people by paying them only about six pence for the said quantity. On the other hand, the people paid exorbitantly for imported goods. The cost of gin rose from eleven shillings to about one pound twelve shillings (Akpan and Ekpo, 1988). The price of all imported goods such as kerosene, cloth, and tobacco, generally rose in the same proportion. It was in the midst of these frustrating economic exploitations and the alleged corruption of warrant chiefs that the government introduced taxation in the south eastern region.

TAXATION

By 1918, taxation was introduced in the western province of Nigeria. In the south eastern region, the people were accustomed to a system of contributions in times of need, communal labour and levies, collectively agreed upon by the people. Then came the colonialist taxation in 1928, imposed on the people without them having any say in the matter. This taxation was preceded by a census in 1927 to ascertain the number of taxable men. Personal properties were also counted for evaluation.

Then rumours made their rounds that women were also going to be taxed, fueled by the fact that there were plans to census both women and their personal belongings. Women remembered that a census preceded the taxing of men. Mr. E Falk, a resident of Calabar province admitted that he had circulated letters to District Officers calling for information; “leading to and upto a final calculation of the lump sum which the units of taxation could be reasonably expected to pay on a basis of a 2.5% of the whole income earning population including women” (Nwabara, 1977).

Meanwhile an event that was to trigger the women’s war took place in neighbouring Bende District of Owerri province. In September, 1929, John Cook, Acting District Officer of Bende directed his warrant chiefs to supply detailed information about taxable males in their villages, such as their wives, children and domestic animals. He added that the census was not meant for taxing women. Afigbo rightly commented that “the mere mention of women in this context gave rise to the rumour that the government in fact had a plan to tax women (Afigbo, 1972). Chief Ananaba Umnala in Oloko, Owerri Province later announced to his village that the government had asked for the enumeration of women for the purpose of taxing the women. He reminded them of how the taxation of men in 1928 was preceded by a census the year before. The women mobilised themselves, held discussions in their various groups and organisations, passed on the news through women’s groups in Owerri and Calabar provinces, and then awaited the day government would actually started counting.

On November 23, 1929 under immense pressure from the colonial government, Chief Okugo, one of the warrant chiefs asked a man called Mark Omerruwa, to start the census. The latter began counting in one household, where one of the wives named Nwanyeruwa confronted the enumerator, asking him if his mother had been counted at his birth. “Was your mother counted? Why do you want me to pay tax? Don’t you know that women do not pay tax in traditional Igbo society?” Was the terse question put up by Nwanyeruwa to the census officials (Aba Commission of Enquiry). A scuffle ensued and Nwanyeruwa was injured. She ran to the women who coincidentally were meeting in the village market close to the Niger Delta Pastorate Mission, Oloko and announced the long awaited bad news that the counting of women for the purpose of taxing them had actually started.

THE WAR

The news that women were being counted for taxation spread quickly. The women sent palm leaves to other women in neighbouring villages in Owerri and Calabar provinces - the traditional way of inviting people to an emergency meeting. The mobilised women confronted Omeruwa cursed him and then march on to the office of the District Officer at Bende, where they made him dismiss chief Okungo from the office of warrant chief. He was also thrown into jail, accused of spreading the explosive of women being counted for taxation.

Having emboldened by their initial success, the womenfolk were determined to proceed further. On the 13th of December the women proceeded to Aba, where a scheduled peaceful anti government demonstration turned violent as a frightened British medical doctor accidentally hit some women with his car. The warring women smashed his car. The news and protest reached spread nearby Azumini and then the following day, to Utu Elim, an Annang village, which was an important colonial trading and administrative centre in the then Calabar province.

According to Nwabara, it was in Utu Etim Ekpo that women in the Calabar province first confronted the government regarding the proposed taxing of women. Early on December 14th, the Utu Etim Ekpo women's drum summoned a meeting. It was a war drum. The women who beat this drum was one of the wives of the warrant chief, Akpan Umo (Mba,1982). Her relation to the chief is significant, as it helps to illustrate the courage, independence and determination of the women anti-colonial crusaders. Answering the call, women assembled in the village square and were unanimous in their decision to act upon both the news of the census for taxation and the protest in Aba and Azumini, by attacking the colonial establishment in Utu Etim Ekpo, Ika, Abak and Ikot Ekpene of Annangland; Itu, Ikonono, Okopedi and Egwanga in Ibibioland. The Anang Ibibio have referred to this militant event as Ekong Iban, women's war. In the Igbo areas the event is known as Ogu Umuwanyị (Women's war). On the fateful day of December 14th, the Utu Etim Ekpo women in their war outfit, their faces painted with charcoal and white clay, heads decorated with fern, and waists covered with short wrapper and fern, chanted their war songs. Brandishing their weapons of pestles, cassava sticks, young palm leaves and short sticks, they danced towards the Native court, the perceived centre and symbol of colonialism and economic exploitation. In a testimony given by Nwoto of Okpuala she testified that, "our grievances are that the land is changed, we are all dying. Our object in coming here is because we heard last year has never been hard before. That is why we sang about. We sang so that you might ask us what our grievances were. We had cause for grievances before the taxation was introduced. It is a long time since the chiefs and the people who know book and the Nkwere people have been oppressing us. We said that we thought that white man came to bring peace to the land. We were annoyed because men are born by women and they marry woman. All the towns were opened so that people might enjoy peace and you now suggest that tax should be paid We meet you here so that we might settle matters. We are telling you that we have been oppressed. If this oppression continues, how are we to praise you" (Aba Commission of Enquiry). Then the womenfolk burnt down the colonial government buildings, the Native Courts, staff quarters and the colonial commercial buildings of the Nigerian Products Company Limited.

Filling the air with victory songs the women danced as many more joined them. That same day some of the women went to Ika Native Court a few kilometres away and burnt it down. By the evening of the same day, the protesting women reached Abak some twentyfive kilometres away. At Abak there was confrontation with government soldiers at the market and post office area. After battling with the women and killing three, the soldiers moved on to Utu Etim Ekpo where there were camping facilities. On 15th December, on seeing the soldiers, the women in Utu Etim Ekpo regrouped and moved towards the court. Captain J.P.James, the Abak District Officer, ordered that the women be shot. There was no formal warning. The women who were approaching the native court from three different directions were fired at from a distance of some one hundred yards. Undaunted the warring women kept advancing, chanting war songs, dancing and waving their symbolic weapons. There was more shooting and the women were hit from sixty yards away. At the final count eighteen women were recorded killed and nineteen injured. These figures do not include those who were rushed home for treatment. But the colonial troops were not yet done. They went on a rampage, looting property, setting homes ablaze and burning to ashes even corpses of the women killed at the shooting.

Meanwhile on the same day, some 2000 women assembled in Ikot Ekpene about twenty kilometres from Abak, but were persuaded to disperse. Some ten kilometres away in Itu about 1000 women carried the war to Itu government still where the D.O. directed medical doctors of the Leprosy Hospital to release the patients of the dreaded disease of Leprosy to stop advancing women. At the sight of the two hundred lepers, the women retreated. They regrouped in the following day, demanding that the medical doctors who released the lepers be punished by the D.O. Since the latter refused to comply, the enraged women retaliated by attaching the

neighbouring colonial commercial establishments at Okopedi some five kilometres away. Laden canoes were sunk, and cocoa palm oil and kernel were destroyed in the river. In Ntan, some women destroyed a colonial trading factory. While all these were going on in Itu District, ominous clouds gathered in Eguanga, Opobo District, now Ikot Abasi. On the 15th of December 1929, Lt. J.H. Hill led an army platoon to Eguanga where D.O.whiteman, has arrived as part of his tour of the District. The D.O. met with the women, sued for peace and arranged for another round of talks to be held the following day at his office at Eguanga Beach. As the women were preparing for the scheduled meeting, their warring colleagues in Ikono, some twentyfour kilometres away held demonstrations at the Ikono Native Court. They broke into the prisons and released three prisoners.

About 2000 women converged near the D.O. office on 16th December for the pre-arranged meeting. Others were still arriving on canoes. Six women leaders representing six groups from Andoni, Bonny, Kwa(Ibibio), Nkoro(Igbo) Ogoni and Opobo town met with the D.O. and demanded that the government excluded women from taxation, and to stop counting personal property and arresting of prostitutes. Other requests included the cancellation of rent payment for the women's market shed, abolish fees for licences to stage women's dances, and the dismissal of Mack Pepple Saja as Chief of Opobo Town. Finally the women insisted that government should give them six copies of the typed acceptance of these demands.

The gathering of the women who were waiting outside the meeting place became impatient and started beating the fence of the District Office with sticks. Mistaking it for a demolition attempt, Lieutenant Hill ordered his men to shoot. There was pandemonium. The soldiers fired at short range, killing and maiming the unarmed women several women jumped into the river from the cliff and died. Others who tried to get away by boat drowned. It was the greatest tragedy in the entire women's war. It also marked the end of the war.

It is difficult to give the accurate number of casualties in the women's war. Akpan and Ekpo recorded that 18 women were killed and 19 wounded in Utu Etim Ekpo (Akpan and Ekpo, 1988). Afigbo (1972) estimated 32 killed and 31 wounded in Eguanga in Opobo District while Akpan and Ekpo (1988) talked about 37 death in Opobo. Afigbo (1972) reported that 3 women were killed in Abak. Mba(1982), on the other hand reported that two died in Aba. However, records shows that the total number of women killed during the women's war were 52 (Birrel Gray Commission). Whatever figure one accepts, it is obvious that women paid dearly in their struggle against the colonial system and its institutions. But they succeeded in shaking the foundations of colonial rule. At home and abroad, they own the respect and recognition of the world. The colonial government was never again the same. Indeed, with the end of the women's war, the colonial government made many reforms that, in a sense, one could say those reforms marked the first steep of colonial disengagement in Nigeria.

RESULTS OF THE WOMEN'S WAR

Three major events marked the post war era. They are

- i) Suspension/cancellation of enumeration exercise;
- ii) Constitution of a Commission of enquiry; and
- iii) Socio-economic and political changes.

i) Cancellation of Census

As already stated, the root cause of the women's war was the census of women and issue of taxation. In order to restore confidence in government, the colonial authorities first suspended the census operation and, later, cancelled it. In some communities like Ukam and Abak, taxation was cancelled. The women had prevailed.

ii) Commission of Enquiry

Initially an inquisition was conducted at Utu Etim Ekpo on 26 and 28 December, 1929. It was conducted at the instance of Ikot Ekpane Division Corover's court and declared that the deceased died of gun shot wounds from the colonial government forces put that the latter acted in self defence. The report tried to defend the use of machine guns by the soldiers. As expected, the inquisition was criticised both in Nigeria and England as unsatisfactory. Thus, the government was forced to set up the commission of enquiry to identify the circumstances of the massacre of women. The first commission was made up of only government representatives and no Nigerian was made a member. It justified the action of the officers who ordered the shooting. When the report was submitted to the Nigerian legislative Council, the Council expressed anger and regret for the unwarranted massacre.

As public opinion at Britain ran contrary to the finding of the enquiry, a second commission of enquiry was formed which at the end of its sitting received testimony from 485 witnesses and identified the following causes of the war.

- a) Low price of exports and high price of import goods;
- b) Corruption of warrant chiefs and members of the native court;
- c) Taxation.

iii) Socio-Economic and Political Changes

The women's war of 1929 had brought profound socio-economic and political changes for Nigerian women and society at large. Taxation of women was cancelled. Prices of imported goods were brought down and those of exports raised. Indirect rule system was reorganised, the warrant chief system was cancelled and replaced with the system of Native courts were established to serve smaller groups, whereas prior to women's war of 1929, many towns and villages, even clans, were grouped into a court irrespective of distance or cultural consideration. The demand of the women to prosecute the warrant chiefs was also granted to the satisfaction and delight of the women. Perhaps, the greatest post war success of the movement was that some women were made members of the reorganised courts. This helped even more the organisational ability of women to present to court alleged cases of corruption and other improprieties' of the warrant chiefs and to fight legally woman rights. The colonial administration for the first time in its history, appointed a few influential leader of the women's war to serve as Native Court members, including Chinwe, the only female member out of the 13 members of the Nguru Mbaize Native Court. Similarly, in Umuapko Native Court area, 13 out of 30 members were women, while 1 out of 9 members of the Okpuala Native Court was a woman (Mba, 1982). The most prominent female member of the Native Courts during colonialism was Ahebi Ugabe of Enugu-Ezike in Nsukka area. She was appointed a native court member in 1930, was reputed for her spiritual prowess and popularly called "Agamega" which means "Female Leopard" (Meek, 1932).

The women's war of 1929 brought to the limelight many unknown women in the forefront. Nwanyeruwa led a major role not only in precipitating the revolt but emerged as a leading advocate of non-violence during the protest marches. As an elderly woman, her words of wisdom were often heeded by more youthful women in her community who led the revolt. Nwanyeruwa's influence though, was largely confined to her community. It is noteworthy that the revolt in many parts of Igboland took a similar pattern. Women from Oloko, Umuahia, and northern Ngwaland in the then Bende District, as well as other parts of Igboland, saw Nwanyeruwa as their heroine who courageously fought for their cause, and prevented women from paying tax. About her role members of the Aba Commission of Inquiry commented thus, "Nwanyeruwa became and still remains a name to conjure with and the Olonko trio cleverly used her as the symbol of womanhood rising against oppression. Ikonmia, Mwannedia, and Nwngo who acted as spokespersons on behalf of the Oloko women came to be recognised as Oloko Trio and people affectionately called them as 'Emissaries of Peace'.

CONCLUSION

From the above discussions one can conclude that it is not correct to refer to the events of 1929 as the 'Aba Riot' by the colonial officials and some scholars as if the event was limited to Aba. Indeed, the disturbances was greater in the Annang and Ibibio villages of Utu Etim Ekpo, Ika, Ikot, Ekpene, Abak, Itu, Ikono, Opopedi and Egwanga. These were the real theatres of war where more than 50 women died and 50 were wounded whereas in Aba, only two died. The event should, therefore, be appropriately called 1929 Nigerian Women's War as it covers a vast geographical area of present day Nigeria. The natives called it and still refer today as Ogu Umunwaanyi (Women's War).

The analyses of the meaning of the war components of the war revealed that this was the women's anti-colonial struggle. It was the first resistance to colonialism and the first major expression of the spirit of nationalism. Truly speaking the history of Nigerian decolonisation can never be complete without a narration of this women's war. With this war women moved from the footnotes of the history of Nigeria into the centre stage and pages of Nigerian history. The 1929 example showed women what could be achieved when they mobilise, and it served as an inspiration to them in organizing the revolts against colonial rule in future.

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STRUCTURAL AND ANALYTICAL STUDIES OF *O*-, *M*- AND *P*-SUBSTITUTED BROMOBENZALDEHYDE DERIVATIVES OF BENZILMONOXIMETHIOCARBOHYDRAZIDE

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ABSTRACT

Reaction between *o*-, *m*- and *p*-substituted bromobenzaldehyde and Benzilmonoximethiocarbohydrazide are *N*"-[(*Z*)-(2-bromophenyl) methylidene]-*N*"'-[(1*E*,2*E*)-2-(hydroxyimino)-1,2-diphenyl-thylidene] carbonohydrazide (HBMT*o*BA), *N*"'-[(*Z*)-(3-bromophenyl) methylidene]-*N*"'-[(1*E*,2*E*)-2-(hydroxyimino)-1,2-diphenyl-ethylidene] carbonohydrazide (HBMT*m*BA) and *N*"'-[(*Z*)-(4-bromophenyl) methylidene]-*N*"'-[(1*E*,2*E*)-2-(hydroxyimino)-1,2-diphenyl-ethylidene] carbonohydrazide (HBMT*p*BA). The present work reports the synthesis and characterization of *o*-, *m*- and *p*-substituted bromobenzaldehyde derivatives of Benzilmonoximethiocarbohydrazide. The synthesized compounds have been characterized on the basis of various physico-chemical techniques

1. INTRODUCTION

Schiff bases are formed when any primary amine reacts with an aldehyde or a ketone. Structurally, a Schiff base and they are also known as azomethine or imine) is a nitrogen analogue of an aldehyde or ketone in which the carbonyl group (CO) has been replaced by an amino group. Schiff base compounds are synthesized easily and almost form complexes with all transition metal ions. Many Schiff base derived compounds reports on their applications in anti-bacterial¹⁻², anti-oxidant³, anti-malarial⁴, anti-viral⁵, anti-cancer⁶⁻⁷, anti-fungal⁸⁻⁹, anti-inflammatory¹⁰ activities and also used as catalyst in several reactions such as polymerization reaction, reduction of thionyl chloride, oxidation of organic compounds, reduction reaction of ketones, aldol reaction, Henry reaction, epoxidation of alkenes, hydrosilylation of ketones, synthesis of bis(indolyl) methanes and Diels Alder reaction. In many biochemical reactions Schiff bases plays an important role.

The Schiff bases derived benzilmonoxime and its derivatives are reported many researchers¹¹⁻¹². Benzilmonoximehydrazone¹³⁻¹⁶ and benzilmonoximethiocarbohydrazide and its various metal complexes are reported earlier. In view of these we wish to the present study deals with the preparation of new Schiff bases derived from *o*-, *m*- and *p*-substituted bromo-benzaldehyde and benzilmonoximethiocarbohydrazide. IUPAC name and abbreviated of the prepared compounds are *N*"-[(*Z*)-(2-bromophenyl) methylidene]-*N*"'-[(1*E*,2*E*)-2-(hydroxyimino)-1,2-diphenyl-thylidene] carbonohydrazide (HBMT*o*BA), *N*"'-[(*Z*)-(3-bromophenyl) methylidene]-*N*"'-[(1*E*,2*E*)-2-(hydroxyimino)-1,2-diphenyl-ethylidene] carbonohydrazide (HBMT*m*BA) and *N*"'-[(*Z*)-(4-bromophenyl) methylidene]-*N*"'-[(1*E*,2*E*)-2-(hydroxyimino)-1,2-diphenyl-ethylidene] carbonohydrazide (HBMT*p*BA). The solid compounds have been synthesized and studied by elemental analyses and various spectroscopic techniques.

2. EXPERIMENTAL**Materials and instruments**

All chemicals were used by AR grade and were used without further purification. Melting points were determined in an Electrothermal 9200. ¹H-NMR spectra in CDCl₃ were recorded on Bruker AV300 NMR spectrometers using TMS as internal standard. The FT-IR spectra were recorded in the range 400–4000 cm⁻¹ by KBr pellet using a 'Perkin- Elmer spectrum 100' model FT-IR spectrophotometer. The UV-Vis spectra in methanol were recorded with a JASCO V-650 Spectrophotometer.

General method for synthesis of *o*-, *m*- and *p*-substituted bromobenzaldehyde derivatives of Benzilmonoximethiocarbohydrazide

Benzilmonoximethiocarbohydrazide were prepared by reported method¹⁸. A mixture of 0.10mol of bromobenzaldehydes (*o*-, *m*- and *p*-substituted) in 50mL ethanol was added to alcoholic solution of 0.15 mol of benzilmonoximethiocarbohydrazide and 2ml of conc. HCl. This mixture was refluxed continuously for 8h and then allowed to cool. The precipitated compounds was collected and purified by crystallization method using methanol (yield: 80-83%).

3. RESULTS AND DISCUSSIONS

Characterization of the prepared compounds are done by using analytical data obtained from UV-VISIBLE, FT(IR), ¹H NMR spectroscopy and elemental analysis etc. The molecular weight of proposed compounds is 480gmol⁻¹ determined by Rast method¹⁹; they are melts at 210-215°C. They are yellowish brown crystalline solids, soluble in common organic solvents such as, methanol, chloroform, acetone, DMF, DMSO, dioxane,

dilute alkali etc. partially soluble in ethanol. Structural studies of the synthesized compounds of FTIR, PMR, UV-VISIBLE spectroscopy and elemental analysis etc. the prepared compounds are monobasic in nature by compounds-KOH titration curve.

UV-VISIBLE SPECTROSCOPY

The UV- spectra of the prepared compounds in the ultra-violet region show high intensity band at around 360-370nm ($\epsilon = 20945\text{-}21500\text{dm}^3\text{mol}^{-1}\text{cm}^{-1}$), 274-289nm ($\epsilon = 13195\text{-}13218\text{ dm}^3\text{mol}^{-1}\text{cm}^{-1}$) and at 218-226 ($\epsilon = 12222\text{-}12300\text{dm}^3\text{mol}^{-1}\text{cm}^{-1}$). These are due to the $\pi \rightarrow \pi^*$ (allowed) transitions of azomethine environment in the all molecules. In many isonitrosoketones²⁰⁻²¹, a bands occurs at similar positions and intensity, are reported as the ($\pi \rightarrow \pi^*$) transitions in the present compounds¹⁷⁻¹⁸.

Table-1: UV-Visible spectra of the *o*-, *m*- and *p*-substituted bromo-benzaldehyde derivatives α -Benzilmonoximethiocarbohydrazide

Compounds	λ (nm)	ϵ ($\text{dm}^3\text{mol}^{-1}\text{cm}^{-1}$)
HBMT _o BA	370	20945
	289	13195
	221	12268
HBMT _m BA	365	21500
	281	13218
	226	12300
HBMT _p BA	360	20999
	274	13200
	218	12222

¹H NMR

¹H NMR spectra of the synthesized compounds was recorded in CDCl₃ solvent and important bands summarized in **Table-2**. The singlet at observed at δ 11.50-11.59ppm (s, 1H) region indicated oximino proton in the prepared compounds and since it is expected to be rather acidic and therefore the weakest shielded proton in the molecules. The singlet observed at δ 10.07-10.10ppm ascribed to proton of the secondary amine (>C=N-NH-). A singlet observed at region δ 8.57-8.68ppm (s, 1H) assigned to either the NH -SH moiety, such an assignment is favored by the thione- thiol tautomerism¹⁷ possible in the proposed compounds. A singlet at δ 4.97-5.00 ppm ascribed to the methine group in the all prepared compounds. The multiplets in the region δ 7.60 - 8.44ppm were ascribed to the aromatic ring protons in synthesized compounds.

Table-2:¹H NMR data of *o*-, *m*- and *p*-substituted bromo-benzaldehyde derivatives α -Benzilmonoximethiocarbohydrazide in ppm

Compounds	-OH	>C=N-NH-	-SH	-CH=	Phenyl rings
HBMT _o BA	11.50	10.07	8.68	4.99	7.60-8.44
HBMT _m BA	11.55	10.07	8.66	4.97	7.60-8.44
HBMT _p BA	11.59	10.10	8.57	5.00	7.60-8.44

FTIR Spectra

A significant feature of the FT(IR) spectra of the *o*-, *m*- and *p*-substituted bromo-benzaldehyde derivatives α -Benzilmonoximethiocarbohydrazide is the absence of band between 3300 - 3350cm⁻¹ due to the -NH₂ vibration reported¹⁷ at 3300cm⁻¹ in α -Benzilmonoximethiocarbohydrazide indicating a successful replacement of the amino group by the azomethine group during Schiff base formation. The spectra show a band at 3218-3226cm⁻¹ due to the presence of -OH of the oximino in the synthesized compounds. Also another band observed at 3011-3023cm⁻¹ in the FT(IR) spectra of the all compounds are ascribed to aromatic C-H stretching vibrations and the aliphatic C-H group band is merged into aromatic C-H stretching which are observed in synthesized compounds. Rest of the bands observed in title compounds are almost at the same frequencies in comparisons with bands of benzilmonoximethiocarbohydrazide (**Table-3**).

Table-3: FT (IR) spectra of the *o*-, *m*- and *p*-substituted bromo-benzaldehyde derivatives α -Benzilmonoximethiocarbohydrazide in cm⁻¹

Compounds	-OH	ν (C-S-H)	ν (C=NO)	ν (C=NN)	ν (N-H)	ν (N-O)	ν (N-N)	ν (Ph-Br)
HBMT _o BA	3226	2345	1611	1699	1590	1002	1070	725
HBMT _m BA	3218	2355	1605	1695	1588	1009	1077	730
HBMT _p BA	3222	2356	1609	1692	1587	1003	1069	755

4. CONCLUSION

The title compounds are soluble in most of the common organic solvents and they have high melting point, indicating strongly bonded all functional groups and other molecules. The synthesized compounds are monobasic in nature concluded on the basis of the compounds-KOH titration curve method. On the basis of the spectroscopic methods tentatively assigned the structures of the proposed compounds as follow;

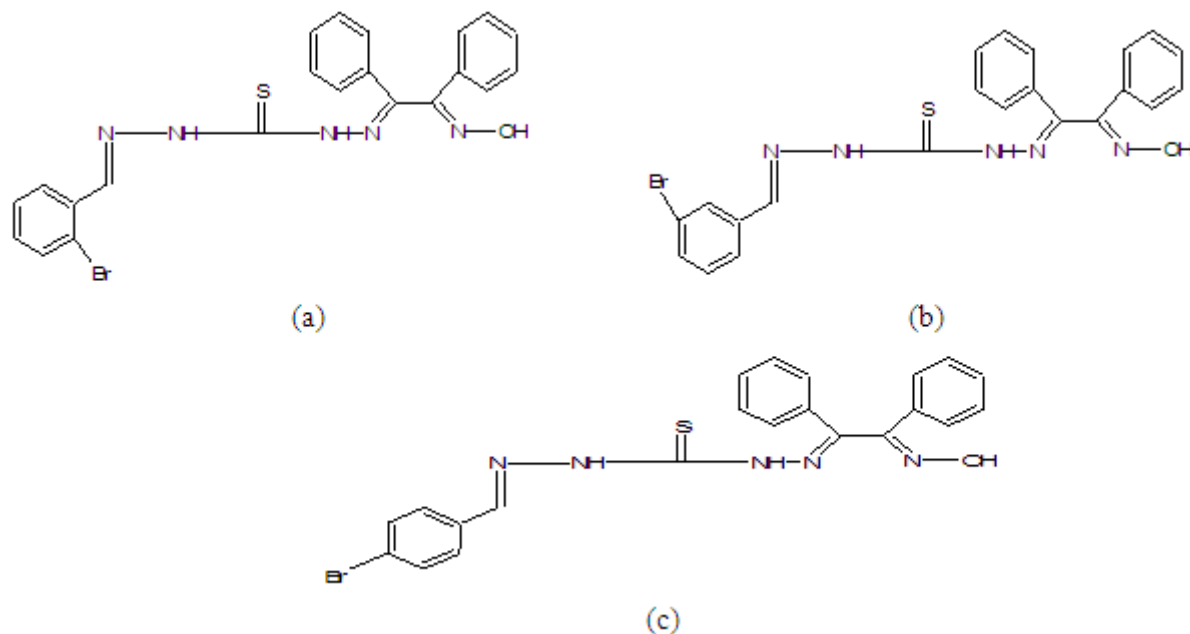


Figure-1

- N'' -[(Z)-(2-bromophenyl)methylidene]- N''' -[(1E,2E)-2-(hydroxyimino)-1,2-diphenylethylidene]carbonohydrazide(HBMTpBA),
- N'' -[(Z)-(3-bromophenyl)methylidene]- N''' -[(1E,2E)-2-(hydroxyimino)-1,2-diphenylethylidene]carbonohydrazide(HBMTmBA) and
- N'' -[(Z)-(4-bromophenyl)methylidene]- N''' -[(1E,2E)-2-(hydroxyimino)-1,2-diphenylethylidene]carbonohydrazide(HBMTpBA)

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SYNTHESIS AND STRUCTURAL STUDIES OF CONDENSATION REACTION BETWEEN ISOEUGENOL WITH INDOLE-3-PROPANOIC ACID

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ABSTRACT

The present work deals with condensation of isoeugenol with Indole-3-Propanoic Acid in presence of DMF. The synthesized molecule structure can be elucidated by some physico-chemical and Analytical techniques, FTIR, UV-Vis and ^1H NMR. Synthesized molecule is insoluble in water, but soluble in common organic solvents. They have high melting point and they are stable in room temperature at open atmosphere

Keywords: Isoeugenol, Indole-3-Propanoic Acid and UV spectra

1. INTRODUCTION

Isoeugenol is naturally occurring product and widely used in flavoring additive and fragrances. Isoeugenol is reported¹ both liquid (*cis*) and crystal (*trans*) isomers, miscible in alcohol, ether, ethanol and propylene glycol. Isoeugenol was synthesized by eugenol and caustic potash isomerization² process and purified by distillation³. Isoeugenol is also useful in flavoring agent for chewing gum, backed goods and non-alcoholic beverages⁴. Importance of isoeugenol using synthesized process of vanillin. Also useful isoeugenol in many home appliance product in specific amount, e.g. perfumes (0.4-0.8%), soaps (0.03-0.3%), detergent (0.003-0.3% and cream lotions (0.015-0.1%)⁵.

Mortelmans et al⁶, was tested isoeugenol against salmonella typhimurium strains all concentrations (303, 10.0, 33.0, 100.0, 250.0, 333.0, and 800.0 g/plate). Isoeugenol was observed to be non-mutagenic. Mutagenicity tests were performed on E. coli reported by Sekizawa and Shibamoto⁷ and no mutagenic effects was observed. Also isoeugenol was tested against B. subtilis strain reported Sekizawa and Shibamoto⁷ and they are studies of genotoxic of isoeugenol was found in their article. The reaction of eugenol and methyl eugenol with various indole acids was reported earlier⁸⁻⁹. In view of these, we wish to reports the condensation reaction between Isoeugenol and Indole-3-Propanoic Acid and characterized the synthesized compounds various techniques such as elemental analysis, physico-chemical techniques, PMR, UV-Vis, FT(IR) and mass spectra.

2. EXPERIMENTAL

All chemicals used in this work were reagent grade (AR), including Isoeugenol, Indole-3-propanoic acid, DMF and ethanol. Spectroscopic grade solvents were used for spectral measurements. Fourier Transfer Infrared (FTIR) spectra were recorded in range (4000-200) cm^{-1} on a 'Perkin- Elmer spectrum 100' FTIR spectrophotometer, using KBr Pellets. The UV-Vis spectra of the synthesized compound were recorded in the range (200-900)nm on a Shimadzu JASCO V-650 Spectrophotometer, in freshly prepared 10^{-4} M solutions in (Methanol) at room temperature using quartz cell (1.000)cm. ^1H NMR spectra were recorded in CDCl_3 solvent, using Bruker AV300 NMR spectrometers using TMS as internal standard.

Synthesis of Title compound

The Isoeugenol (2.05g, 12.5 mM) in 25ml DMF was refluxed with Indole-3-Propanoic Acid (1.89g, 10 mM) for 10 h, the volume of the solution was reduced to one third. On cooling, a brown solid was separated, filtered and recrystallized from ethanol.

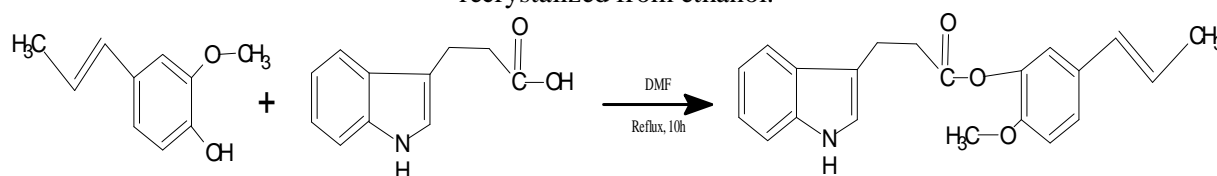


Figure-1: Reaction scheme of the title compound.

3. RESULTS AND DISCUSSIONS

The reaction of isoeugenol with Indole-3-Propanoic Acid gave as brown in color compound and abbreviated as IEIPA. The structures of synthesized compound elucidated on the basis of elemental analysis, FT(IR), PMR, electronic spectral data. Prepared compounds are stable at room temperature in open atmosphere and they have high melting points (208°C). Title compound is insoluble in water and soluble in most common organic solvents, such as Methanol, Chloroform, Acetone, Acetonitrile, DMF etc. Progress of reaction monitored by TLC, using Ethyl Acetate: Pet Ether (20:80) as a mobile phase. Synthesized compound purity checked by GC instruments by standard procedure¹⁰ purity of the prepared compound is 97.32%.

Table-1: Physical and Analytical data of isougenol derivatives of Indol-3-Propanoic Acid

Comp	Color	Purity (by GC) %	M.P.	Elemental Analysis			
				% C Found (Calcd)	% H Found (Calcd)	% N Found (Calcd)	% O Found (Calcd)
IEIPA	Brown	96.39	208	75.13 (74.78)	6.26 (6.32)	4.17 (4.03)	14.31 (13.75)

UV-Visible Spectra

The electronic spectrum of all synthesized compounds in methanol for the UV region reveals two high intensity bands at 330nm and 249nm (**Table: 2**), these due to $n \rightarrow \pi^*$ and $\pi \rightarrow \pi^*$ transitions possible from the Carbonyl ($>C=O$) and Alkene ($>C=C<$) environments in the proposed molecule¹¹.

Table-2: UV-Visible data of isougenol derivatives of Indol-3-Propanoic Acid in methanol

Compound	λ_{nm}	Transition
IEIPA	330	$n \rightarrow \pi^*$
	249	$\pi \rightarrow \pi^*$

FT (IR) Spectra

A significant feature of the FT(IR) spectrum of IEIPA is absence of band between $3400-3500\text{cm}^{-1}$ due to the ν_{O-H} vibration reported¹² at 3443cm^{-1} in parent molecules (Isoeugenol) indicating a successful replacement of the Hydroxyl group by the ether group during condensation reaction. This observation also supported by, the new band observed at 1060 in the all compounds, indication the $-C-O-$ present in the synthesized molecule. Three bands observed at 3284cm^{-1} , 3188cm^{-1} and 1649cm^{-1} suggesting the $-NH$, $=CH_2$ and $>C=O$ groups respectively, in the proposed molecule. Important ir bands of the synthesized molecule are listed in **Table-3**.

Table-3: Important IR bands (cm^{-1}) and their assignments for isougenol derivatives of Indol-3-Propanoic Acid

Comp.	$-NH$	$-CH_2-$	$=CH_2$	Ar.v(C-H)	$>C=O$	Ar v(C=C)	$>C=C<$	$-C-O-$
IEIPA	3284	2965	3188	3069	1649	1515	1598	1060

¹HNMR Spectra

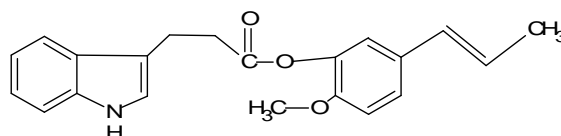
¹HNMR spectra recorded in d_6 DMSO solvent and they are listed in **Table-4**. No any peak observed in the region 12.00-13.00 ppm in prepared compounds, this is reported¹² at 12.50ppm of $-OH$ group in isoeugenol, suggested that successfully replaced hydroxyl group to ether group formation. PMR spectra recorded in d_6 DMSO solvent and they are listed in **Table-4**. Another singlet observed at around 9.92ppm, suggesting the tertiary amine group of the all compounds

Table-4: ¹HNMR data of the for isougenol derivatives of Indol-3-Propanoic Acid in ppm

Comp	$-NH-$	Phenyl Rings	$-CH=$	$-CH_2-$	$-OCH_3$	$-CH_3$
IEIBA	9.95	7.60-8.55	3.55	3.98	4.45	1.85

4. CONCLUSION

Synthesized molecule is insoluble in water but soluble in dilute alkali, common organic solvents and have high melting point indicated strongly bonded all elements and stable at room temperature in open atmosphere. On the basis of spectral and analytical data, structure of the synthesized molecule tentatively assigned as;

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CHU & DIAZ- ITERATED FUNCTION SYSTEM

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ABSTRACT

In this paper, we introduce a new iterated function system namely “Chu & Diaz- Iterated Function system” using Chu & Diaz mapping and prove the existence and uniqueness of the attractor of such a system. At last, we formulate a collage theorem for Chu & Diaz’s Iterated Function system.

Mathematics Subject Classification: 28A80, 54H25

Keywords: Iterated Function System; Collage theorem, attractor; complete metric space; Contraction Mapping; Chu & Diaz Mapping.

1. INTRODUCTION

One of the more exciting and deep development in the structures of fractals sets, the use of iterated function systems. The IFS is a scheme for describing and manipulating complex fractal attractors using simple mathematical models. The idea of IFS was first developed in 1981 by Hutchinson [1]. However, on the basis of the self-similarity property, this theory was practically developed by Barnsley and Demko[2] in 1985, and the method was popularized by M. Barnsley[3]. In 1986, Barnsley et al. [4] given the concept of Collage theorem who wanted to show that it was possible to reconstruct images using a set of functions. The Collage theorem provided to solving the inverse problem. The Collage theorem states that an image by using a set of iterated function systems with a specific attractor that will yield the desired image regardless of the initial set.

For details regarding the theory of Iterated Function System and multifunction’s, one may refer, Barnsley[3], Hutchinson[1], vrscay [5] have traced the idea back to Williams[6], who studied fixed points of infinite composition of contractive maps. Fractals are discovered as the fixed points of certain set maps. Groller [7], Frame and Angers [8], Torre and others ([9], [10],[11]).Sahu et al. [12] have introduced k- iterated function system using Kannan mapping to prove fixed point theorem in complete metric space and obtained a Collage theorem.

In 1969, Chu & Diaz ([13], [14]) introduced a new mapping which is called Chu & Diaz –mapping which had presented a condition which is more lenient than contraction condition. and proved that if T is a mapping of a complete metric space X into itself is not contraction. It is possible that T^n is contraction.

The purpose of this paper is to introduce the concept of Chu & Diaz-Iterated Function System and obtain some existence and uniqueness results.

2. ITERATED FUNCTION SYSTEM

Let X denotes a complete metric space with distance function d and T be a mapping from X into itself. Then T is called a *contraction mapping* if there is a constant $0 \leq s < 1$ such that

$$d(T(x), T(y)) \leq s d(x, y). \quad (1)$$

The constant s is called the contractivity factor for T .

Polish mathematician S. Banach[15] proved a very important result, regarding contraction mapping in 1922, known as Banach Contraction principle.

Theorem 2.1. Let $T : X \rightarrow X$ be a contraction mapping, with contractivity factor ‘ s ’, on a complete metric space (X, d) . Then T possesses exactly one fixed point $x^* \in X$. Moreover, for any point $x \in X$, the sequence $\{T_n(x) : n = 0, 1, 2, \dots\}$ converges to x^* . That is $\lim_{n \rightarrow \infty} T^{0n}(x) = x^*$, for each $x \in X$. Where T^{0n} denotes the n -fold composition of T .

In the famous paper [2], Hutchinson proved that, given a set of contractions in a complete metric space X , there exists a unique nonempty compact set $A \subset X$, named the attractor or fractal for the iterated function systems.

IFS generally employ contractive maps over a complete metric space (X, d) , where the Banach’s celebrate result mentioned above guarantees the existence and uniqueness of the fixed point known as “attractor” or

“fractal”. This can be done since a Hutchinson- Barnsley operator is also a contraction over $H(X)$, Where $H(X)$ denotes the space whose points are the compact subsets of X . The main property of contraction mapping which is used in IFS is given by the following lemma:

Lemma 2.2. Let $T: X \rightarrow X$ be a contraction mapping, with contractivity factor ' s ', on a complete metric space (X, d) . Then T is continuous.

We now discuss certain definition required to understand iterated function system. Let (X, d) be a complete metric space and $H(X)$ denote the space whose points are the compact subsets of X known as Hausdorff space, other than the empty set. Let $x, y \in X$ and let $A, B \in H(X)$. Then

(1) distance from the point x to the set B is defined as

$$d(x, B) = \min \{d(x, y) : y \in B\},$$

(2) distance from the set A to the set B is defined as

$$d(A, B) = \max \{d(x, B) : x \in A\},$$

(3) Hausdorff distance from the set A to the set B is defined as

$$h(A, B) = d(A, B) \vee d(B, A).$$

Then the function $h(d)$ is the metric defined on the space $H(X)$.

In IFS, the contractive maps act on the members of Hausdorff space, i.e., the compact subsets X . Thus, an iterated function system is defined as follows:

A Hutchinson's iterated function system consists of a complete metric space (X, d) together with a finite set of continuous contraction mappings $T_n: X \rightarrow X$ with respect to contractivity factor s_n , for $n = 1, 2, 3, \dots, N$.

Now, we present the existence of the attractor for Hutchinson's IFS, i.e., the following theorem was given by Hutchinson or Barnsley (see [2], [3]):

Theorem 2.3 ([2], [3]): Let $\{X: T_n, n = 1, 2, 3, \dots, N\}$ be an iterated function system with contractivity factor s . Then the transformation $W: H(X) \rightarrow H(X)$ defined by $W(B) = \bigcup_{n=1}^N T_n(B)$ for all $B \in H(X)$, is a contraction mapping on the complete metric space $(H(X), h(d))$ with contractivity factor s . That is

$$h(W(B), W(C)) \leq sh(B, C).$$

Its unique fixed point, which is also called an attractor, $A \in H(X)$, obeys

$$A = W(A) = \bigcup_{n=1}^N T_n(A),$$

And is given by $A = \lim_{n \rightarrow \infty} W^n(B)$ for any $B \in H(X)$. W^n denotes the n -fold composition of W .

Example 2.1: Let (R, d) be a complete metric space. Consider the IFS $\{R; w_1, w_2\}$ in X .

Let $w_1, w_2: R \rightarrow R$ be given by;

$$w_1(x) = \frac{x}{3} \quad ; \quad w_2(x) = \frac{x}{3} + \frac{2}{3}$$

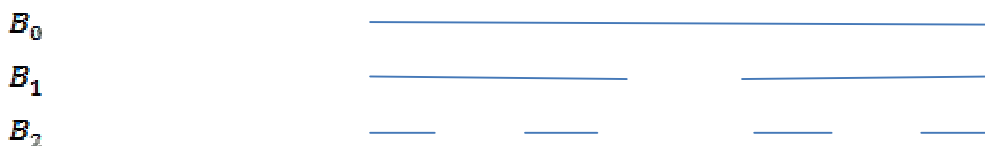


Fig-1: Cantor set

Let $B_n = W^{on}(B_0)$. The iteration shows in figure.

Now, if we let B_0 denote the interval $[0,1]$.

Let B_1 denote the set $\left[0, \frac{1}{3}\right] \cup \left[\frac{2}{3}, 1\right]$.

Let B_2 denote the set $\left[0, \frac{1}{9}\right] \cup \left[\frac{2}{9}, \frac{3}{9}\right] \cup \left[\frac{6}{9}, \frac{7}{9}\right] \cup \left[\frac{8}{9}, 1\right]$.

We know that the attractor is defined as $A = \lim_{n \rightarrow \infty} W^{on}(B)$.

So in our case; The attractor of the IFS is the classical Cantor set.

3. CHU & DIAZ –ITERATED FUNCTION SYSTEM

In this section, we shall try to explore the possibility of improvement in IFS by replacing contraction mapping by a more general condition known as Chu & Diaz mapping. In 1964-65, Chu & Diaz([13],[14]) introduced a mapping, which was an improvement over contraction mapping, known as *Chu&Diazmapping* defined as follows:

If there exists a number α , $0 < \alpha < 1$ such that for all $x, y \in X$

$$d(T^n x, T^n y) \leq \alpha d(x, y) \quad (2)$$

Then T^n is called a *Chu&Diaz* mapping. Let us name α as *Chu&Diaz –contractivityfactor* of Chu & Diaz mapping T^n .

Example 3.1:- Let $T: [0,1] \rightarrow [0,1]$ is defined by $T(x) = \frac{x}{1+x}$

Since; $T^2(x) = T(T(x)) = T\left(\frac{x}{1+x}\right) = \frac{x}{1+2x}$;

$$T^3(x) = \frac{x}{1+3x};$$

$$T^n(x) = \frac{x}{1+nx}$$

The ratio;

$$\frac{d(T^n(x), T^n(y))}{d(x, y)} = \frac{|T^n(x) - T^n(y)|}{|x - y|} = \frac{\left|\frac{x}{1+nx} - \frac{y}{1+ny}\right|}{|x - y|} = \frac{|x(1+ny) - y(1+nx)|}{|(x-y)(1+nx)(1+ny)|} = \frac{1}{(1+nx)(1+ny)}$$

is arbitrarily close to 1, when x and y are sufficiently closed to 0.

The above example shows that, $T^n: X \rightarrow X$ is a Chu and Diaz mapping on (X, d) with contractivity factor $\alpha \in [0,1)$ i.e; $0 \leq \alpha < 1$.

On the basis of definition of (hyperbolic) iterated function system given by Barnsley[14], we now introduce Chu & Diaz-iterated function system:

A Chu & Diaz- iterated function system consists of a complete metric space (X, d) together with a finite set of Chu & Diaz mappings $T_r: X \rightarrow X$ with Chu & Diaz –contractivity factor α_r , for $r = 1, 2, 3, \dots, N$.

First of all we state and prove the two propositions which will establish a relation between T^{k_n} ; ($k = 0, 1, 2, 3, \dots, N$), and α ; and uniqueness of fixed point of T^n if it exists, respectively.

Proposition 3.1. Let $T^n: X \rightarrow X$ be a Chu & Diaz mapping, with Chu & Diaz –contractivity factor ' α ', on a metric space (X, d) and $x \in X$ Then T^n satisfies the following condition:

$$d(T^{kn}(x), T^{kn}T(x)) \leq \alpha^k d(x, T(x))$$

$$\text{Moreover, } \lim_{k \rightarrow \infty} d(T^{kn}(x), T^{kn}T(x)) = 0.$$

Proof. Since T^n is a Chu & Diaz contraction mapping, we have

$$\begin{aligned} d(T^{kn}(x), T^{kn}T(x)) &\leq \alpha d(T^{(k-1)n}(x), T^{(k-1)n}T(x)) \\ &\leq \alpha^2 d(T^{(k-2)n}(x), T^{(k-2)n}T(x)) \\ &\dots\dots\dots \\ &\dots\dots\dots \\ &\leq \alpha^k d(x, T(x)) \end{aligned}$$

.....

.....

$$\leq \alpha^k d(x, T(x))$$

Taking limit as $k \rightarrow \infty$, we have

$$\lim_{k \rightarrow \infty} d(T^{kn}(x), T^{kn}T(x)) \leq \lim_{k \rightarrow \infty} \alpha^k d(x, T(x))$$

Therefore;

$$\lim_{k \rightarrow \infty} d(T^{kn}(x), T^{kn}T(x)) = 0; \quad \text{since } \alpha < 1$$

Proposition 3.2. Let $T^n: X \rightarrow X$ be Chu & Diaz mapping, with Chu & Diaz –contractivity factor ' α ' on a metric space (X, d) . If T^n has a fixed point, then it is unique.

Proof. On the contrary;

Let x^* and y^* be two fixed points of T^n .

Then $x^* = T^n(x^*)$, $y^* = T^n(y^*)$, and

$$d(x^*, y^*) = d(T^n(x^*), T^n(y^*))$$

$$\leq \alpha d(x^*, y^*)$$

$$d(x^*, y^*) = 0 \quad [\text{since } \alpha < 1]$$

Therefore: $x^* = y^*$

Next, we prove the following proposition, which shows the principle underlying the collage theorem for Chu & Diaz mapping.

Proposition 3.3. Let $T^n: X \rightarrow X$ be a continuous Chu & Diaz mapping on a complete metric space (X, d) with contractivity factor and let $x^* \in X$ be the fixed point of T^n . Then

$$d(x, x^*) \leq (1 - \alpha)^{-1} d(x, T(x)), \quad \forall x \in X.$$

Proof. For $x \in X$, we have

$$\lim_{k \rightarrow \infty} T^{kn}(x) = x^*$$

Taking the point $a \in X$ as fixed. We know that the distance function $d(a, b)$ continuous at the point $b \in X$, we conclude

$$\begin{aligned} d(x, x^*) &= d(x, \lim_{k \rightarrow \infty} T^{kn}(x)) \\ &= \lim_{k \rightarrow \infty} d(x, T^{kn}(x)) \end{aligned}$$

$$\begin{aligned}
 &\leq \lim_{k \rightarrow \infty} \sum_{m=1}^{kn} d(T^{m-1}(x), T^m(x)) \\
 &\leq \lim_{k \rightarrow \infty} [d(T^0(x), T^1(x)) + d(T^1(x), T^2(x)) + \dots + d(T^{(k-1)n}(x), T^{kn}(x))] \\
 &\leq \lim_{k \rightarrow \infty} [1 + \alpha + \alpha^2 + \dots + \alpha^{k-1}] d(x, T(x)) \\
 &\leq \lim_{k \rightarrow \infty} (1 - \alpha)^{-1} d(x, T(x)) \\
 d(x, x^*) &\leq (1 - \alpha)^{-1} d(x, T(x))
 \end{aligned}$$

This completes the proof.

Using Proposition 3.1 and 3.2 we now prove the following theorem,

Theorem 3.4. Let $T^n: X \rightarrow X$ be a Chu & Diaz mapping, with Chu & Diaz-contractivity factor ' α ', on a complete metric space (X, d) . Then T^n possesses exactly one fixed point $x^* \in X$ and moreover for any point $x \in X$, the sequence $\{T^k(x); k = 0, 1, 2, \dots\}$ converges to x^* that is $\lim_{k \rightarrow \infty} T^k(x) = x^*$, for each $x \in X$.

Proof. Let $x \in X$. Since T^n is a Chu & Diaz mapping with Chu & Diaz – contractivity factor α , we have

$$d(T^{kn}(x), T^{kn}T(x)) \leq \alpha^k d(x, T(x))$$

$$\forall k = 0, 1, 2, 3, \dots$$

Then, for any fixed $x \in X$, we get

$$\begin{aligned}
 d(T^{kn}(x), T^{km}(x)) &= d(T^{kn}(x), T^{kn}T^{km-kn}(x)) \\
 &\leq \alpha^{kn \Delta km} d(x, T^{|kn-km|}(x)) \quad (3)
 \end{aligned}$$

Where $m, n = 0, 1, 2, \dots$

In particular, let us take $s = |kn - km|$ for $s = 0, 1, 2, 3, \dots$, we have

$$\begin{aligned}
 d(x, T^s(x)) &\leq d(x, T(x)) + d(T(x), T^2(x)) + \dots + d(T^{k-1}(x), T^k(x)) \\
 &\leq (1 + \alpha + \alpha^2 + \dots + \alpha^{k-1}) d(x, T(x)) \\
 &\leq \left(\frac{1 - \alpha^k}{1 - \alpha} \right) d(x, T(x)).
 \end{aligned}$$

On substituting in Eq. (3), we obtain

$$d(T^{kn}(x), T^{km}(x)) \leq \alpha^{kn \Delta km} \left(\frac{1 - \alpha^k}{1 - \alpha} \right) d(x, T(x))$$

it immediately follows that $\{T^{kn}(x)\}_{k=0}^{\infty}$ is a Cauchy sequence. since X is a complete metric space, this Cauchy sequence has a limit $x^* \in X$, and we have

$$\lim_{k \rightarrow \infty} T^{kn}(x) = x^* \quad (4)$$

Now, to prove that x^* is a fixed point of T^n we see that

$$d(x^*, T^n(x)) \leq d(x^*, T^{kn}(x)) + d(T^{kn}(x), T^n(x^*)) \quad (5)$$

Taking limit as $k \rightarrow \infty$, on considering Eq.(4) and proposition(3.1),

Now,

$$\lim_{k \rightarrow \infty} T^{kn}(x) = x^*$$

$$T^n(\lim_{k \rightarrow \infty} T^{kn}(x)) = T^n(x^*)$$

$$(\lim_{k \rightarrow \infty} T^{kn}T^n(x)) = T^n(x^*)$$

On substituting in Eq.(5), we obtain

$$d(x, T^n(x^*)) \leq d(x^*, \lim_{k \rightarrow \infty} T^{kn}(x)) + d(\lim_{k \rightarrow \infty} T^{kn}(x), \lim_{k \rightarrow \infty} T^{kn}T^n(x))$$

$$\leq d(x^*, x^*) + \alpha^k d(x, T^n(x))$$

$$\leq d(x^*, x^*) + \alpha^k d(x, x)$$

$$\leq 0.$$

$$d(x^*, T^n(x^*)) = 0$$

$$\text{Hence, } x^* = T^n(x^*)$$

By Proposition (3.2), x^* is unique.

This completes the proof.

Example 3.2:- Let $T: \mathbb{R} \rightarrow \mathbb{R}$ defined by ;

$$T(x) = 1 \quad ; \text{ if } x \text{ is rational}$$

$$T(x) = 0 \quad ; \text{ if } x \text{ is irrational}$$

$$\text{Then, } T^2(x) = T^3(x) = \dots = T^n(x) = 1 \text{ for all } x.$$

Thus, T^n is a contraction map and hence T^n has a unique fixed point.

Remark 3.1:-Theorem 3.4 generalizes the famous Banach Contraction principle for Chu and Diaz mapping.

Lemma 3.5. Let $T^n: X \rightarrow X$ be a continuous Chu & Diaz mapping on the metric space (X, d) with Chu & Diaz contractivity factor ' α '. Then $T^n: H(X) \rightarrow H(X)$ defined by $T^n(B) = \{T^n(x): x \in B\}$ for every $B \in H(X)$ is a Chu & Diaz mapping on $(H(X), h(d))$ with contractivity factor α .

Proof. Since T^n is a continuous mapping, therefore by Lemma 2 of Ref 14, T^n maps $H(X)$ into itself.

Let $B, C \in H(X)$. Then

$$h(T^n(B), T^n(C)) = d(T^n(B), T^n(C)) \vee d(T^n(C), T^n(B))$$

$$\leq \alpha \{d(B, C) \vee d(C, B)\}$$

$$= \alpha d(B, C)$$

$$= \alpha h(B, C)$$

$$\text{Therefore, } h(T^n(B), T^n(C)) \leq \alpha h(B, C)$$

This completes the proof.

Lemma 3.6. Let (X, d) be a metric space. Let $T_r^n: r = 1, 2, 3, \dots, N$ be continuous Chu & Diaz mappings on $(H(X), h)$. Let the Chu & Diaz contractivity factor for T_r^n be denoted by α_r for each r . Define

$T^n : H(X) \rightarrow H(X)$ by $T^n(B) = T_1^n(B) \cup T_2^n(B) \cup \dots \cup T_N^n(B) = \bigcup_{r=1}^N T_r^n(B)$ for each $B \in H(X)$. Then T^n is a Chu & Diaz mapping with Chu & Diaz –contractivity factor $\alpha = \max\{\alpha_r : r = 1, 2, \dots, N\}$.

Proof. We shall prove the theorem using mathematical induction method using the properties of metric h . For $N=1$, the statement is obviously true. Now for $N=2$, we see that

$$\begin{aligned} h(T^n(B), T^n(C)) &= h(T_1^n(B) \cup T_2^n(B), T_1^n(C) \cup T_2^n(C)) \\ &\leq h(T_1^n(B), T_1^n(C)) \vee h(T_2^n(B), T_2^n(C)) \\ &\leq \alpha_1 [h(B, C)] \vee \alpha_2 [h(B, C)] \\ &\leq (\alpha_1 \vee \alpha_2) h(B, C) \\ &= \alpha h(B, C) \end{aligned}$$

Therefore, $h(T^n(B), T^n(C)) \leq \alpha h(B, C)$

By the condition of mathematical induction Lemma 3.6 is proved.

Thus from all the above results and the definition of Chu & Diaz –iterated function system, we are in the position to present the following theorem for Chu & Diaz –iterated function system.

Theorem 3.7. Let $\{X; (T_0^n, T_1^n, T_2^n, \dots, T_N^n)\}$, where T_0^n is the condensation mapping be a Chu & Diaz –iterated function system with Chu & Diaz –contractivity factor α . Then the transformation $T^n : H(X) \rightarrow H(X)$ defined by $T^n(B) = \bigcup_{r=1}^N T_r^n(B)$ for all $B \in H(X)$ is a continuous Chu & Diaz mapping on the complete metric space $((H(X), h(d)))$ with contractivity factor α . Its unique fixed point, which is also called an attractor $A \in H(X)$, obeys

$$A = T^n(A) = \bigcup_{r=1}^N A$$

And is given by $A = \lim_{r \rightarrow \infty} (T^n)^{\circ r}(B)$ for any, $B \in H(X)$.

Based on above mathematical formulation of proposition 3.3, we can prove the following Collage theorem for Chu & Diaz –iterated function system.

Theorem 3.8 Let be (X, d) a complete metric space. Let $L \in H(X)$ be given and $\varepsilon \geq 0$ be given. Choose an Chu & Diaz iterated function system $\{X; (T_0^n, T_1^n, T_2^n, \dots, T_N^n)\}$ Where T_0^n is the condensation mapping with Chu & Diaz –contractivity factor α , so that

$$h(L, \bigcup_{r=0, r=1}^N T_r^n(L)) \leq \varepsilon$$

Then,

$$h(L, A) \leq \varepsilon \cdot \frac{1}{1 - \alpha}$$

Where, A is the attractor of the Chu & Diaz iterated function system. Equivalently,

$$h(L, A) \leq \left(\frac{1}{1 - \alpha} \right) \cdot h \left(L, \bigcup_{r=0, r=1}^N T_r^n(L) \right)$$

for all $L \in H(X)$.

Remark 3.2: In Theorem 3.7, we obtain the attractors for Chu and Diaz's iterated function system, which generalizes the main results concerning the famous Hutchinson iterated function system.

Remark 3.3: Theorem 3.7 and Theorem 3.8 are a valuable addition to the main results of literature ([16], [3]).

4. CONCLUSION

We studied Chu & Diaz – Iterated Function System and generalizing some existence and uniqueness results. Some of the major results reported in the literature are obtained which are true for an Chu & Diaz – IFS are established in this paper. We therefore assert that Collage theorem which was true for Contraction mapping remains unchanged for Chu & Diaz- mapping. In addition, some illustrative examples are given which is related to concepts and results.

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TO STUDY THE ANTIBACTERIAL ACTIVITY OF SELECTED MEDICINAL PLANTS

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ABSTRACT

The aim of the present study was to evaluate the antibacterial activity of selected medicinal plant species viz. *Costus speciosus*, *Erythrina indica*, *Lagerstroemia speciosa*. We have tested effect of different plant extracts prepared in Acetone, Methanol and Distilled Water (nonpolar to polar) on selected pathogen gram positive (*Staphylococcus aureus*) and gram negative bacteria (*Escherichia coli*) by the well diffusion method. Gram negative bacterial strain *Escherichia coli* showed maximum inhibition in *Lagerstroemia speciosa* at the concentration of 20 mg concentration (16.66 mm) than *Costus speciosus* and *Erythrina indica* (5.33mm and 14.33mm) in methanol extract as well as in gram positive bacterial strain *Staphylococcus aureus* showed maximum inhibition in *Lagerstroemia speciosa* at same concentration (16.33 mm) *Costus speciosus* and *Erythrina indica* (10.33 mm and 9.33 mm) in methanol extract. On the basis of observations and results obtained it is concluded that *Lagerstroemia speciosa* shows best antibacterial activity in methanol and aqueous extract and acetone extract shows moderate activity.

Keywords: Antibacterial activity, *Costus speciosus*, *Erythrina indica*, *Lagerstroemia speciosa*, *Staphylococcus aureus*, *Escherichia coli*.

INTRODUCTION

In the current scenario, infectious diseases was due to the various pathogenic organism are still one of the leading reason behind the death in the world. Medicinal plants are an integral part of daily life and traditional medicine. In different part of the world, medicinal plants are considered importance for the prevention and treatment of various diseases. Plants have been widely used in traditional medicine systems such as Ayurveda, Unani and Homeopathy. A large number of plants are used as remedy against several ailments by tribal communities. Besides, the origin of most of the drugs available now a day is from medicinal plants. Research of medicinal plants is increasing day by day due to high cost and having side effects associated with using of modern synthetic drugs. Treatment of ailment using medicinal plants is often cheaper and in almost all cases it lack of side effects¹. So to overcoming these entire problems, researchers looking for the invention of alternative and novel drug from natural sources like plants².

Escherichia coli, a gram negative bacterium, can cause food poisoning. The diseases caused by *E. coli* are gastroenteritis, urinary tract infection, neonatal meningitis, septicemia and pneumonia. *Staphylococcus aureus* is a facultative anaerobic gram positive coccal bacteria. It is found on the skin as a part of normal skin flora and nasal passages. Infection caused by *S. aureus* are minor skin infection such as pimple, impetigo, boils, cellulites, folliculites, scaled skin syndromes³ and the life threatening disease such as pneumonia, meningitis, osteomyelitis, endocarditis, toxic shock syndromes and sepsis. it can caused severe diseases in infants⁴.

Costus speciosus (Koen ex.Retz.) Sm. belongs to family Zingiberaceae comprised 175 species are found in all over the world. It is commonly called a Spiral Ginger. It is found moist places of India. The plant is mostly used for healing in burning sensation, constipation, leprosy, worm infection, skin diseases, diabetes, fever, asthma and bronchitis. The leaf infusion is used by the patient while bathing with high Febrifuge⁵.

Erythrina indica Lam belongs to family(Fabaceae) is a middle- size quick growing tree found in Bengal and many other parts of India especially in southern India. The *Erythrina* genus comprises 110 species of trees and shrubs. It is commonly known as Indian coral tree in English. It used traditionally used for the treatment of liver trouble, joint pain, dysentery, convulsion, diabetes, as a diuretic, laxative and an anthelmintic⁶.

Lagerstroemia speciosa (L.) Pers belongs to family (Lythraceae) is a medium size to large deciduous tree with a rounded crown distributed more or less throughout India especially in Assam, Bengal and Deccan peninsula. It is commonly called as Banaba. The leaves of *Lagerstroemia speciosa* are purgative, deobstructive and diuretic. A decoction of the leaves prepare like tea is used for diabetes mellitus in Philippines, Taiwan and Japan⁷. The chemical compound isolated from the extract are corosolic acid, larger stroemin, flosin B and reginin A. it has been previously reported to have hypoglycemic activity, and also possessed Antioxidant, Anti inflammatory, Antiobesity and Antifibrotic⁸.

MATERIAL AND METHODS**Collection of Plants Materials**

The selected medicinal plant was collected from different localities Nagpur and Gadchiroli, Maharashtra, India.

Plant Material

Leaves of *Costus speciosus* (Koen ex.Retz.) Sm (Zingibereceae), *Erythrina indica* Lam (Fabaceae), *Lagerstroemia speciosa* (L.) Pers (Lythraceae).

Preparation of Extracts

The leaves of selected plant species were clean and shade dried. The dried plants materials were grind into fine powder by grinder. The powder was used for prepared of plant extracts with Acetone, Methanol and Distilled Water by using Soxhlet apparatus and the extract was condensed to remove the solvent. The residues were used for Antibacterial studies.

Test organism

The human pathogenic gram positive bacteria *Staphylococcus aureus* and gram negative bacteria *Escherichia coli* were used for antibacterial activity. The above bacterial culture was maintained in nutrient agar slant at 4°C for further studies.

TESTING OF ANTIBACTERIAL ACTIVITY BY WELL DIFFUSION METHOD

Nutrient agar was prepared and sterilized by autoclave (121°C for 15 min.), pour into a pre sterilized Petri plates to solidify at room temperature in laminar air flow⁹. Culture of bacteria (0.3ml) was placed on the nutrient agar and spread with help of glass spreader. Wells were prepared by using 6mm sterile cork borer. In each well 100 µl of the sample was loaded and incubated at 37°C for 18 to 24 hrs in the inverted position on the incubator. Zone of inhibition was observed in mm. Streptomycin and Erythromycin were used as a positive control¹⁰.

RESULT**Table-1: Antibacterial activity of different solvent extracts of leaves of selected Plant species**

Zone of inhibition in mm						
Bacteria	Plants Name	Acetone	Methanol	Aqueous	Positive control	
					Streptomycin 10µg/ml	Erythromycin 10µg/ml
Escherichia coli. (Gram-ve)	Costus speciosus	0	5.33± 0.57	4.33± 0.57	17.55±0.57	4.33±0.56
	Erythrina indica	8.66± 0.57	14.33 ±1.15	10.66 ±0.57		
	Lagerstroemia speciosa	9.66± 0.57	16.66 ±0.57	13.66 ±0.57		
Staphylococcus aureus. (Gram+ve)	Costus speciosus	5.66± 0.57	10.33 ±0.57	9.33± 0.57	4.66±0.57	20.33±0.57
	Erythrina indica	3.66± 0.57	9.33± 0.57	8.66± 0.57		
	Lagerstroemia speciosa	11.66 ±0.57	16.33 ±0.57	14.66 ±0.57		

Value are mean±S.D (n=3)

The antibacterial activity of selected plant species has been evaluated in vitro against two bacterial strains such as *Escherichia coli* and *Staphylococcus aureus*. Acetone, Methanol and Aqueous extract were screened against bacteria (Table 1).

Gram negative bacterial strain *Escherichia coli* showed significantly maximum zone of inhibition in *Lagerstroemia speciosa* at the concentration of 20 mg (16.66 mm) it is nearest to Streptomycin than *Costus speciosus* and *Erythrina indica* (5.33 mm and 14.33 mm) in methanol extract as well as in gram positive bacteria strain *Staphylococcus aureus* maximum zone of inhibition was observed in *Lagerstroemia speciosa* at same concentration (16.33 mm) it is nearest to Erythromycin than *Costus speciosus* and *Erythrina indica* (10.33 mm and 9.33 mm) in methanol extract. Methanol extract exhibit significant antibacterial activity when compare with slandered antibacterial agent (Streptomycin and Erythromycin).

The aqueous extract of *Lagerstroemia speciosa* also showed best antibacterial activity in *E. coli* and *S. aureus* (13.66 mm and 14.66 mm). In *Costus speciosus* (4.33mm and 9.33mm), *Erythrina indica* (10.66mm and 8.66mm).

The acetone extract of *Lagerstroemia speciosa* shows moderate antibacterial activity in *E. coli* and *S. aureus* (9.66mm and 11.66mm). the activity in *Costus speciosus* do not found in *E. coli* but found in *S. aureus* (5.66mm) *Erythrina indica* (8.66 mm and 3.66mm).

The Methanol extract of leaves shows significantly highest result in antibacterial activity against the gram negative as well as gram positive bacteria.

DISSUSSION

In the present study acetone, methanol and aqueous (distilled water) were used as a solvent source. Since the polarity of methanol and aqueous is higher most of the secondary metabolites of leaves were dissolved. The properties of medicinal plants due to the presence of various secondary metabolites such as alkaloids, flavonoids, tannin and phenols.

In the leaf of *Costus speciosus* the maximum bioactive compounds viz. flavonoids alkaloids, glycosides, steroids, phenol, tannins and steroids were found. Methanol extract shows significant results due to the presence of secondary metabolites agreed with previous work⁵.

The similar results also found in *Erythrina indica* and methanolic and aqueous solvents extracts on *E. coli* and *S. aureus*^{11,12}.

CONCLUSION

On the basis of observations and result obtained it was concluded that methanolic extract of *Lagerstroemia speciosa* showed at stronger antibacterial activity against both gram negative and gram positive bacterial strain. This justifies the methanolic extracts could be recommended as a good source of pharmaceutical materials required for the preparation of new antibacterial drugs and to isolate and characterize the medicinally active compounds.

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ANALYZING THE ORGANIZATIONAL CULTURE OF A NATIONALIZED BANK IN INDIA FROM THE GENERATION PERSPECTIVE

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ABSTRACT

In the continuous evolving era of organization culture in banks the requirement of the employees also keeps on changing. There is a continuous requirement from the management side to understand the perspective of the employee's needs and demands on physical and mental level. With the distribution of employees on the basis of their generation cohorts there is also an observation about there is difference in the conceiving of the organizational ethos. There is an attempt made to retrieve the reaction of the employees on the basis of their generation on what cultural aspect is significant and the relevant reasons. A validated instrument "OCTAPACE" by DrUdaiPareek is used for survey purpose. The reaction is again segregated on the basis of the official designation.

Keywords: Generation X, Generation Y, Nationalized Bank, Organizational Culture.

INTRODUCTION

In India, by taking Hofstede's model of cultural dimension (1984) in reference, the country is viewed as a masculine nation with a score of 56 on this measurement. Indian culture tends to be inclined towards masculinity as far as visual showcases of progress and power, notwithstanding the reality it scores scarcely over the midrange. In a patriarchal nation like India, the emphasis is on progress and an accomplishment is being approved by material achievement. Also there is a centrifugal importance given to professional life of an Indian employee life where the professional achievement and organization's reputation is considered to be critical. Though the Indian culture values confidence, intensity and desire of an individual, the professional achievement of any individual creates the social dominance. People may unconsciously do not accept the organization imperatives totally even though they are framed from time to time for the employees. Therefore there is a continuous requirement to revolutionize the organization culture with the future demand.

The definition of culture as per Hagberg and Heifetz (1998) is "it is an operating system of the organization. It guides how employees think, act and feel". Edgar H. Schien (1984) also defined the organization culture as "a set of basic assumptions that a given group invented, discovered or developed in learning to cope with its problems of external adaptations and internal integrations that have worked well enough to be considered valid, and therefore, to be taught to new members as a correct way to perceive, think and feel in relation to these problems". According to Daniel R Denison (1990) the definition is "Organization culture refers to the underlying values, beliefs and principles that serve as a foundation of organization's management systems, as well as the set of management practical and behaviors that both exemplify and reinforce those basic principles."

The work culture in India, is an amalgamation of various societal forces. Consistency in matching the expectation of the societal demands and organizational objectives is on the basis of the boundaries, technology, managerial practices, human and physical resources. All the resources can be the driving force or the constraints. With the inclusion of synchronizing the demand of organization and individual it's a continuous effort. With the entry of Millennial in workforce there is a lot of debate and research initiated on the behavior, skills, communication and the most important the compatibility with the other members of the organization (especially generation X). The focus has shifted from the ability of the millennial to create functional relation with the older generation, the hurdle which they encounter when they enter into the socialization with the other employees (Chao et al 1994 and van and Schien 1971). There is common belief observed in research wherein the millennial are found to be impatient, self obsessed, aloof and the most uncommitted employees (Howe and Strauss 2007, Jacobson 2007) and at the same time there are researches who have observed them to be more appreciative than compared to the previous generation, more compatible with the technology and communication, ability to forecast and predict the opportunities, have more solution oriented approach in all discussions (Howe and Strauss 2000; Tapscott 1998; Zemke et al 2000).

With the perspective to understand the insight of the millennial the current research paper makes an attempt to understand the basic difference in the employees of generation X and generation Y who are working in nationalized bank of Ahmedabad. The banking sector is one of the most competitive sectors in India. It has faced continuous challenges in terms of technological revolution, diversification in service, customer approach

and achieving the global standards and reforms. At each point of time the banking sector has claimed that their employees are their main DNA of survival. The knowledge, attitude, skill and competency of their employees is the basic survival tactics of the sector. Accordingly the compatibility of the organizational culture becomes equally significant. There are many studies like Gupta (2008) which recommends the core focus of all the HRD related policies are again targeted towards the development of the competencies of the employees. In order to facilitate and retain the employee development and commitment, there is a strong surge towards development of organizational culture and climate.

OBJECTIVES

- To assess and compare the components of OCTAPACE through the perspective of generation X and generation Y.

RESEARCH METHODOLOGY

In order to conduct the survey 320 employees of the nationalized bank were approached. They were full time employees working in nationalized bank, whose name is kept anonymous on the basis of request. The instrument used in the research is "OCTAPACE" by DrUdaiPareekh. Based on guide lines OCTAPACE, an extensive study was done on the nationalized banks. Bank employees were interviewed and their responses were recorded for analysis. The respondents were approached on convenient basis and the responses were captured online and through hard copies as per the request of the respondents. At the end 300 complete responses were recorded.

300 bank employees from the two age brackets i.e. 62% were from generation Y (birth year ranging from 1980 to 1999) and 38% were from generation X (birth year ranging from 1969 to 1979) were interviewed as follows.

Table-1: Generation wise gender break up.

Category	GEN X	GEN Y	Total
Male	22%	34%	56%
Female	16%	28%	44%
Total	38%	62%	100%

Table-2: Gender and generation wise response towards the organization.

	GENDER	Percentage			
		Gen Y -Negative %	GenY +Positive %	Gen X -Negative %	Gen X +Positive %
O	M	29.41	70.59	20	80
	F	32.86	67.14	18.75	81.25
C	M	28.24	71.76	19.09	73.64
	F	18.57	81.43	12.5	87.5
T	M	21.18	78.82	28.18	71.81
	F	14.29	85.71	28.75	71.25
A	M	43.53	56.47	45.45	54.55
	F	41.43	58.57	37.5	62.5
P	M	28.24	71.76	21.82	78.18
	F	42.86	57.14	30	70
A	M	44.71	55.29	30.91	69.09
	F	40	60	22.5	77.5
C	M	27.06	72.94	22.73	77.27
	F	27.14	72.86	22.5	77.5
E	M	37.65	62.35	31.82	68.18
	F	32.86	67.14	27.5	72.5

PRIMARY ANALYSIS

For the sake of simplicity and better understanding, the Male and Female respondents of GEN X and GEN Y were further broken up in to Officers and Clerks. Officers include the employees like, Assistant Manager, Branch Manager, Agriculture officer, loan process officer Chief Manager, Assistant General Manager and General Manager. All other staff like fresher, accountants, Cashiers, Tellers, Senior Assistant, Special Assistant etc are summed up as Clerks.

From the above table various combinations were made for a comparative study. They are as under

Note:

For example;

OMX means OF. Male Gen X

CFY means Clerk Female Gen Y

Table-4: category wise gender response towards OCTAPACE model

CLASS	GENDER	GENERATION	RESPONSE	Openness	Confrontation	Trust	Authenticity	Proactive	Autonomy	Collaboration	Experimentation
O	M	Y	P%	81.05	75.79	76.84	61.05	60	57.89	73.68	57.89
O	M	Y	N%	18.95	24.21	23.16	38.95	40	42.11	26.32	42.11
O	F	Y	P%	65	70	68.33	71.67	53.33	65	76.67	65
O	F	Y	N%	35	30	31.67	28.33	46.67	35	23.33	35
O	M	X	P%	83.08	83.08	78.46	58.46	76.92	58.46	75.38	73.85
O	M	X	N%	16.92	16.92	21.54	41.54	23.08	41.54	24.62	26.15
O	F	X	P%	97.5	95	77.5	72.5	72.5	72.5	70	80
O.	F	X	N%	2.5	5	22.5	27.5	27.5	27.5	30	20
C	F	X	P%	75	77.5	65	52.5	65	55	82.5	62.5
C	F	X	N%	25	22.5	35	47.5	35	45	17.5	37.5
C	M	X	P%	80	55.56	62.22	35.56	82.22	48.89	75.56	57.78
C	M	X	N%	20	44.44	37.78	64.44	17.78	51.11	24.44	42.22
C	F	Y	P%	77.5	86.25	80	47.5	53.75	57.5	73.75	66.25
C	F	Y	N%	22.5	13.75	20	52.5	46.25	42.5	26.25	33.75
C	M	Y	P%	89.33	61.33	69.33	41.33	73.33	28	70.67	34.67
C	M	Y	N%	10.67	38.67	30.67	58.67	26.67	72	29.33	65.33

NOTE

O=OFFICERS, C= CLERK,

M= MALE, F=FEMALE

X=GEN X, Y= GEN Y

P% = Percentage of Positive responses in a particular category

Combination-1: Male and Female Officers of Gen X

GEN	RESPO	O	C	T	A	P	A	C	E
OMX	P%	83.08	83.08	78.46	58.46	76.92	58.46	75.38	73.85
OFX	P%	97.5	95	77.5	72.5	72.5	72.5	70	80

1. Female Officers scale highest on 5 out of 8 values i.e. Openness (97.5%), Confrontation (95%), Authenticity (82.22%), Autonomy (72.5%) and Experimentation (80%)
2. Female Officers scale lowest on Collaboration (70%).
3. Female Officers seem more positive towards facing challenges.

Combination-2: Male and Female Officers of Gen Y

GEN	RESPO	O	C	T	A	P	A	C	E
OMY	P%	81.05	75.79	76.84	61.05	60	57.89	73.68	57.89
OFY	P%	65	70	68.33	71.67	53.33	65	76.67	65

1. Female Officers of Gen Y scale the least on Openness (65%) and Pro-action (53.33%).
2. Male Officers are more open than female officers; however the openness in Gen Y is less.

Combination-3: Male Officers of Gen X and Gen Y

GEN	RESPO	O	C	T	A	P	A	C	E
OMY	P%	81.05	75.79	76.84	61.05	60	57.89	73.68	57.89
OMX	P%	83.08	83.08	78.46	58.46	76.92	58.46	75.38	73.85

1. Male Officers of Gen X and Gen Y share almost equal opinion as regards to openness, trust, authenticity and collaboration.
2. However male Officers of Gen X are more positive than male Officers of Gen Y as regards to pro action and experimentation.
3. Officers of Gen X believe in taking preventive actions (considering both negative and positive aspects) on most of the matters.

Combination-4: Female Officers of Gen X and Gen Y

GEN	RESPO	O	C	T	A	P	A	C	E
OFY	P%	65	70	68.33	71.67	53.33	65	76.67	65
OFX	P%	97.5	95	77.5	72.5	72.5	72.5	70	80

1. Female Officers of Gen X are very positive to openness (97.5%) than the female Officers of Gen Y (65%).
2. Female Officers of Gen X are self- dependent and encourage their subordinates.
3. Female Officers of Gen X are seemed to be more positive than the female Officers of Gen Y.

Combination-5: Male and Female clerks of Gen X

GEN	RESPO	O	C	T	A	P	A	C	E
CFX	P%	75	77.5	65	52.5	65	55	82.5	62.5
CMX	P%	80	55.56	62.22	35.56	82.22	48.89	75.56	57.78

1. Female Clerks of Gen X scale highest on collaboration (82.5%)
2. Male clerks of Gen X scales least on Confrontation(55.56), Trust (62.22%) and Authenticity (35.56)
3. Female clerks of Gen X are very proactive (82%).

Combination-6: Male Clerks of Gen X and Gen Y

GEN	RESPO	O	C	T	A	P	A	C	E
CMX	P%	80	55.56	62.22	35.56	82.22	48.89	75.56	57.78
CMY	P%	89.33	61.33	69.33	41.33	73.33	28	70.67	34.67

1. Male clerks of Gen Y are least positive towards Autonomy (28%) and Experimentation (34.67%).
2. Male clerks of Gen Y (89.33%) are more open than the male clerks of Gen X (80%).
3. Male clerks of Gen X (82.22%) are more proactive than male clerks of Gen Y (73.33%).

Combination-7: Female Clerks of Gen X and Gen Y

GEN	RESPO	O	C	T	A	P	A	C	E
CFX	P%	75	77.5	65	52.5	65	55	82.5	62.5
CFY	P%	77.5	86.25	80	47.5	53.75	57.5	73.75	66.25

1. Female clerks of Gen Y are the most positive towards Trust (80%).
2. Female clerks of Gen Y are most positive on the scales of confrontation, i.e. they exhibit more courage towards facing challenges.
3. However they too think that people are not as they appear (47.5% positive).
4. Female clerks of Gen X seem more inclined towards team work.

Combination-8: Male and Female Clerks of Gen Y

GEN	RESPO	O	C	T	A	P	A	C	E
CFY	P%	77.5	86.25	80	47.5	53.75	57.5	73.75	66.25
CMY	P%	89.33	61.33	69.33	41.33	73.33	28	70.67	34.67

1. Male clerks of Gen Y are negative on the scales of autonomy (59% negative, 41% positive).
2. Male clerks of Gen Y are very positive towards openness (89.33%) compared to female clerks of Gen Y (77.5%).

Combination-9: Male Officers and Clerks of Gen X

GEN	RESPO	O	C	T	A	P	A	C	E
OMX	P%	83.08	83.08	78.46	58.46	76.92	58.46	75.38	73.85
CMX	P%	80	55.56	62.22	35.56	82.22	48.89	75.56	57.78

1. Both are very positive towards openness i.e. 80% and 83%.
2. Officers are more positive towards facing challenges (83.08% positive) compared to clerks which is just 55.56% positive.
3. Male clerks of Gen X scale least on authenticity. I.e. 35.56%.

Combination-10: Male Officers and Clerks of Gen Y

GEN	RESPO	O	C	T	A	P	A	C	E
OMY	P%	81.05	75.79	76.84	61.05	60	57.89	73.68	57.89
CMY	P%	89.33	61.33	69.33	41.33	73.33	28	70.67	34.67

1. Clerks are more open than OF.s.
2. Officers are more positive than clerks in taking up challenges.
3. Clerks are least positive towards autonomy (28% positive) whereas Officers are almost twice more positive towards autonomy, i.e. 58% positive.

Combination-11: Female Officers and Clerks of Gen X

GEN	RESPO	O	C	T	A	P	A	C	E
OFX	P%	97.5	95	77.5	72.5	72.5	72.5	70	80
CFX	P%	75	77.5	65	52.5	65	55	82.5	62.5

1. Female Officers of Gen X scale high on openness and confrontation i.e. 97.5 % & 95% respectively.
2. Female Officers of Gen X are ahead of female clerks of Gen X on every value except collaboration where female clerks believe more in team work.

Combination-12: Female Officers and Clerks of Gen Y

GEN	RESPO	O	C	T	A	P	A	C	E
OFY	P%	65	70	68.33	71.67	53.33	65	76.67	65
CFY	P%	77.5	86.25	80	47.5	53.75	57.5	73.75	66.25

Female clerks of Gen Y have a higher perception (47.5% positive only in autonomy) that people are not as they appear, as compared to the female Officers of Gen Y (71.67% positive in autonomy)

Table-5: Summary of Highest and Lowest positive responses to the 8 values of OCTAPACE

CLASS	GENDER	GEN	RESPONSE	O	C	T	A	P	A	C	E
OF	M	Y	P%	81.05	75.79	76.84	61.05	60	57.89	73.68	57.89
OF	F	Y	P%	65	70	68.33	71.67	53.33	65	76.67	65
OF	M	X	P%	83.08	83.08	78.46	58.46	76.92	58.46	75.38	73.85
OF	F	X	P%	97.5	95	77.5	72.5	72.5	72.5	70	80
C	F	X	P%	75	77.5	65	52.5	65	55	82.5	62.5
C	M	X	P%	80	55.56	62.22	35.56	82.22	48.89	75.56	57.78
C	F	Y	P%	77.5	86.25	80	47.5	53.75	57.5	73.75	66.25
C	M	Y	P%	89.33	61.33	69.33	41.33	73.33	28	70.67	34.67
			Avg	81.06	75.56	72.21	55.07	67.13	55.41	74.78	62.24
			Max	97.5	95	80	72.5	82.22	72.5	82.5	80
			Min	65	55.56	62.22	35.56	53.33	28	70	34.67

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1. OFX scale highest on 5 out of 8 values i.e. Openness(97.5%), Confrontation(95%), Authenticity(82.22%), Autonomy (72.5%) and Experimentation (80%) where as they scale lowest on Collaboration (70%) as against the highest 82.5 %
2. CFX scale highest on collaboration (82.5%)
3. CMX scales least on Confrontation(55.56), Trust (62.22%) and Authenticity (35.56) where as they scale highest on Pro-action
4. CFY are the most positive towards Trust (80%)
5. CMY are least positive towards Autonomy (28%) and Experimentation (34.67%)
6. OFY scale the least on Openness (65%) and Pro-action (53.33%)
7. The Average Values reveal that Autonomy and Authenticity find the lowest place in the series.ie. 55.41% and 55.07% respectively.
8. The Average value of Openness is the highest of all other values i.e. 81.06%.

CONCLUSION

As per the analysis and the evaluation provided we can understand that with each segment of the population there is a different set of requirement from the organizational culture which is very challenging and subjective for the HRD. Nevertheless the policy framework of the organization could revolve around the openness of the OCTAPACE which is found to be having the maximum average value. It has been observed that Generation X always echoes the values of collaboration between the employees and departments. Generation Y is more into trust, autonomy and experimentation. An inference can also be deduced that there is more of a collaborative approach of generation X and individual approach of generation Y.

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PERSPECTIVES INFLUENCING EDUCATION IN TWENTY-FIRST CENTURY: INCLUSIVE EDUCATION, CONSTRUCTIVISM, GENDER SENSITIZATION AND ENVIRONMENTAL LITERACY

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ABSTRACT

The present paper is an endeavor to discuss the few major and important perspectives influencing education in twenty first century as Inclusive Education, Constructivism, Gender Sensitization and Environmental Literacy. Twenty first century created rather complexity and brought great revolution in each and every sector everywhere in present globalised world and changed the perspectives of society and individuals. The century came up with deep-rooted challenges to the nature, values and control of both school education and higher education. Expectations of the society from the both school education and higher education and their public resources are undergoing fundamental shifts. Both external and internal changes of education are altering its character, its students, faculty, governance, curriculum, functions, and each and every part of society. The paper also talks about the perspectives in details which are not merely influencing the process of education but its whole system. Inclusive Education is an approach to educate all children who are at risk for neglect in education system. It expects that all learners learn together through access to common educational provisions. Gender sensitization regulates gender sensitivity which refers to the modification of behavior through bringing or raising awareness about the issues and concerns of gender equality. The environment has been a main topic of debate and discussion and much has been discussed about the necessity to take action to protect this planet and awareness. Education plays an important and an essential role in increasing awareness of environmental problems and challenges and shaping the behaviors and attitudes.

Keywords: Twenty-first Century, Perspective, Inclusive Education, Constructivism, Gender Sensitization and Environmental literacy.

INTRODUCTION

The twenty-first century has come up with deep-rooted and profound challenges to the nature, values and control of both school education and higher education in each and every country of present world. Expectations of the society from the both school education and higher education and their public resources are undergoing fundamental shifts. Both external and internal changes of education are altering its character, its students, faculty, governance, curriculum, functions, and each and every part of society. The social, cultural, political and economic development but complete future of the country depends on the contributions of those who are students today. The century demands that the education must be more visionary than ever before and future-oriented because of technological and scientific innovations and revolution in the field of communication and transport and, industrialization and unbelievable socio-economic and socio-political reforms and challenges. The concept of lifelong learning demands us to have close look on education in all its dimensions, both as an instrument for betterment and advancement of individuals and society and as an end in itself. Education must fulfill and satisfy some basic and specific requirements, teaching skills, preparing people for their future. But education which directly or indirectly narrows utilitarian aims will be ultimately partial and will be unable to attain even those aims properly it has itself set. A new educational philosophy for the twenty-first century is that innovations, technology, science and research have been indispensable tools of education to survive with rapid changes happening in the century. Educational innovations are important, crucial, and undoubtedly would be effective if they are research-based and permeated with technology (i.e. systematic approach to the teaching-learning process); and technology in education (e.g. use of hard-wares and soft-wares). Eventually, new dialogues will take place and fresh perspectives can be generated. The few major perspectives influencing the whole system of education and the process of education itself are Inclusive Education, Constructivism, and Gender Sensitization and Environmental literacy.

INCLUSIVE EDUCATION

Inclusive Education is an approach to educate all children who are at risk for neglect in education system. It expects that all learners learn together through access to common educational provisions. The crucial people in the system are the parents, community, teachers, administrators and policy makers. All these people have to be supportive towards the diverse needs of children. It should be seen as an experience rather than a problem. The concept of inclusiveness in education was adopted at the "World Conference on Special Needs Education: Access and Quality" (Salamanca Statement, Spain 1994) and was mentioned again at the "World Education Forum" (Dakar, Senegal 2000). The Statement demands every country and state of the world to give

the utmost priority to make education system inclusive in nature and adopt the theory and concept of inclusiveness in education as an important matter of policy making. The idea of inclusion is further supported by the “United Nation’s Standard Rules on Equalization of Opportunities for Person with Disability” which proclaims the participation and equality for all. UNICEF has defined “Inclusive Education as a process of addressing the diverse needs of all learners by reducing barriers to, and within the learning environment. It means attending the age appropriate class of the child’s local school, with individually tailored support” (UNICEF 2007). In other word, inclusive education is a process of reinforcing the capacity building of the education system to reach out to all individuals of the society irrespective of their socio-political, socio-economic and cultural background. Inclusion in education system is an approach and philosophy that advocates greater educational opportunities for academic and social achievements. The philosophy behind this humanitarian approach and perspective is creating and providing opportunities to take part in the full range of social and recreational arts, sports, music, day care and afterschool care, extra-curricular and all other activities.

INCLUSIVE EDUCATION IN INDIA

The constitution of India mentions concept of inclusive education as a fundamental right which is binding upon all citizens of the country. Article 45 (Part IX) of the constitution says that the state shall endeavor to provide, within a period of ten years from the commencement of this constitution, for free and compulsory education for all children of six to fourteen years of their age. The Supreme Court’s Unnikrishnan judgment in 1993 reinforced and strengthened Article 45. In this case, the court said that Article 45 must be read in conjunction with Article 21 of the constitution, which states that “No person shall be deprived of his life or personal liberty except according to procedure established by law.” The 86th amendment to the constitution, section 21A reads, “The State shall provide free and compulsory education to all children of the age of six to fourteen years in such manner as the State may, by law, determine.” The Ministry of Welfare, Government of India, created the Integrated Education of Disabled Children Scheme (IEDC) and the programme provided children with disabilities “financial support for books, school uniforms, transportation, special equipment and aids,” with the intention that these aids will support to include these children in mainstream classrooms. The National Policy on Education (NPE), 1986 states that children with mild disabilities should be included in mainstream classrooms, whereas children with moderate to severe disabilities should be placed in segregated schools. The Rehabilitation Council of India (RCI) Act came into existence in 1992. The RCI Act discussed all about disabilities and provided standards for rehabilitation professionals. That is why one type of rehabilitation professional will be treated as special education teachers. This act is worth mentioning because it made compulsory special educators or special education teachers to get registered and get license from RCI otherwise these teachers will bear consequences for teaching without a license. Teachers without a license could face imprisonment for up to one year, or would be fined 1000 rupees, or both.

CONSTRUCTIVISM

Constructivism has been a centre of discussion in the process of teaching-learning and took a key place in present education system. This is used as a broad term by philosophers, curriculum designers, psychologists, educators and others in contemporary philosophy, psychology, epistemology, and education (von glaserfeld, 1997, p.204). Mostly those who use the term underline “the learner’s contribution to meaning and learning through both in individual and social activity” (Bruning, Schraw, & Ronning 1999, p.215). Concept and theory of constructivist are rooted in the research of Piaget, Vigotsky, the gestalt psychologists, Bartlett, and Bruner as well as the educational philosophy of John Dewey, for the maintenance of few intellectual bases. On the one hand, constructivism adopts many theoretical perspectives on learning but on the other hand it does not itself suggest any particular pedagogy. The view supports strategies which encourage and enable learners to select and transform information, construct their own hypotheses and can be active in their own learning. This is an active process of learning where learners themselves construct new knowledge and ideas or concepts based upon their present and past experiences. Behaviorist theories about transmission of knowledge to learners have been outdated because it has become clear to each individual that when teachers and instructors teach or instruct something to learners, they cannot expect that these learners will make sense of it in the way these teachers and instructors intend. It seen that every learner internally construct the knowledge and makes sense of it in its own way. Concept of constructivism focuses attention on the learning rather than on the teaching. Constructivism is a theory of learning which can be seen and found in ‘learning by doing’ or experiential learning. Though, practical activities may go to some extent towards supporting children to construct knowledge own their own but activity kit items are not sufficient as in itself it does not embody a concept.

THE THEORY OF CONSTRUCTIVISM

The credit of the theory of constructivism is generally goes to Jean Piaget, who created some mechanisms by which learners internalize knowledge. He advocated that individuals construct new knowledge from their

experiences through processes of accommodation and assimilation. When people assimilate something, it means that they incorporate the new experience into an already existing mental structure without modifying that structure. This may happen when the experiences of people are evened up their personal and internal representations of the world, but may fail to change a faulty understanding. Unlike assimilation, when the experiences of people contradict their internal representations, they may modify and change their perceptions of the experiences to fit their internal representations. According to the theory, accommodation is the process of restructuring one's mental representation of the external world to fit new experiences. Accommodation can be understood as a mechanism which strongly advocates and proves that failure leads to learning: when an individual acts upon the expectation that the world operates but it violates his/her expectations, that individual often fails, but by accommodating this new experience and reframing his/her model of the way the world works, he/she learns from the experience of failure, or others' failure. It is necessary to understand that constructivism is not a particular pedagogy in teaching and learning but it is a theory which describes how learning happens, irrespective of whether learners are using their past and existing experiences to understand a lecture or not. In both cases, the theory of constructivism suggests that learners construct new knowledge out of their past and already existing experiences. Constructivism is a philosophy of learning originated on the premise that, by reflecting on prior experiences, individuals construct our own understanding of the world we live in. Each individual in the world generates her/his own rules and mental models, which people use to make sense of their experiences. In short, learning is simply the process of adjusting our mental models and structures to accommodate new experiences.

GENDER SENSITIZATION

Gender refers to social classification of men and women into masculine and feminine. Gender is a socially constructed phenomenon and it exists into a number of social institutions e.g. family, educational institutions, workplace, religious system, norms and beliefs. Contrary to sex, which is biological the gender identities of men, women and others are socially and psychologically constructed and historically and culturally determined. The particular process of socialization which teaches children about their gender roles is called gendering. The construction of concept of gender is mostly done by dominant groups of the society who assign role and responsibilities and expect differently from males and females. For instance, it is societies that stereotype the toys as well as dresses according to the gender like girls should play with dolls especially Barbie and boys should play with cars and guns.

Gender sensitization presides over gender sensitivity which means modification of behavior of individuals by creating and raising awareness regarding issues and concerns of gender equality. The purpose of gender sensitization can be accomplished through conducting various sensitization campaigns, conferences, workshops, seminars, symposiums, training centers, and likewise other programmes. Gender sensitization theories establish that the behavior of teachers and parents towards children has strong effect on children's behavior about gender equality. Therefore, the behavior of teachers and parents should also be modified. In other words gender sensitizing is a process of changing behavior of individuals and instilling empathy about other genders. This process helps support people to examine their personal attitudes and beliefs and question the realities they thought they know. Gender Sensitization is one of the fundamental needs for the normal growth and development of individuals. Because people without being sensitive to the requirements of a particular gender, they may not be able to understand the opposite gender. The necessity and importance of this sensitivity have been realized through the beginning and in almost all kinds of human existence, across the globe. (Wikipedia: Gender Sensitization)

GENDER SENSITIZATION AND EDUCATION

Gender sensitization in schools is one of the most important steps in this regard. Efforts are being made to incorporate gender sensitivity programmes in the education system and strong demands are being raised to make it a compulsory subject in the school curriculum. Thus, it becomes imperative that the process of inculcating values of gender equality begins early in life. Gender sensitization in schools is one of the most important steps in this regard. Efforts are being made to incorporate gender sensitivity programmes in the education system and strong demands are being raised to make it a compulsory subject in the school curriculum. However, making educational institutes gender-sensitive and incorporating gender sensitization in the school curriculum help change sexist perceptions that the young students develop over a period of time. Girls and boys are able to see each other as responsible and equal partners in the socio-economic development as they are able to identify areas and instances of gender bias. They also learn to be more expressive as well as assertive as they realize that their abilities are not defined by their gender. They learn to critically question and examine established codes and norms that give rise to rigid gender divisions or roles. Children who have learnt to respect

both genders equally have the potential to become instruments of social change. A gender-sensitized person makes a conscious effort to make the environment favorable for everyone to flourish and prosper.

Regarding gender sensitization, teachers are supposed to take responsibility to act as agents of change for the purpose of achieving gender equality through their teachings as what contents they teach, what methods and approach they opt to teach and how they behave, their beliefs and practices both inside and outside the classroom. Educational institutions are the places where the socializing process is underpinned and given validity and credibility. The knowledge about social issues and concerns as gender is constructed, authenticated, preserved and sustained by schools through textbooks, pedagogy and methods of teaching, assessment and evaluation and the academic environment to minimize. For this purpose, intelligent and educated teachers who have a sound knowledge regarding gender issues are needed in the society. Teachers affect the children in their early upbringing and their construction of concepts, ideas and beliefs. Teachers need not only to have gender sensitive curriculum and textbooks but also gender equality education rather they can serve as role models for the students in each and every aspect of their life.

ENVIRONMENTAL LITERACY

The environment has been a main topic of debate and discussion in the press as well as in classrooms in each and every part of the world and much has been discussed about the necessity to take action to protect this planet and awareness among people in this regard. Scientists have predicted that if climate changes continuously at the current trends then the temperature will increase at the rate between 3 and 6 degrees Celsius by 2050. If temperature increases at this rate then it would lead to water crisis for millions of people, decrease and reduce agricultural yields, increase death of millions of people because of malnutrition related diseases and lead to the extinction of a large number of living species. Education plays an important and an essential role in increasing awareness of environmental problems and challenges and shaping the behaviors and attitudes that can make a difference. The most common and the best known definition of the environment in simple words is that environment is everything that surrounds us. But as educationist and concerned about environment we need more comprehensive and broader definition that explains the complex social and ecological relationships among all living organism, especially humans to develop an urge and instinct into the people to protect and conserve the environment which surrounds them. Thus, a more clear and simple definition is “the environment is the complex set of physical, geographic, biological, social, cultural and political conditions that surround an individual or organism that ultimately determines its form and the nature of its survival” (Robert Steel, 2010). Actually, the environment is a loan-blend part of biophysics and society, because, there is no place on the earth’s surface where an environment (or nature) untouched by the impact of human beings. The environment is the product of both social and biophysical structures and processes too.

EDUCATION AND ENVIRONMENT

Environment can be promoted by various means and one of the most effective among them is giving proper education to the both the generations new as well as old. Education to bring awareness about protection and conservation of environment is essential for the benefit of whole society including living and non-living organism. Education can act as suitable solution to solve various types of challenges and problems that exist in present society. That is why education has a key role to play in saving and protecting natural environment. More educated and learned people are seen not only to be more conscious and concerned about the environment, but also work to engage other people in actions that support and promote political decisions in regards of protection and conservation of environment. Pressure of civil societies and educated intellectuals of the country is an important way of compelling and pushing the ruling government towards such binding agreement that is required to control greenhouse gases and reduce levels of emission. Global Warming Citizen Survey in the United States also pointed out in its own analysis that the higher a respondent’s education level, the greater participation and environment-friendly behavior. By increasing awareness about environment and its associated issues, education can persuade and inspire people to reduce negative impact on the environment by using energy more efficiently and by water supplies, especially in the areas which are facing the scarcity of resources. Educated households mostly use different methods of purification of water by filtering and boiling. In urban areas of our country, the probability of water purification increased by 9% when mostly educated adults had completed elementary education and purification increased by 22% when mostly educated adults had completed the level of secondary education.

CONCLUSION

Twenty first century is a century of technology, science, industrialization, globalization, materialism, innovations, revolution in the field of communication and transport and explosion of knowledge. This century requires a new educational philosophy of education to cope with rapid changes, innovation, science and

technology. The twenty-first century has come up with deep-rooted and profound challenges to the nature, values and control of both school education and higher education in each and every country of present world. Expectations of the society from the both school education and higher education and their public resources are undergoing fundamental shifts. Both external and internal changes of education are altering its character, its students, faculty, governance, curriculum, functions, and each and every part of society. The few major perspectives influencing the whole system of education and the process of education itself are Inclusive Education, Constructivism, and Gender Sensitization and Environmental literacy as they all have been discussed before in details. Inclusion is an approach and a philosophy in education that advocates providing all students irrespective of their caste, creed, and religion, gender etc. greater educational opportunities for academic and social achievements. The philosophy behind this humanitarian approach and perspective is creating and providing opportunities to take part in the full range of social and recreational arts, sports, music, day care and afterschool care, extra-curricular and all other activities. Constructivism in learning is a constructed and felt need of this twenty first century and has taken an important place in present education in the world. This is an active process of learning where learners themselves construct new knowledge and ideas or concepts based upon their present and past experiences. Gender sensitization is a meter of discussion very where in the world and it presides over gender sensitivity which refers to the modification of behavior by raising awareness of gender equality concerns. This can be achieved by conducting various sensitization campaigns, training centers, workshop, programs etc. Scientists have predicted that if climate changes continuously at the current trends then the temperature will increase at the rate between 3 and 6 degrees Celsius by 2050. If temperature increases at this rate then it would lead to water crisis for millions of people, decrease and reduce agricultural yields, increase death of millions of people because of malnutrition related diseases and lead to the extinction of a large number of living species. Education plays an important and an essential role in increasing awareness of environmental problems and challenges and shaping the behaviors and attitudes that can make a difference.

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RISK TOLERANCE AND MANAGEMENT OF COMMERCIAL BANKS IN INDIA – A DESCRIPTIVE ANALYSIS

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ABSTRACT

Risk Management is strategy which controls different types of risk which are associated with a business organization. This paper is an effort regarding different types of risk which are associated with the banking sectors. The study has been done on small, medium and large banking sectors. In this study, the steps which have been taken by the banks to control these risks will be examined. This paper will help in creating a good framework that will act as asset for banks in dealing with these risks.

Keywords: Risk Tolerance, Risk Management, Commercial Banks, ANOVA Test and Descriptive Analysis JEL Classifications: G21, G32

1. INTRODUCTION

Risks are meant by the hindrance which comes in the way of success or completion of any task. Risk makes a situation more critical. It is better to take preventive measures rather than facing the risk. Banks should be aware about the risk before analyzing and responding to it. Taking risk, analyzing it, responding to it and gaining profit out of it is a continuous process.

Discussing here the major types of risk which are associated with bank. There are mainly these types of risk which banks are facing which are listed down

1. Credit risk
2. Operation risk
3. Market risk
4. Liquidity risk
5. Reputation Risk
6. Interest rate risk
7. Legal risk

The profit for any organization depends on the access amount which bank gets in return of its risk. The total amount exceeds to principle amount then bank is in profit and vice-verso. There is a different strategy in dealing with each risk which is associated with bank.

I. Credit Risk

If a borrower doesn't pay money back to the bank which has been taken as a loan, it is called credit risk. In this case bank loses its principle amount. These are the most common risk and borrower refuse to pay installments and banks incurred losses.

II. Market Risk

Due to the market movements or investors changing mind shares of bank goes down thus profit too. Apart from offering loans, banks deal in securities to cater capital market. Bank faces many types of equity risk. Bank hold large amount of equities. Holding large amount of equities may lead to equity risk.

III. Operation Risk

Operation risk is different from credit and market risk. Operation risk arises due to human error, system failure, failure due to internal process, breaks down, failure in day to day business activity are a part of operation risk. These risks can be divided into 3 categories:

- ✓ Human Risk (Loss because of human error)
- ✓ IT Risk (Failure due to the technology)
- ✓ Processes Risk (Leaking information, improper information)

Some of the real case study explaining credit risk, market risk and operation risk

- **CASE 1-** We must be aware of PNB case of 11400 crores of recent fraud which resulted in Credit risk, operation risk & reputation risk against PNB.
- **CASE 2-** The second case of SBI total exposure 1458 crores followed by IDBI 728 crores, PNB 710 crores, BOI 575 cr. & BOB 538 crores respectively. The bank has finally covered 963 crores from the auction rest is all credit risk.
- **CASE 3-** Videocon and ICICI bank case. Videocon gets loan of 3500 crores from ICICI in 2017 but failed to pay whole amount and paid only 2810 crores. This large amount results in reputation of bank on stake.

After studying and analyzing these three cases we can see how credit risk, operation risk and market risk results in huge loss for the banks.

IV. Liquidity Risk

When bank doesn't offer loans or credits due to less cash carry or fear of getting it back which results in less flow of money results in less liquidity.

CASE 4- Bank of Baroda. Due to the substantial loss, Bank of Baroda was not providing loans and credits to its genuine customer that resulted in liquidity risk because of less cash flow.

V. Reputation Risk

The success of any bank or institution depends on reputation. Once reputation goes enterprise suffers with losses. Customers face safe and fair-trade practices from bank this is why customers invest in banks, mutual fund shares and many more. Once involved in illegal practices, loss their goodwill and reputation from stakeholders.

VI. Interest Rate Risk

Unexpected change in interest will have a negative impact on value of any investment. It is calculated by getting the differences between total interest income and total interest expenses.

VII. Legal Risk

Financial loss arises by legal suits filed against the bank for not operating in a legal way or better say for applying law in a wrong way.

2. PROCESS OF RISK MANAGEMENT

There are few steps which bank follows

- Risk Identification** – It is the first step. Very carefully bank has to analyze the risk, because the next step will be successful only when it has analyzed the risk carefully.
- Risk assessment and Measurement** - Risk has been analyzed in the first step. Next is to understand the consequences regarding risk.
- Risk Control** - To control the risk one must identify and assess the risk. Then only controlling the risk is possible through using tools.
- Risk Monitoring** - Regular follow-up the risk is necessary. Once risk is growing high, it means Institution is going under loss.
- Balancing the risk** - Regular balancing of risk against return.

3. STATEMENT OF PROBLEM

The risk management is a common phenomenon in the banking industry. Risks are involved when we talk about the functioning of banking. Some risks can be controlled while some can't. The banks should be capable of dealing with risks. The biggest problem is to design customized and personalized tools and techniques for each and every risk. There is not common tool taken into consideration while dealing with the number of risks. Each risk has different aspect and output as compared to other risks. So, the tools and techniques should be designed differently for each risk.

4. OBJECTIVES

- To understand the number of risks faced by any bank
- To examine the process of Risk Management.

5. HYPOTHESIS

Upon this aim, researcher formulated null hypothesis:

Null hypothesis: There is no significant difference in the risk associated with size of the bank.

6. RESEARCH METHODOLOGY

This paper is based on descriptive research. This research is being conducted only in Indian banks. Sample size is 30 (small, medium and large size banks 10 each).

7. DATA ANALYSIS

Data has been taken from last 10 years of working of small, medium and large banks which has been taken into consideration. It shows highest risk and lowest risk among these three types. Sample has been taken from small, Medium & large size banks 10 each from each size.

Table-1: (Descriptive Research)

Sector	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean (Lower bound)	95% Confidence Interval for Mean (Upper Bound)	Minimum	Maximum
Small	10	1587.5000	154.78480	77.39240	1341.2028	1833.7972	1450.00	1800.00
Medium	10	735.0000	405.55175	128.24672	444.8858	1025.1142	200.00	1400.00
Large	10	795.0000	367.00742	116.05794	532.4587	1057.5413	350.00	1400.00
Total	30	902.0833	467.99275	95.52862	704.4673	1099.6993	200.00	1800.00

Source: RBI – Statistics reports

Table -2 (ANOVA)

ANOVA					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2273020.833	2	1136510.417	8.634	.002
Within Groups	2764375.000	21	131636.905		
Total	5037395.833	23			

Source: Calculated Data

7.1. ANALYSIS AND INTERPRETATION

- The highest risk is associated with small scale banking sector, which is 1587.5
- The value of f-test is higher than p value so the null hypothesis is rejected ($f=8.634$, $\text{sig.}=.002$)

8. CONCLUSION AND SUGGESTIONS

- I. Survival of any bank depends how quickly bank is taking positive turn.
- II. Risks are common. So, the banks should be capable of dealing with it.
- III. Rather than waiting for the changes and react to it, the banks should be prepared before it happens.
- IV. There should be organized committee for risk handling.
- V. Proper use MIS will be helpful in offering loans seeing customer's previous record or status.
- VI. Banks should play a safe game rather than involving itself in risk just for the sake of profit
- VII. Bank should possess proper rating system and techniques required to handle the risk.

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EDUCATION AND INTERFAITH: ROLE OF EDUCATION IN INTERFAITH DIALOGUE

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ABSTRACT

India has been a birthplace of certain religions and also has been sustaining many other religions. As India is a pluralistic country, all religions have become integral part of India's socio-cultural diversity. Being such a diversified country it is very necessary for the nation to avoid the unnecessary religious conflicts. For any country to avoid the religious conflicts it is essential for the people to respect and understand each other's faith; interfaith learning is such a system to induce trust and understanding in the wider populace regarding various religions. Education is one of the tools that are extensively used in the process of interfaith learning. Islam is one of the religions which has always stressed on the interfaith dialogue. This paper is centered on the debate regarding the interfaith learning with a special reference to the Islam initiated interfaith education; and also the role of education in encouraging the interfaith learning. This paper explains the need of interfaith, the perception of Islam on interfaith education, the role of education and the stress Islam puts on the education as mode of interfaith learning. The distinctive analysis and comprehension in the paper would assist on further broadening the concept of interfaith leaning and also helps understand the evolution of the concept of interfaith learning.

Keywords : Education, Interfaith Dialogue, Islam, Fundamentalism and Communalism, Mutual Enrichment, Misconceptions and Reciprocal Encounter

INTERFAITH DIALOGUE

Interfaith dialogue refers to a cooperative interaction between people adhering to different religions, spiritual and other humanist beliefs, with the prime motive of creating a positive and congenial atmosphere, for cross-sectional understanding, both at the individual as well as institutional level. Interfaith dialogue is different from "syncretism" in the respect that it endorses a greater understanding of religious differences, rather than to synthesize new belief system. Interfaith dialogue has been a successful mechanism to resolve communal differences and enhance a better understanding of roles that each belief system can play in an ever-growing intolerant world. Interfaith dialogues in recent times have become evermore popular, that there have been suggestions for adopting more pluralistic and nuanced acronyms like 'inter-belief' or 'inter-path' dialogues. Such suggestions have been proposed to avoid exclusion of atheists, agnostics, humanists and several other faiths with no religious grounding, but have ethical and philosophical basis. In this regard, few interfaith dialogues have begun to organize meeting under the name, inter-belief dialogue. Similarly, "pluralistic rationalist" groups have held public discussions encouraging not any particular worldviews, (based on a single religious, cultural or political viewpoint), rather prescribed a multi-dimensional outlook.^[5]

Interfaith dialogue, to some, is synonyms with interreligious dialogues. But both carry independent and contextual meanings. Both are not the same as "nondenominational Christianity." The World Council of Churches distinguishes the meaning of the terms, 'interfaith and 'interreligious'. To the WCC, "interreligious refer to action between different Christian denominations and the interfaith refers to the interaction between different faiths groups such as Muslim and Christian or Jew for example."

Defining religion has been the most complex activity in the academia; however, there have multiple attempts by many scholars, academics and public intellectuals. In this regard, "there is no universally accepted concept of religion" (Frazer and Friedli 2015). Frazer and Friedler take a constructivist stand and argue that "each individual will have a different understanding of what 'religion' means to them, therefore religion may be understood as being whatever each individual deems it to be." Therefore, it is imperative to understand what people mean when they use the word 'religion' or refer to themselves as 'religious'; because the narrative and experience will differ from individual to individual.

The term interfaith is frequently used to denote people with contrary outlooks on values, beliefs, philosophies, practices and organization of religion and faith (Byrne 2011). Such definitions prove to be unsteady, like that of the term inter-religious, which is considered to be analogous with inter-culture and inter-ethnic (Jackson and Fujiwara 2007). However there is a considerate dynamism in worldview and individual faith, both must not be measured as static and inflexible. People develop purposeful meanings, often through constructs, and establish knowledge through different interpretations of faith and remain flexible to change over time (Lindholm and Astin 2008). For example, Kath Engebretson in her book 'Interfaith Education in Australia', puts forward that a

lot of young Australians describe themselves as 'spiritual' rather religious (2009, 17). This dissociation from established religions is growing in societies throughout the world. Hence this disassociation does not imply that the need to express and to share one's views and beliefs of faith has diminished. Rather there is an increasing need for discussions and deliberations on systems of beliefs and faiths. So that tolerable environment, for spiritual and religious prosperity, would be ensured.

"Religious or faith identification can provide believers with a belief system that offers epistemological (how do we know about what is?) and ontological (what is real or true?) certainty." Furthermore, it is imperative to research the roles that religious identifications and affiliations carry because then only one can identify the initial point of the thinking process of an individual person. Such identifications and affiliations, linked to the individual thinking, becomes the starting point for intra-group and inter-group behaviour, which in turn appropriates the views, divisions and reactions towards other faiths affiliated groups (Ysseldyk 2011).

Before taking the discussion further, terms like religious identity and Dialogue must be defined. In this regard, "religious identity is often defined by what is different in one's views compared to others. Dialogue has been described as a 'negotiation or tension' between one's own views (of I or self) and the views of others." Such a negotiation induces (internal and overt) the necessity of dialogue, such an engagement adds to the knowledge, the diversity. Only through dialogues, can the difference and diversity be acknowledged and respected. To understand the differences and diversity, partakers and observers (in interfaith dialogue) must examine view of theirs (self) and the viewpoint of 'other', then with a coherent mind open themselves for the "religious otherness." The respect for the otherness opens up the possibilities of consideration of equality of thought and each other's worldviews.

INTERFAITH DIALOGUE INTEGRAL TO ISLAM

Religion Islam puts special emphasis on dialogue, as a process to reach to the reality; the truth. Islamic theology, in particular, has encouraged dialogue among the people of the book (that is, the Jews, the Christians and the Muslims). The Qur'an states, "Say, "O People of the Scripture, come to a word that is equitable between us and you – that we will not worship except Allah and not associate anything with Him and not take one another as lords instead of Allah." But if they turn away, then say, "Bear witness that we are Muslims [submitting to Him]" [3:64].

The importance of dialogue in Islamic tradition can be judges from the following lines of the holy book, "O people! Behold, we have created you from a male and a female and have made you into nations and tribes so that you might come to know one another. Verily, the noblest of you in the sight of God is the one who is most deeply conscious of Him. Behold, God is all-knowing, all-aware" [Qur'an 49:13].

In contemporary time, Muslim theologians and thinkers have been in favour of inter-faith dialogues transcending all the rigidities and complexities they face, to some degree, this phenomenon is new in a political sense. The declaration, "a common word between us and you" of 2007, the first public initiative between Christians and Muslims aimed at bringing peace and shunning social differences, between the two religions. This first-ever public interfaith meeting shared a common ground, "part of the very foundational principles of both faiths: love of the One God, and love of the neighbour". The declaration emphasized that "these principles are found over and over again in the sacred texts of Islam and Christianity

The book *Progressive Muslims: On Justice, Gender, and Pluralism* contains a chapter by Amir Hussain on "Muslims, Pluralism, and Interfaith Dialogue," in this chapter author has highlighted the importance of interfaith dialogues and argues that such dialogues are an indispensable part of religion Islam. Hussain further elucidates that "Islam would not have developed if it had not been for interfaith dialogue". From the "first revelation" and for the rest of his life, Muhammad was "engaged in interfaith dialogue" and "pluralism and interfaith dialogue," have at all times been vital to Islam. For example, when few of Muhammad's supporters underwent "physical persecution" in Mecca, he instructed them to go Abyssinia (a Christian nation-state) and they were "welcomed and accepted" by the Christian king. To illustrate the importance of interfaith dialogue to Islamic culture another example can cite, that of Córdoba, Andalusia in Muslim Spain, in the ninth and tenth centuries. Córdoba was "one of the most important cities in the history of the world". In it, "Christians and Jews were involved in the Royal Court and the intellectual life of the city". Thus, there is "a history of Muslims, Jews, Christians, and other religious traditions living together in a pluralistic society". Connecting this to present debate it can be put forward inter-faith dialogue is not a new phenomenon or a recent innovation, rather it has long and insightful tradition. Hussain aptly illustrates that in spite of Islam's long history of "pluralism and interfaith dialogue," Muslims nowadays face a serious challenge of contradictory passageways in the Qur'an

few of which upkeep interfaith as "bridge-building", while certain can be employed to "justify mutual exclusion".

THE ROLE OF EDUCATION

A wider role of education can be seen in promoting learning and inculcating new values or to detach public from unnecessary beliefs. Education has become a fundamental process of learning. Education is also expected to play the same role while instilling interfaith, making it a requisite in the process of interfaith learning. The queries related to identity and world view center the instructive intentions of interfaith education. The aim of the educators of the interfaith education is to develop critical thinking and new awareness, understanding of one's own religion and tolerance towards other's faiths using one's own faith. The motive behind the interfaith education is to ingrain peaceful attitude in people towards each other's faith for which interfaith education is also termed as peace education. To promote the interfaith through education, in 2015, an Interfaith Dialogue was launched by Multi-faith Chaplaincy at James Cook University. The dialogue aimed at encouraging the people of the university to share the experiences of their faith with wide variety of religious people and then deepen understanding of each other's faith and perspectives through discourse. A broad range of issues were debated in the dialogue, for instance, the perspectives of religions on terrorism, life and death, natural disasters and other societal issues. As the objective of the interfaith education or faith education is to bring a peaceful and positive social and cultural change, a full pledged public engagement is essential to deal with the broader concerns along with the improvement of skills in the people to build positive relations.

The objectives of the interfaith education are in correspondence with the basic principles of the interfaith dialogue while the instruction (pedagogy) of the interfaith learning is bolstered by the literature on religious, peace education, and conflict resolution and communication spheres. The quest for peace increased after the First World War and the peace research gained importance from 1950's, since then it has been established as individual discipline. The peace education contains the phrase "trying to change the dominant repertoire of [a] culture of conflict" (Bar-Tal & Rosen, 2009, p. 558) in its definition, which admits that peace is differently perceived by different populace (Harris, 2007). Peace education as a term is hence considered as a broad term and includes issues such as non-violent communication, dialogue, cultures of peace, religious instruction and also conflict resolution. The peace education broadly aims at developing self-comprehensive skills, interpersonal relationships as private objective; also focuses on societal issues related to peace such as justice, diversity and equality (Jackson & Fujiwara, 2007, p. 3). The programmes those were included in the modus operandi of peace education intended to construct trust, eliminate mistrust and stereotypes and boost understanding amidst the members involved in the peace dialogue. The crucial components necessary for a triumphant peace education (Johnson & Johnson, 2010), especially for the societies facing uncontrollable conflicts (Bar-Tal & Rosen, 2009), is to have interdisciplinary discourse on the traditional and contemporary topics of conflict studies, education and peace. The interfaith education aligns with the peace education.

Another linchpin of the interfaith education is to build mutual accord among the students and also to reach out to wider global community. The growing numbers of universities and educational opportunities have been building a platform for the growth of interfaith learning (Schottmann, 2013). In their write up regarding interfaith cooperation in educational places, Patel and Meyer (2011, p. 1) noted that the method of interaction between the diversities effect the prospectus of cooperation or conflict among the diversities. Patel and Meyer (2011) has stressed that the educational institutes should encourage its students to get into interfaith learning and build its students as leaders of interfaith cooperation which will lead to the increase in the number of graduated students fathom diversity. Education as a means of interfaith learning contributes the unity building, promoting understanding and pluralism among the differing religions.

TO AVOID RELIGIOUS FUNDAMENTALISM AND COMMUNALISM

Education is essential to avoid religious fundamentalism and religious fanaticism which leads to religious communalism, results in arson, looting, killing, rape and damage to properties. The selfish evil forces with vested interest promote religious fundamentalism and fanaticism to divide and to create communal disharmony to fulfill their selfish desires. But interfaith dialogue provides space for people of different religions to come together and discuss about their religions, clarify the doubts and promote interreligious understanding and creates interreligious relations, which avoids frictions between religious and religious communities. Religious extremism has been one of the major problems contemporary India faces. Fundamentalism is considered by many scholars as a attitudinal shortcoming. Most of the populace does not possess efficient understanding of other faiths and its practices. The misapprehended situation most of the times leads to unnecessary fights, quarrels, animosity and even violence. Occasionally, the situations gets extreme as the hatred almost makes the eradication of each other's faith as people's goal or they totally don't consider the other faiths as if they have

nothing to do with the people with other faiths; such environment is not amicable and can lead to extreme disasters on encounter with each other. The hatred setting encourages one to further hate other faiths and consider one's own faith as the only religion or faith that is truth. Antagonist conditions can also cripple the attempts to cultivate amicable relations and interfaith learning. Religious fundamentalism camouflages the individual from perceiving the larger world view, rather confines the person to have narrow view of the world through one's own faith.

The broader role of the education in the process of interfaith learning can be understood by the following brief explanation;

TO UNDERSTAND ONE'S OWN RELIGION BETTER

Education helps us understand our religion better in the context of pluralism. It enables us to have our doubts clarified with regard to other religions. It provides opportunity for us to reread our scriptures and doctrines and dogmas in the context of pluralism. It creates a healthy atmosphere where we realize that we have to reinterpret our doctrines and dogmas in the presence of other faiths. It gives strength and wisdom to reread and reinterpret our dogmas, doctrines and scriptures in the pluralistic context.

IT HELPS THE ENRICHMENT OF OUR RELIGION

Education provides opportunity for the enrichment of one's own religion. Our religion is enriched in the context of other religions through dialogue. All exclusive claims of our religions become meaningless in the presence of other religions. Through dialogue the adherents of each religion develops openness and broad mindedness. They begin to respect other faiths. It educates its adherents theologically and ultimately enables them to create new theological insights about other faiths helps them to respect other faiths and enables them and educate its adherents to see the meaning and truth revealed in other faiths also.

MUTUAL ENRICHMENT

Education assists the religions to advance themselves and also mutually grow together. It implants the idea of peace through dialogue among the religious which would reduce the impulsive aggressive behaviour of people on encounters. The idea of dialogue would enrich the religions jointly and also provide adequate room for self-development without offenses; such setting led by interfaith learning would lead to the development of religions which would complement each other. The opportunity created in dialogue enables religions to clarify their doubts, misconceptions and misunderstandings about other faiths and further contributes towards other religions development and growth. This is a very positive aspect and important dimension in the context of pluralism. So far religions are antagonistic towards each other. But now through dialogue they help each other's development and enrichment. This is possible only through interfaith dialogue. We are more and more becoming aware that man's personal and social life and religion it are dialogically structured. Dialogue here is understood as a mode of being and a way of life. It is a sharing and a process of mutual enrichment. Like all realities, dialogue too is a paradox: a paradox of rootedness and mobility, conviction and openness, commitment to one's own ideals and open appreciation and acceptance of others. It implies limitations and perfections, pain and Joy; It is a movement towards growth in truth and love, it is a process of listening, to and discovering the other; and a way to restructuring and reconditioning human life, and society.

IT REMOVES MISUNDERSTANDING AND MISCONCEPTIONS

Misunderstanding and misconceptions created about other faiths disappears through the help of dialogue. Knowingly or unknowingly a lot of misconceptions and misunderstandings about other faiths are created. Education provides scope for the misconceptions and misunderstandings to be removed. The tension created between religions through these misunderstanding also removed by the dialogue. Theories that say there will be clashes between civilizations, cultures and religions become meaningless when we experience the possibility for unity and fellowship between religions through interfaith dialogue. The interfaith dialogue encourages non-confrontational and non-offensive debates on each other's religion; thus leading to a peaceful open minded environment.

CREATES RESPECT FOR OTHER RELIGIONS AND A RECIPROCAL ENCOUNTER

Education creates respect for other faiths. It not only alleviates the misconceptions and misunderstanding but also it creates respect for other faiths. Education provides opportunity for reciprocal encounter. Through dialogue, religions come to the realization that Truth is revealed all religions. It is not acknowledging that particular religion or few religions alone have true divine revelation. But interfaith dialogue provides opportunity for believers understand the Truth revealed in other religions.

Education is the one process which can dissolve the narrow setting of the faith and broaden the people's view towards the other religions; this increases the role of education in encouraging the interfaith learning.

CONCLUSION

All the religions at a level preach peace and non-aggressive behaviour towards other religions. Religious people are expected to have peaceful behaviour and have responsibility to build peace and make their part of contribution to building peace at a wider scale. Most of the religions have been defamed because of community strife, war conditions or violence; this kind of religious usage should not be encouraged as it would further increase the gap between the religions and induce religious misunderstandings. A strong setting should be introduced to contain the religious involvement in the community strife and warfare. The undeniable fact is that, most of the times religious sentiments are misused to achieve greater power or some personal benefits and these problems are not properly addressed increasing religious misapprehensions. Prejudices have strong presence in the attempts to build and improve interfaith at all levels of the society. But there is still a trust or hope that the quest for the search of righteousness and education on interfaith and loving and uniting nature of humans will eradicate religious hatred. Common sufferings that humans face could also become the causes for bringing all the people together irrespective of their faith. The civilizational and cultural changes will foster good will, peaceful relations and religious cooperation. Since India is a multi-cultural and multi religious society dialogue is very essential for the unity and well-being of the Indian nation. Dialogue contributes towards the national integration and the development of the country. Plurality is a basic and fundamental fact of the Indian society. Everyone has to understand this pluralistic nature of Indian society. Every religion also has to be pluralistic in its own perspective and promote this pluralism among its adherents. Pluralism of Indian nation also related to the democracy and the socialism. Inter-faith dialogue has to contribute towards communal harmony and the welfare of the humanity.

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MACROECONOMIC TRENDS IN BRICS COUNTRIES: A THEORETICAL ANALYSIS

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ABSTRACT

In the present globalization economic world exchange rate plays a major role in every countries economic activity. Here, Exchange rate policy has been identified as one of the endogenous factors that can affect the economic performance of a nation. Exchange rate plays a key role in international economic transactions because no nation can remain in isolation due to varying factor endowment. Movements in the exchange rate have ripple effects on other economic growth. The present study briefly analyzes the Macroeconomic trends in the BRICS countries. It is also briefly summarized the theoretical and countrywide inputs here. The paper has briefly explains the each countries Exchange rate system and their monetary policy structure, each central banks role and controlling of inflation through following by a particular exchange rate regime. Finally, this study presents a concise picture of the BRICS nations' developments and their challenges in the present world portraying the economic structures of the BRICS nations. Their financial policies, exchange rate regimes and exchange rate management systems are sketched. The chapter further discusses the effects of global currency crisis on BRICS nations. The aftermath of the crisis on BRICS nations are also discussed. The chapter briefly presents the BRICS nations' macroeconomic trend configuration, their share in the world GDP and trade as well as their investment and growth rates.

Keywords: Exchange rate regime, monetary policy Framework, Trend analysis, Inflation and Economic Growth.

1. INTRODUCTION

Brazil, Russia, India and China together form the grouping acronym BRIC. Jim O' Neill of Goldman Sachs in his paper "Building Better Global Economic BRICs" a paper focusing on the growth aspects of the four largest emerging economies that are distinct in cultural aspects and geographical positions, coined the term for the first time in 2011. According to him in the current global scenario, the cooperative strength of BRIC has a pivotal role to play in the growth of the global economy. The BRIC nations witnessed rapid growth changing the life style of the population and the global economy as compared to the other nations that stumbled across the deficit budgets, mounting unemployment rates, and ineffectual growth.

Goldman Sachs' report on the effective economic growth happening in Brazil, Russia, India and China (BRIC) nudged the world to realize the potential and importance of the group at the global level. The report pointed towards the unnoticed gradual shift occurring in the global economic power from the developed to the developing countries. The four countries together accounted for more than 25% of the world's geographical area, with 40% of the world's population, and their economies together contributed about 46.8% to the global growth in 2011.

Goldman Sachs noting the rapid growth of BRIC nations, proved in a paper that by 2050 the combined economies of BRIC could conceal the pooled economies of the current world opulent countries. These nations were seeking to form a 'political club' or 'alliance' which could convert their growing economic power into a greater 'geopolitical clout', so that at every global scale they would become the largest entity, the biggest and the fastest growing emerging markets. Jim O'Neill in August 2010, opined that Africa would be the next BRIC nation, and thus, on December 24, 2010, South Africa was officially admitted into the BRIC nations. It was China and the other BRIC countries who had invited Africa to join the group. Thus, the cluster of BRIC nations now became plural in literal sense and was called BRICS.

This study is organized as follows: Section 2 Deals with the monetary policy frameworks in BRICS countries. Section 3 discussed the Global financial crisis and their impact on BRICS countries. Section 4 explains the economic structure of BRICS countries. Section 5 examines the exchange rate regimes and inflation. Section 6 briefly discuss the growth performance in BRICS countries and why BRICS are important in the emerging world order and the chapter concludes with Section 7.

2. MONETARY POLICY FRAMEWORK IN BRICS NATIONS

The monetary policy framework of the economies of BRICS operates differently as evident from Table 1. Nations like South Africa and Brazil concentrate on inflation- targeting regimes, while China, Russia and India operate various frameworks. The monetary phenomenon history is discussed here in brief.

Table 1. Monetary Policy Framework in BRICS

Country	Monetary Policy Framework	Key Monetary Policy Tools	Objectives
Brazil	Inflation Targeting	Interest rate (Selic rate): Interest rate on overnight interbank loans collateralized on federal debt instruments	Inflation point target 4.5 per cent with tolerance range of 2% points headline CPI
Russia	No single target indicator <ul style="list-style-type: none"> • Inflation (CPI) targeting for 3 years period • Managed floating exchange rate regime 	OMOs and standing facilities; reserve requirements	To ensure stability of national currency
India	Multiple Indicators Approach	Key policy Report/ reverse repo rate and reserve requirements, CRR and SLR	Maintain price stability, financial stability and ensure appropriate flow of credit to productive sectors
China	Multiple Indicators Approach	Reserve requirement ratio, central bank base interest rate, rediscounting, central bank relending, open market operation, and other policy instruments specified by the State Council	Maintain the stability of the value of the currency and thereby promote economic growth
South Africa	Inflation Targeting	Key policy rate: Repurchase rate	Inflation target range for headline CPI of 3-6 per cent combined with financial stability objective

2.1 The Central Bank of Brazil

It was in June 20, 1996, that the monetary policy committee (COPOM) of the Central Bank of Brazil (BCB) was created. It was allotted the responsibility of setting the viewpoints regarding the interim interest rate and a suitable monetary policy. Enhancing the transparency, providing regularity in monetary policy and their decision making processes were the major objectives behind the creation of COPOM.

In June 1999, for making the monetary policy effective a formal inflation-targeting framework was executed by Brazil. In this process, COPOM set their main target in monetary policy decisions to achieve the National Monetary Council's (CMN) inflation targets. The Governor of the Central Bank writes an open letter to the Minister of Finance when the inflation breaks the target set by the CMN. The letter clarifies the reasons for the mishap along with the rectifying measures taken to bring inflation back to the target, and the required period to obtain the effect of the changes made.

Over-Selic rate, which is commonly understood as inter-bank interest rate is the main instrumental policy of the BCB. The target for over-selic rate is set in the BCB's monetary policy committee's (COPOM) regular meetings. Open Market Operations Department (Demab) is made responsible to meet 22 such set targets began by the COPOM through market operations.

Since 2006, COPOM has met eight times, with each meeting lasting for two days. Every minute of the meeting is made available by the Committee on the website of the Bank exactly eight days after each meeting and the press officer then passes it onto the press. The Inflation Report of Central Bank is published quarterly (March, June, September, December) by COPOM detailing information on nation's economic conditions and COPOM's new inflation projections made in its latest meeting.

2.2 Bank of Russia

The Bank of Russia's monetary policy is intended to preserve the financial stability of the nation and create new conditions favorable for the economic growth that can be sustained. It was in the beginning of the 21st century that Russia started new policies to contain inflation rates and smoothen the fluctuations of nominal exchange rate. In reducing the rate of inflation, the bank started measures like reducing the interventions made in the domestic foreign exchange market, increasing the flexibility of exchange rates, and gradually initiated winding

up anti-crisis measures for stimulating the interest rate policy. The monetary policy committee set their principal objective as reducing inflation to an annual rate of 5% for the following three years.

Currently, the Bank of Russia uses standing facilities, open market operations and reserve requirements as the different monetary policy instruments. The Bank of Russia impacts its interest rates through the open market operations and standing facilities, where the REPO and lombard loans — the fixed rate on overnight refinancing operations become the upper limit of the interest rate corridor and fixed overnight deposit rate turns out to be the lower limit.

Intended at justifying the effects of external shocks caused at the background of managed floating regime on the economy of Russia, the exchange rate policy was implemented by the Bank of Russia. For Russia, the ruble value of the bi-currency basket is the functional standard of the exchange rate policy which presently consists of 0.55 US dollar and 0.45 euro. The floating operational intra-day band of fluctuations in the value of bi-currency basket is used by the Bank of Russia.

2.3 Reserve Bank of India

Reserve Bank of India (RBI), the nation's sole monetary authority formulates, implements, and monitors the country's monetary policy to confirm adequate credit flow to the productive sectors and maintain price stability as their major objective. In India, monetary policy is concerned with rising current capital account liberalization, changing patterns of credit requirements of the real sector, liberalization of the financial sector, and rapid changes in the world economic scenario. Thus, substantial changes are seen in the functional procedure of monetary policy in terms of targets and instruments.

The two major objectives of India's monetary policy as mentioned earlier are maintaining price stability and ensuring availability of adequate credit to productive sectors of the economy. This will ensure constant growth of nation even though their relative importance varies depending on the different circumstances. Currently, along with this an inclination has developed for the interest rate that creates soft and flexible environment within the framework of macroeconomic stability. Though the use of broad money as an intermediate target has been de-emphasized, the growth in broad money (M3) is continued to be used as an important indicator of monetary policy. It was in 1998-99, that a multiple-indicator approach was adopted to draw policy perspectives where the interest rates or rates of return in different markets (i.e., money, capital, and government securities) along with high frequency data on currency, fiscal position, credit extended by banks and financial institutions, trade, inflation rate, exchange rate, capital flows, refinancing and transactions in foreign exchange are juxtaposed with output data.

RBI has also restructured its supply of instruments, slowly substituting direct instruments with the indirect ones along with the increasing market orientation of the financial structure and deregulation of the operations of commercial banks. In recent years, the thrust of monetary policy has mainly been to develop a group of instruments that could transmit liquidity and interest rate signals in a more flexible and bidirectional manner in a short period. It was in June 2000, that Liquidity Adjustment Facility (LAF) was initiated to modulate short-term liquidity and signal, with short-term interest rates. The LAF usually functions using repo and reverse repo auctions, thus establishing a vent for the short-term interest rate to be consistent with other policy objectives. The RBI has thus been able to modulate the large market borrowing program by combining strategic devolvement/private placement of government securities with active open market operations.

2.4 People's Bank of China

It is The People's Bank of China (PBC) that determines the objectives of monetary policy in China. Their main objective is to sustain the stability of the currency value which ultimately promotes economic growth. The central bank base interest rate, reserve requirement ratio, central bank lending, rediscounting, open market operations, and other policy instruments specified by the State Council are the major monetary policy methodologies initiated by the PBC.

In the formulation and adjustment of monetary policy and in macroeconomic management, China's Monetary Policy Committee plays an important role. It is the State Council that prescribes the composition, responsibilities, and working procedures of the committee and the committee made the consultative body responsible for the formulation of monetary policy by the PBC. The major responsibilities of this body are to advise on the formulation and adjustment of monetary policy, the targets needed for a certain period, application of monetary policy instruments and major monetary policy measures, and coordination between monetary policy and other macroeconomic policies. The committee also plays a consultative role based on the inclusive study made on macroeconomic situations and the macro targets set by the government. The committee usually

functions through regular quarterly meetings. An ad hoc meeting could be held in urgent case, if proposed by the chairman or recommended by more than one-third members of the monetary policy committee.

2.5 South African Reserve Bank

In the Constitution of the Republic of South Africa, the South African Reserve Bank's (SARB) mandate is defined as "the protection of the value of the currency in the interest of balanced and sustainable economic growth in the Republic." It is from this constitutional mandate, that the bank derives its primary goal of the South African economic system. Their main objective is 'achievement and maintenance of price stability'. In February 2000, the monetary policy adopted inflation targeting as a framework. The main objective was to achieve and sustain headline with CPI inflation within the range of 3-6% on a continuous basis.

The government also helps in setting the inflation target in consultation with the Reserve Bank. The monetary policy committee of SARB meets at least six times a year. Decisions made are publicized immediately after the meeting at a press conference that is transmitted on television and later the monetary policy committee statement is published on SARB's website. The minutes of the meetings are not publicized on the website, but the bi-annual Monetary Policy Review, which is published later discusses the factors influencing inflation and the risks to the output. SARB also conducts Monetary Policy Forums that connect directly with the public twice a year held in major centres of the country. In addition to this, the Governor of SARB appears at least thrice a year before the Parliament's Portfolio Committee on Finance.

The SARB thus, implements inflation targeting in a flexible and forward-looking manner acquiring knowledge of external shocks to the economy, along with other factors like the changes in the output gap and domestic imbalances. Financial stability is yet another important objective of SARB.

SARB also focuses on maintaining and improving its domestic market operations. It carefully monitors the liquidity in the domestic and international interbank markets. It was not necessary to provide any special or additional liquidity to domestic banks beyond the normal daily operations during the global financial crisis and the subsequent recession, even when the contingency plans were put in place and communicated to the banking counterparties.

Further, the monetary policy committee grasps new movements in the exchange rate and their potential impact on inflation in determining policy rates. Still, the rand is a free-floating exchange rate and SARB never tried to influence the level of the currency. Interventions, if any, were aimed at easing the excessive currency volatility through open-market operations in the short term. Through the last few years, reserve accumulation became very necessary to reduce South Africa's external vulnerability in confronting a rising current account deficit.

3. GLOBAL FINANCIAL CRISIS AND ITS IMPACT ON BRICS NATIONS

Developed countries had witnessed a global financial crisis in 2008 which had impacted the world economy severely and their economic recovery prospects. The BRICS countries or the newly emerging economies, namely, Brazil, Russia, India, China and South Africa had to confront bigger challenges during this crisis. Thus, it becomes important for each of these nations to alter their development strategies so that sustainable economic development could be achieved fast.

The BRICS nations are all developing countries. They ensure healthy economic development and a speedy growth. Today, though they have become prominent names on the world economic stage, they have to face several challenges like unstable economic development models, the pressure of economic transformation and upgrading, the negative impact of unfamiliar challenges, and external strategic pressure/internal political uncertainty.

The economic development models of developed countries like the United States, Europe and Japan are totally different from that of the BRICS nations. Abundant mineral resources, low-cost labour and few technological innovations form the basis of economic growth in the five BRICS countries. For instance, China depends mostly on investments vis-a-vis consumption which does not have any contributing value for the growth of its economy.

4. THE ECONOMIC STRUCTURES OF BRICS NATIONS

In reality, the economic structures of BRICS nations are not sufficient. Russia mainly depends on energy, military and heavy industries for its economy, while Russian services and financial sector are underdeveloped. China stands at the farther end of the industry-chain structure, while South Africa, Brazil and India cannot claim to have a comprehensive industrial system and their external dependence is evident.

Considering the inflation prospective, both the external and internal environmental changes had caused these large emerging economies to devote their time to the transformation, the urgent and the most difficult task. At the global level, it is noted that for the BRICS countries there was a general rise in the inflation rate. In the last few years, the overall inflation rate of BRICS countries have increased year after year. In 2012, the exchange rate of the Russian ruble to the US dollar had appreciated by 5% and renminbi (currency of the People's Republic of China) had appreciated by 5%. On the other hand, the Indian rupee, Brazilian real and South African rand together confronted serious devaluations as these countries experienced a drop in the growth of capital flight and foreign investment.

China and India in regarding the case of labour force mainly relied on profuse and at the same time low-cost labour force. Thus, these countries are engaged in the outsourcing of services and in processing and exporting of low value-added labour-concentrated products. This will easily influence the international market, which substantially decline the demand in developed markets and market protection policies. Russia, Brazil and South Africa primarily develop mineral products for the purpose of export. It is the export revenue that is vulnerable to international demand and price fluctuations.

External challenges like the South China's Sea dispute, the East China's Sea Diaoyu Island's issue, and the China/India territorial issue add to the domestic pressures of each nation. Similarly, Russia had a strained relationship with western countries due to Crimea and the recent Malaysian plane tragedy in Ukraine. These issues will surely decline the economic growth of the nation. At the same time internal challenges also matter. In BRICS countries political transparency is not so good. Corruption, polarization and terrorism are other issues which affect economic development, political stability and market confidence.

These challenges give the impression that the relation among the BRICS nations is not very smooth. BRICS is a group of nations where each country has its own circumstances. But these evident cracks between the BRICS countries imply that the economic ties between the countries are not very strong. The volume of trade is insufficient; their industries do not complement each other satisfactorily and information exchange needs to be strengthened. To resolve these issues, the rift is relatively compared to that of developed economies and are studied as the temporary fluctuations that happen during the process of economic cyclical changes. If handled properly, these cracks will not change the overall trend of the economic development of the BRICS countries.

The huge population that provides resource advantages and some industrial advantages important in the international division of labour is the advantage of BRIC nations. Only such inclusive reforms can promote rapid economic development. In the BRICS countries, economic development is not aided by technology. The support of technology can do more wonders when merged with labour resources. BRICS nations must also increase innovative ability along with the advancement of continuous independent and integrated innovation. They should also create a social atmosphere for creative innovative ideas in order to improve economic innovation which is possible only by introducing and training the talented mass. The talents should be used to build an innovative environment and the rights of intellectual property should be protected with the strictest legal measures.

The spatial disparity among BRICS countries has resulted in increasing the cost relatively more than economic cooperation. During this period of globalization, it is proper for the BRICS countries to have a more practical approach, where more effective measures and longer-term plans are necessary to further promote economic cooperation.

To meet these challenges, few developments were recently introduced by the New Development Bank (NDB), commonly known as the BRICS Development Bank, whose sole purpose is to establish greater financial and development cooperation among the five emerging markets. It is expected that through these relations between these countries will be strengthened, creating more opportunities for sustained economic growth and development.

5. EXCHANGE RATE REGIMES AND INFLATION

Researches in the context of both developed and developing countries have been conducted on choice of exchange rate regimes in countries. Distinctly, in the BRICS countries, literature on the exchange rate regimes and its inflation and economic growth effects are very few. Although, the available literature explains the association of the different exchange rate regimes with the indicators of macroeconomic performance, like trade flows, growth and inflation, but is limited. More than empirical investigation, most of these studies focus on theoretical and conceptual discussions on the link between exchange rate regimes and macroeconomic performance. The main reason behind this is the complexity of the issue that gives rise to problems in relation with the exchange rate regime classification systems. Moving on, there is no consensus in the existing literature

about the link between exchange rate regimes and macroeconomic performance. As it has been identified that the macroeconomic performance under different exchange rate regimes differ according to the structural characteristics and the development stages of a country, the succeeding analysis focuses mainly on literature on developing countries. For example, the result for an advanced economy may be different from that of a developing economy, when we differentiate macroeconomic performance under a certain exchange rate regime. There is an inevitable difference in countries which are more linked with world capital markets as compared to those that are not among the developing countries.

5.1. Inflation

Theoreticalliterature establishes a healthy relationship between inflation and fixed exchange rate regime. The government by maintaining an acceptable nominal anchor can reduce inflation to maintain fixed exchange rate regime. Empirical research on this topic shows inconclusive and extensive results. Husain *et al.* (2005) using the data from 158 advanced, emerging and developing countries for the period 1970-1990 studied and classified exchange rate regimes on the basis of the Reinhart and Rogoff's (2004) 'natural classification'. The performance of exchange rate regimes in terms of inflation, growth and crisis vulnerability was explored under natural classification and the results were separately evaluated based on the country's development stage. Following are the main results of the evaluation with regard to inflation for developing countries:

- a) The exchange rate regime and lower inflation are directly proportional to each other. The former being more rigid, controls the later better, without giving-up in terms of economic growth.
- b) Higher inflation is seen in developing countries with flexible exchange rates, while effects of positive economic growth are deficient.
- c) Developing countries with fixed exchange regimes that have limited access to international financial markets, have minimum inflation and maximum regime durability.

The study also found that an inflexible exchange rate regime is related to minimum inflation, though the difference in inflation between those with inflexible and flexible regimes is lesser for developing countries as compared to emerging market economies that are more integrated with financial markets. On the contrary, a relation between the flexible exchange rate regime and higher inflation was not found for the advanced countries.

Further, Ghosh *et al.* (1997) used a sample of 140 countries with data spanning from 1960-1990 and found a very similar result. In the results of both the studies, pegged exchange rate regimes were found to be associated with lower inflation because of minimum monetary growth and lower residual velocity growth that controls interest rate effects and income. These results were held even after controlling for endogeneity of regime choice. The same results were not obtained for countries that have De Jure pegs, but De Facto floats. In spite of this, Ghosh *et al.* (1997) like Hussain *et al.* (2005) did not compare the different groups of countries. Grabbing a different methodology from these studies, Bleaney and Francisco (2007b) alienated soft pegs from hard pegs in their study on developing countries. Subsequently, instead of distinctly categorizing crawling bands and crawling pegs they were all grouped as soft pegs. They also encompassed other variables like past inflation and employed fixed country effects to make the relationship among the inflation and exchange rate regime healthy. Conclusively, they discovered that though hard pegs achieve minimum inflation in developing countries, soft pegs do not have any counter-inflationary benefits in the case of further flexible exchange rate regimes.

6. GROWTH PERFORMANCE IN BRICS COUNTRIES/WHY BRICS ARE IMPORTANT IN THE EMERGING WORLD ORDER

It is broadly observed that in the past few decades the growth caused by the biggest developing countries, predominantly the BRICS, became a much more substantial force in the world economy besides playing an inevitable role in decision making.

India and Brazil are found to be comparatively more domestic demand-driven economies in BRICS. They achieved faster economic recovery from the financial crisis of 2008 than other advanced and emerging market economies. Though their external linkages are very strong, they have however, undertaken trivial rebalancing of their economies with regard to their domestic sectors during the post-crisis period. On the basis of an assessment by Goldman Sachs, among BRICS, four countries are estimated to be accountable for 47% of global GDP by 2050 that would noticeably alter the list of the 10 largest economies in the world. Over the medium- to long-term a vital variation that we may expect is that there may be difference between the top 10 countries in terms of per capita GDP and the top 10 countries in terms of GDP. The inborn potency of the BRICS originates from solid domestic demand-based economies in the case of Brazil and India, important external relationships

in the case of Russia and China, while the huge resource base and vast unexploited growth potential of the African continent are the benefits of South Africa.

In the present decade, amid BRICS, the economies which have been growing rapidly are China, followed by India. The Chinese economy grew at an average annual rate of 9.9% during the period 1978 -2009 that is much higher than the world average growth rate. After the financial crises of the 1990s, the growth performance of Brazil and Russia have also enhanced expressively. Table 2 shows that the persisting economic reforms and enriched macroeconomic fundamentals accompanied by a buoyant macroeconomic environment have led to improved growth performance of the BRICS in the last decade (Table 2).

Table 2: Growth Rate of Gross Domestic Product of BRICS Countries

Names	1991-2002	2002	2005	2006	2007	2008	2009	2010
Brazil	2.6	2.7	3.2	4.0	6.1	5.2	-0.6	7.5P
Russia	6.3	4.7	6.4	8.2	8.5	5.2	-7.8	4.0P
India	5.7	4.6	9.2	9.8	9.4	7.3	5.7	10.4
China	10.3	9.1	10.4	11.6	13.0	9.6	8.7	10.3
South Africa	2.1	3.7	5.3	5.6	5.8	3.7	-1.7	2.8
Advanced Economies	2.8	1.7	2.7	3	2.8	0.5	-3.2	3.0
Euro Area	2.1	0.9	1.7	3	2.8	0.6	-4.1	1.7
USA	3.5	1.8	3.1	2.7	2.1	0.4	-2.4	2.8
World	3.2	2.9	4.5	5.1	5.2	3.0	-0.6	5.0

Note: P implies projected value.

Source: World Economic Outlook, IMF (2011).

As replicated in the high savings and investment rates, the strong macroeconomic fundamentals are the basic reason for the strong growth performance of the BRICS, though South Africa and Brazil still have chances to further increase their growth rates. Over the past decade, as government and public corporations have moved into infrastructure investment, the investment ratio of South Africa has increased intensely, but due to low savings there is suppression on their overall investment. China top the list, followed by India with regard to investment and savings among BRICS nations. In the case of China and India, the contribution of net exports to GDP reduced because of high savings. Consequently, domestic savings largely sponsored the investment-led growth. Table 3 presents the savings-investment profile of BRICS nations.

Table-3: Gross Domestic Investment and Savings of BRICS Countries

Country		1990	1995	2000	2006	2007	2008	2009	2010
1		2	3	4	5	6	7	8	9
Brazil	Investment	20.2	18	18.3	16.8	18.3	20.7	16.5	19.3
	Saving	21.4	16.5	16.5	19.7	18.8	18.4	16.1	17.0
Russia	Investment	NA	25.4	18.7	21.4	24.1	26.2	22.7	19.8
	Saving	NA	28.8	38.7	34.1	33.2	34.9	33	24.7
India	Investment	24.2	26.6	24.2	36	37.6	35.6	34.5	37.9
	Saving	22.7	25.4	23.2	32.9	33.5	30.2	29.8	34.7
China	Investment	36.1	41.9	35.1	43.6	41.7	42.5	44.8	48.8
	Saving	39.6	44.1	37.5	51.3	50.5	50.2	54.2	54.0
South Africa	Investment	NA	18.2	15.9	19.7	21.3	22.0	19.4	21.7
	Saving	19.1	16.5	15.8	14.4	14.1	14.9	15.4	20.0

Note: Not available

Source: World Bank Database

Huge topographical dimensions and population size are the prominent features of the BRICS economies. It is generally observed that for initiating the most stabilizing forces, all the BRICS economies have a wealthy middle class, which is considered to be their great potential. By offering a strong foundation for the growth and expansion of the economies, this middle-income group in each country is emerging at wavering rates although the upcoming path is clear, which is the broadening and deepening of the middle class.

6.1. Market Share in Global GDP

Over the last two decades, the BRICS economies have developed as a global force due to their increasing share in the world GDP. BRICS accounted for 10% of the world GDP in 1990, which is currently more than 25%. Table 4.4 shows that BRICS' share in the world GDP increased by 150% during the past 20 years, which compared to their economic size is considered insignificant.

Table-4: Overview of BRICS, 1990 and 2010

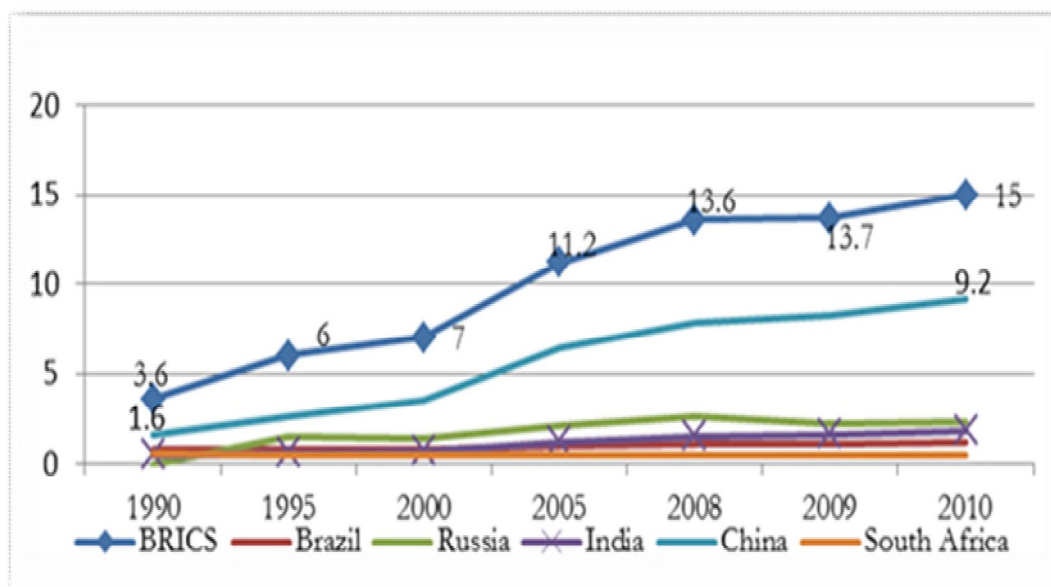
Country	Rank in World	GDP (PPP bn)	GDP (\$ bn)		Share in World GDP (%)		Per Capita GDP (\$)	
			1990	2010	1990	2010	1990	2010
Brazil	8	2,172	508	2,090	3.3	2.9	3,464	10,816
Russia	6	2,223	–	1,465	–	3	–	10,437
India	4	4,060	326	1,538	3.1	5.4	378	1,265
China	2	10,086	390	5,878	3.9	13.6	341	4,382
South Africa	26	524	112	357	0.9	0.7	5,456	7,158

Source: International Monetary Fund database adapted from the BRICS Report, 2012

6.2. Share in the Trade

There has been an invariable improvement from 3.6% to 15% in the share of trade of BRICS in world GDP during the last two decades. China accounted for the majority of it; its share rose from 2% to more than 9% over the period. Shares of other countries have also increased. Brazil's share rose from 0.8% to 1.2%, while Russia's share increased from 1.5% to 2.3% and in case of India the share increased from 0.5% to 1.8%. However, South Africa's share has remained persistent in the world trade during the past two decades. Figure 1 presents the trends of BRICS nation's trade share over the last two decades.

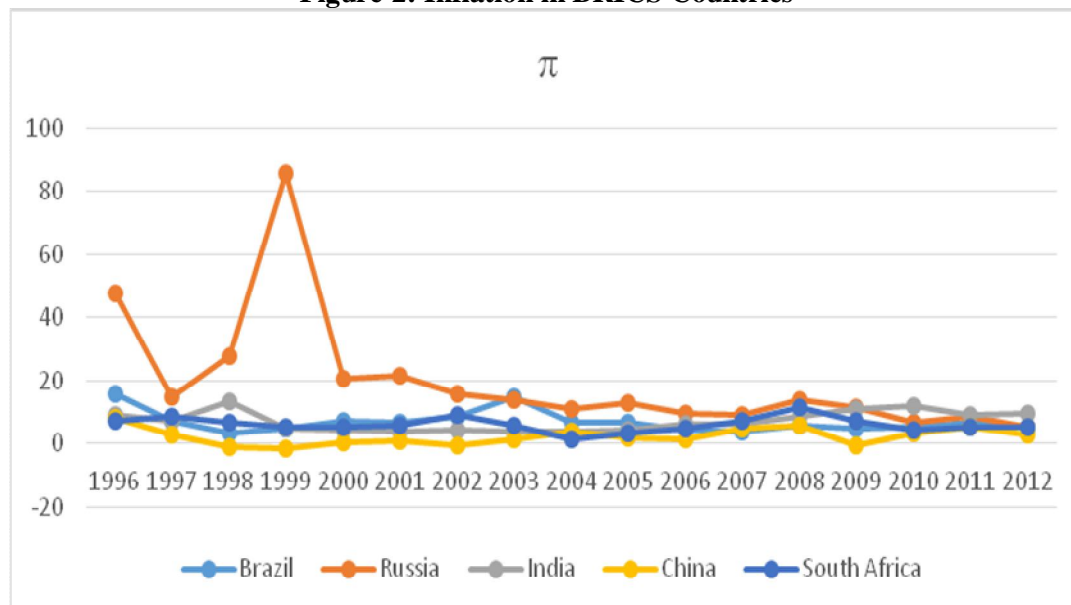
Figure-1: Trend of Share of BRICS' Trade in Global Trade, 1990-2010 (in %)



Source: UNCTAD, adapted from the BRICS Report 2012.

From the point of trade, their shares play an important role in enhancing the economic development of these countries. Evidences show that trade liberalisation played a major role in encouraging economic growth and simplifying development in all the BRICS countries. The main economic parameters like extent of trade openness, present account balance and forex assets amid others show the plainness and maintenance of a healthy relation among BRICS countries.

When we consider the issue of inflation performance of the BRICS countries, it is observed that inflation has radically diminished from a binary numeral to solitary numeral. During the period 1996-2000, the highest rate of inflation was in Russia (47.7%) and huge reduction was observed from 2000. From 2000, the rapidity of the rate reduced and it came down to the solitary number at 5.06% in the year 2012. From the beginning of 1992, Russia experienced a negative economic growth and high inflation which was persistent till 1998. However, after 1998 Russia succeeded in maintaining good economic development. Figure 2 presents the inflation rates of BRICS nations over the last two decades

Figure-2: Inflation in BRICS Countries

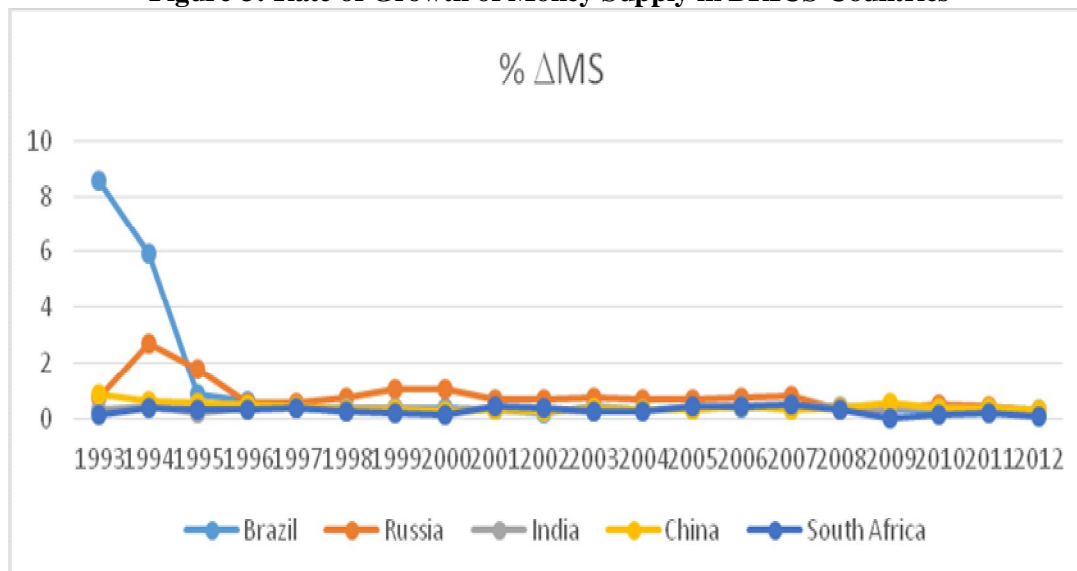
Source: Author's own calculations based on the data obtained from WDI

Before 1996, other countries like Brazil faced a similar situation. It is observed from Figure 2 that Brazil's inflation rate improved from 15.7% in 1996 to 5.4% in 2012. During the early 1990s, although Brazil faced a period of hyperinflation, it redeemed its stability by accepting the 'Real Plan'. In 2004, Brazil's growth rate was 5% approximately.

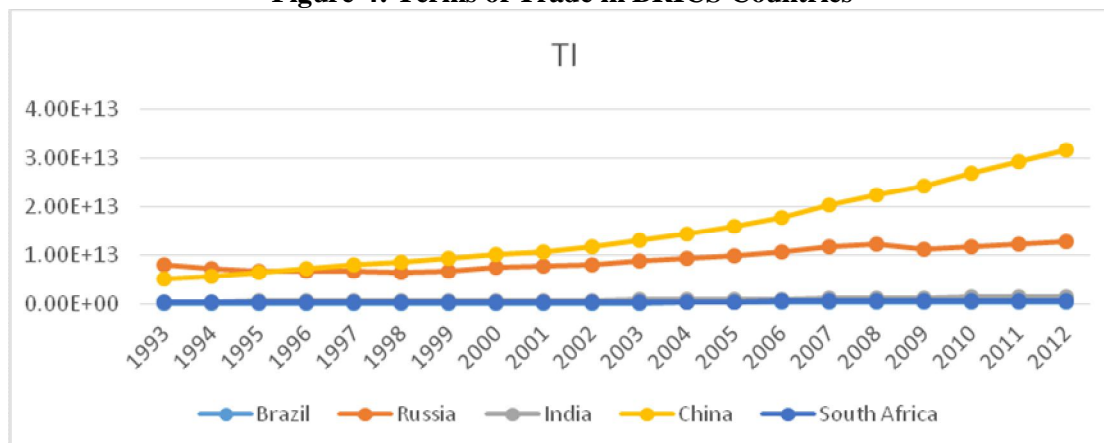
In case of China, the inflation decreased from 8.3% in 1996 to 2.6% in 2012. Since 1990s, China has been showing a great stability in its growth and minimum inflation rate. In case of India, the inflation rate was 8.9% in 1996, which rose to 9.3% in 2012, which is considered as a stable rise. Finally, South Africa experienced an inflation rate of 7.3% in 1996 which came down to 5.4% in 2012. Overall, BRICS countries succeeded in maintaining a minimum inflation rate as compared to the other emerging countries.

Around 10% of present global exports involve exports from the BRICS nations. In global export, the percentage share of BRICS nations increased from 4.2% in 1992 to 10.1% in 2004, when global trade amid the developed countries reduced from 52.6% to 42.1%. Among the BRICS countries, a great gap is found between China and the other four nations. China's exports have risen to 6.4% of global exports as a volume to imports, in comparison to those of Brazil of 1.3%, Russia of 1.8%, India of 0.8%, and South Africa of 0.4%.

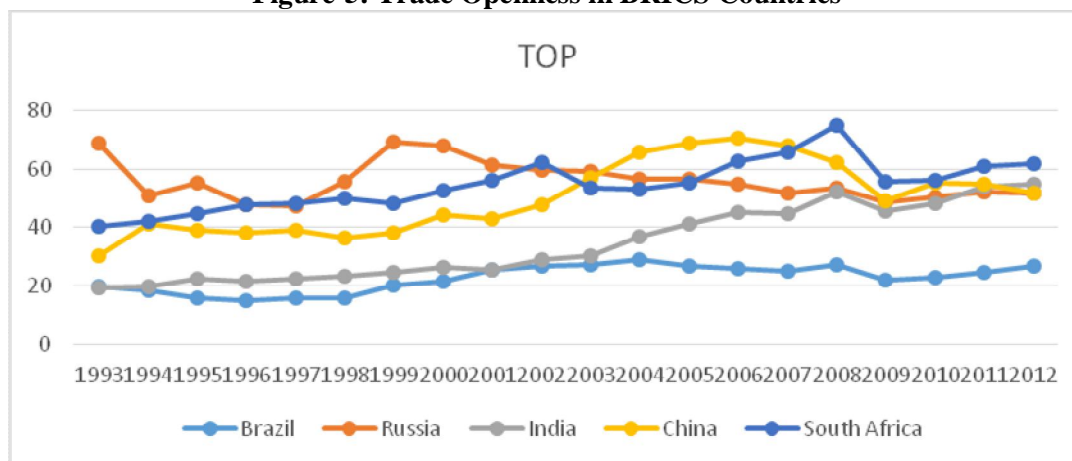
The following figures 3 and 4 and 5 shows the Rate of Growth of Money Supply in BRICS Countries, Terms of Trade in BRICS Countries and Trade Openness in BRICS Countries respectively.

Figure-3: Rate of Growth of Money Supply in BRICS Countries

Source: Author's own calculations based on the data obtained from WDI

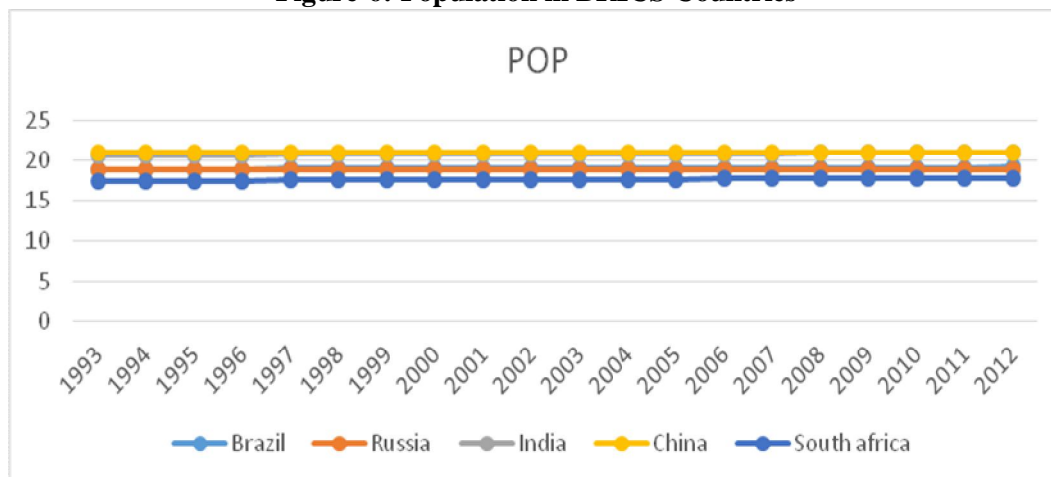
Figure-4: Terms of Trade in BRICS Countries


Source: Author's own Calculations based on the data obtained from WDI

Figure-5: Trade Openness in BRICS Countries


Source: Author's own Calculations based on the data obtained from WDI

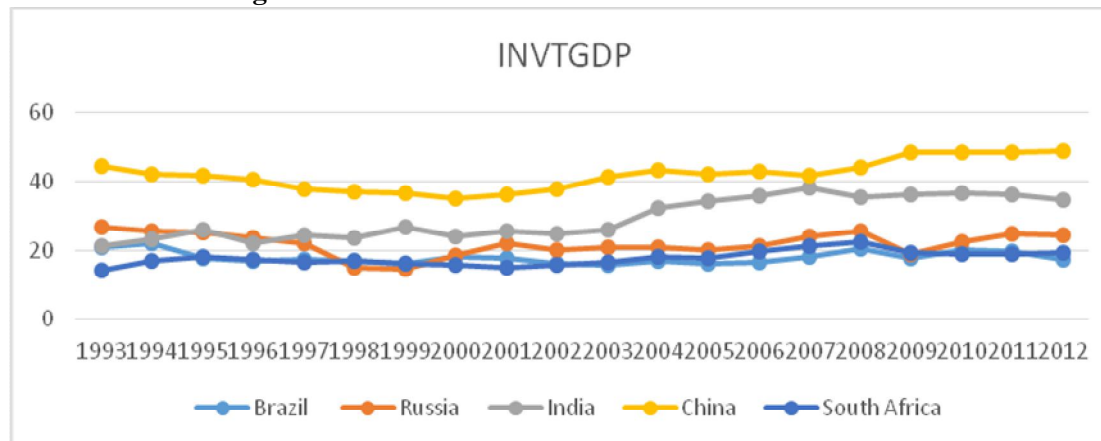
With regard to population, India and Russia's population began to diminish, on contrary to the enduring healthy growth in that of China's, while South Africa and Brazil managed to maintain a gentle growth in population. On the other hand, Africa's population that has been rising rapidly may double by 2050. The consequences of population growth on per capita GDP growth is direct and universally negative. When relations are involved in the statistical model it will become stronger. Presently, in developing countries population growth can be influenced by their respective governments. A clear example is obtained from China, where the government unexpectedly presented a group of highly coercive approaches to decrease the total fertility rate from 5.8 to 2.2 births per women during 1970 and 1980. Figure 6 presents the population statistics of BRICS nations over the last two decades.

Figure-6: Population in BRICS Countries


Source: Author's own Calculations based on the data obtained from WDI

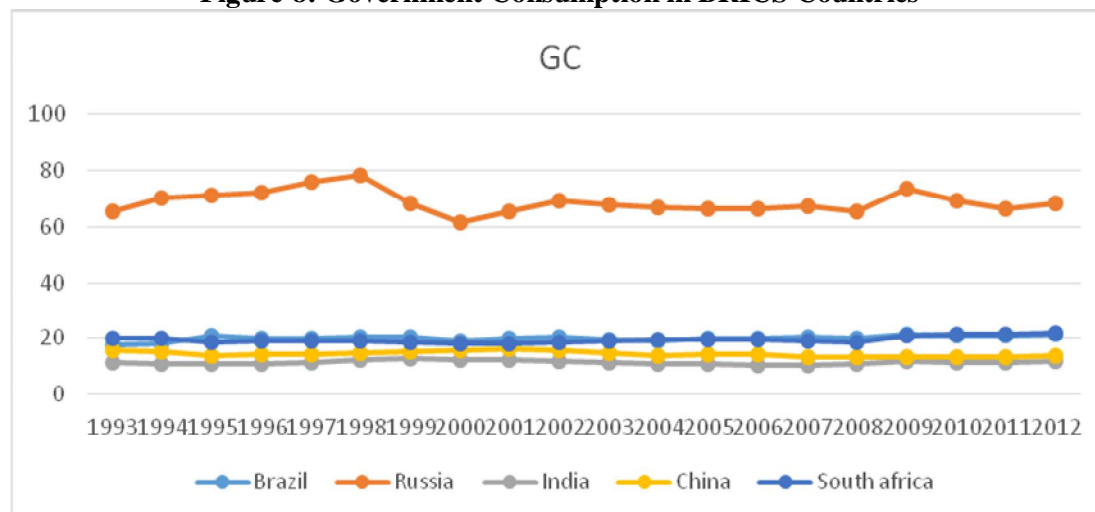
Since 1990s, with regard to investment/GDP ratio, China has topped the list of BRICS nations (with above 40% trepidations regarding ‘excess investment’) vis-a-vis the unproductivity in Russia and Brazil. China maintained a constant investment-GDP ratio from 1990 till 2012. China was followed by India in terms of investment/GDP ratio, while South Africa was at the fourth position. Figure 7 presents the investment-GDP ratios of BRICS nations over the last two decades.

Figure-7: Investment-GDP Ratio in BRICS Countries



Source: Author's own calculations based on the data obtained from WDI

Figure-8: Government Consumption in BRICS Countries



Source: Author's own calculations based on the data obtained from WDI

7. CONCLUSION

This study presents a concise picture of the BRICS nations' developments and their challenges in the present world portraying the economic structures of the BRICS nations. Their financial policies, exchange rate regimes and exchange rate management systems are sketched. The chapter further discusses the effects of global currency crisis on BRICS nations. The aftermath of the crisis on BRICS nations are also discussed. The chapter briefly presents the BRICS nations' macroeconomic trend configuration, their share in the world GDP and trade as well as their investment and growth rates.

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MERGER OF FEW INDIAN COMMERCIAL BANKS – A BOLD STEP TO STRENGTHEN WEAK BANKS

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ABSTRACT

Mr. M. Narsimham – the 13th Governor of Reserve Bank of India, and the said committee which was titled as “Committee on Banking Sector Reforms (Committee-II) was submitted to the Finance Minister in April 1998. The committee had recommended for merger of large Indian banks to make them strong enough for supporting international trade. The committee had recommended three tier banking structure in India through establishment of three large banks with international presence, eight to ten national banks and a large number of regional and local banks. Over the past two decades the recovery of bank loans has become a serious concern in the Indian banking industry. Year after year the overdue amounts are rising and the rate of recovery is decreasing considerably. During the past three years now numbers of corporate and business houses loan accounts have been turned out to be Non-Performing Assets and large number of frauds involving unprecedented amounts. This have further worsened the position of majority of the public sector banks.

Major highlights of these mergers as claimed by the Finance Ministry are:

- ❖ *A bigger bank gains from economies of scale and can cut costs by utilizing synergies of network.*
- ❖ *Mergers of weak banks also mean fewer, better-capitalized banks and improved regulatory oversight.*

Experts feel that it might turn out to be a short term fix for the bad loan problem. Moody’s Investor Service - the credit rating agency has welcomed the decision and hoped that it will improve the efficiency of the banks and also improve the working of it. It has also expressed that the Govt. of India will have to pump in funds to ensure capital adequacy in course of time. Taking an overview of the foregoing discussion and the market sentiments the proposed move of merger of three banks will have a challenge to the new entity to meet the expectations placed on it by the government.

Keywords: Merger of banks, rising Non Performing Assets, Frauds in banks, Easy to control, the new entity will be the third largest bank in India.

HISTORICAL BACKGROUND

With a view to have a review of the implementation of the banking reforms since 1992 and with the aim of further strengthening the financial institutions of India, the Reserve Bank of India had adopted a committee of experts under the chairmanship of Mr. M. Narsimham – the 13th Governor of Reserve Bank of India, and the said committee which was titled as “Committee on Banking Sector Reforms (Committee-II) was submitted to the Finance Minister in April 1998.

Amongst other recommendations one recommendation was in relation to the restructuring of the banking system to make it stronger to participate globally. The committee had recommended for merger of large Indian banks to make them strong enough for supporting international trade. The committee had recommended three tier banking structure in India through establishment of three large banks with international presence, eight to ten national banks and a large number of regional and local banks. The committee had further recommended to merger of existing banks to build the size and strength of operation for each bank. The committee also cautioned that the large banks should merge only with banks of equivalent size and not with weaker banks, which should be closed down if unable to revitalize themselves. . Given the large percentage of NPAs for weaker banks, some as high as 20% of their total assets, the concept of "narrow banking" was proposed to assist in their rehabilitation.

Earlier the merger exercise was carried out in late 90s and early 2000 and these mergers were encouraged by the Govt. of India keeping in view the recommendations of the committee. However, this recommendation was not implemented in full.

Of late the banks especially commercial banks are passing through rough weather since the last two decades. In the meantime there has been spate of Non-Performing Assets in the banking sector and the public sector banks are affected the most. This has certainly had an adverse impact on their performance on erosion of capital, business development, profitability etc. and in order to remain in business with the prescribed CRAR per Basel committee recommendations the Govt. of India also funded the most affected public sector banks and pumped in funds in those banks.

Over the past two decades the recovery of bank loans has become a serious concern in the Indian banking industry. Year after year the overdue amounts are rising and the rate of recovery is decreasing considerably. During the past four years, i.e. 2014 to 2017 the banks have shade away this swelling of the overdue loans by writing off those loans. The quantum amount for all the public sector banks was Rs.2.72 lakhs crores and as against the recovery of these accounts during the same four years period was just Rs.29,343 crores which means hardly 10.77 per cent. Out of the total written amount of Rs.2.72,558 crores, only the State Bank of India accounts for 1,02,587 crores and the recovery in the said bank was just Rs.10,396 crores which accounts for 10.13 per cent.

Prior to 2014 the rate of recovery of written off amounts in the public sector banks was on an average 40 per cent which has now fallen to 10.77 per cent. Out of 21 public sector banks almost half of these banks have not been able to record recover of written off amounts to double digit recovery percentage. United Commercial bank in the public sector has not been able to recover a single penny from out of the total amount of Rs.6,087 crores during the period of 2014 to 2017.

The following table gives details of some of the public sector bank's performance of the recovery of NPAs during the period 2014-2017.

(Rs. In crores)			
Name of the bank	Written off amount	Recovery during the period 2014-17	Percentage of recovery
UCO bank	6,087	0	00
Indian Overseas	10,470	10	0.10
Allahabad Bank	9,533	257	2.70
IDBI Bank	15,568	479	2.89
Corporation Bank	10,790	562	5.21
Bank of India	17,680	1,099	6.22
Bank of Baroda	10,571	915	8.66
State Bank of India	1,02,587	10,396	10.13
Punjab National Bank	27,814	6,270	22.54
Canara Bank	13,917	3,248	23.34
Syndicate Bank	5,363	1,535	28.62
Total for all 21 public sector banks	2,72,558	29,343	10.77

Source: Reserve Bank of India, Annual reports

FRAUDS IN INDIAN BANKING

During the past three years now numbers of corporate and business houses loan accounts have been turned out to be Non-Performing Assets and large number of frauds involving unprecedented amounts. This have further worsened the position of majority of the public sector banks.

In addition to the heavy write off of the banks had to resort to in the past, there is one more issue which is also equally concerned with the stability of the banking industry. During the last five years the Indian banking industry is flooded with frauds. The following data given by the Reserve Bank of India, throws light on the year wise number of frauds and the amounts involved therein.

FRAUDS IN INDIAN BANKING INDUSTRY

Rs. In crores		
Financial Year	No. of Frauds	Amount involved
2013-14	4306	10,170
2014-15	4639	19,455
2015-16	4693	18,698
2016-17	5076	23,933
2017-18	5152	28,459
Total	23866	1,00,715

Source: RBI reports of the respective years.

PERFORMANCE OF THE BANKING INDUSTRY AS OF 31.3.2018:**Gross NPAs of PSU Banks (Rs. 000 cr.)**

F.Y. 2013	F.TY.2014	F.Y.2015	F.Y.2016	F.Y. 2017	F.Y;2018
156	217	263	502	641	890

Public sector banks had a total loss of Rs.79,071 crores while the private sector banks made net profit of Rs.42,000 crores.

State Bank of India is aiming to bring down the NPA level to 6% by 2020 – a level considered to be manageable. IDBI has the highest NPA level.

In order to improve this position the Govt. of India also passed several legislation to strengthen the banker's hands made stringent legal provisions to take action against those defaulting borrowers to book them and have forced recovery of the outstanding loans. The credit rating authorities worldwide were skeptical about the Govt. of India's seriousness to strengthening the banks by enforcing the banking sector reforms.

In the meantime the subsidiaries of the State Bank of India and the BharatiyaMahila Bank were merged in the principal bank effective from 31st March 2018. This exercise made it possible to the inclusion of the State Bank to among the top 50 banks in the world. As a result of this merger it has been observed that nearly 4000 employees of the State Bank of India have preferred to have Voluntary Retired Scheme. So far as junior employees are concerned they are not affected much as a result, the senior officers have a feeling of insecurity. The same will be the plight of the employees in the newly formed entity of the proposed merger of the three banks.

Now on the Sept. 2017, Mr. ArunJettley – the Finance Minister announced that the three State run Banks namely Bank of Baroda, Vijaya Bank and Dena Bank to create India's third largest bank. While doing this announcement the Finance Minister stated that the new entity will see substantial rise in customer base, market reach, operational efficiency and wider bouquet of products and services for customers. The bigger bank will gain from economies of scale and can cut costs by utilizing synergies of network. The government also made it clear that the proposed merger will not have any loss of jobs.

However, the banking experts carry a view that the real reason for merger of these banks lie somewhere else.

The impact of the proposed merger will be having the following position after the merger.

Bank	Total Business (Rs. Crores)	Deposits (Rs. Crores)	Employees	Net NPA %	CASA ratio *
Bank of Baroda	1,029,810	581,485	56,360	5.4	35.52
Vijay Bank	279,575	157,325	15,875	4.1	24.91
Dena Bank	172,325	841,830	85,675	11.4	34.06
Merged entity	1,482,325	841,830	85,675	5.71	34.06
Impact	Advantage	Advantage	Negative	Advantage	Advantage

* Current and savings accounts to total deposits. Higher the CASA ratio higher is the profitability as these forms low cost deposits.

Major highlights of these mergers as claimed by the Finance Ministry are

- ❖ A bigger bank gains from economies of scale and can cut costs by utilizing synergies of network.
- ❖ Mergers of weak banks also mean fewer, better-capitalized banks and improved regulatory oversight.

Experts feel that it might turn out to be a short term fix for the bad loan problem. Moody's Investor Service - the credit rating agency has welcomed the decision and hoped that it will improve the efficiency of the banks and also improve the working of it. It has also expressed that the Govt. of India will have to pump in funds to ensure capital adequacy in course of time.

No doubt that the merger of these three banks will result in cost cutting and the new entity will merge few branches in proximity and the with the permission from the new entity will utilize the closed branches licenses in new potential centers deploying surplus staff which will add to the business. Therefore, in course of time surplus staff will be redeployed to fetch extra business. There will be no recruitment in place of those retired one. Some of the senior staff, as a result of displacement, may prefer to put up their papers which will reduce the staff cost. Of course all this will take some time to happen.

However, so far as recovery of NPAs of the respective merged banks will be a tough task for the new entity. Merely on paper the NPA percentage vis-à-vis the total advance may come down but actual recovery is a tough task. Achieving this objective is difficult.

The merger will certainly help in making additional funds for deployment and thereby increasing the business levels of the new entity.

IMMEDIATE IMPACT ON THE STOCK MARKET

Immediate impact of the proposed merger move on the stock market was of mixed reaction. The investors in Bank of Baroda expressed their resentment leading to fall in the stock prices by 16 per cent. Vijay Bank was relatively in comfortable position but still its stocks declined by 6 per cent. Of the three banks, Dena Bank is a weak one and its stock gained by 19 per cent.

According to the paper reports that the third dose of merger of three more public sector banks is in offing, wherein three banks namely Punjab National Bank, Oriental Bank of Commerce and Andhra Bank are to be merged to form a new entity. The Finance Ministry is in dialogue with the board of directors of these banks and the government intends to make this merger effective from 1st April 2019. The objective cited for the merger of earlier three banks holds good for these banks also. State Bank of India has already indicate that they do not have capacity to merge any more bank in it stating that for normalization after merger requires two to three years.

Taking an overview of the foregoing discussion and the market sentiments the proposed move of merger of three banks will have a challenge to the new entity to meet the expectations placed on it by the government.

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**ROLE OF REWARD MANAGEMENT FOR EMPLOYEE ENGAGEMENT
WITH REFERENCE TO SELECTED SERVICE INDUSTRY UNDER STUDY AT HYDERABAD
DISTRICT, TELANGANA STATE**

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ABSTRACT

This study was aimed at determining the effect of rewards as components on Employees Engagement at work among employees of selected service units of Hyderabad. Employee engagement is about building a truly great relationship with the workforce. People are the most important and valuable asset of every organization. Organization should prefer to maximize wealth through maximizing their human capital. Research variables include any types of rewards as components which have been as independent variables, and employees Engagement at work as a dependent variable. To collect required data, structured and reliable questionnaires were used which had been used in the previous studies. Then, questionnaires were implemented by Pilot-Study method and correlation coefficient obtained. The study focused on employee dimension which strengthens the concept of employee engagement in service industry. This paper is trying to throw the light of the various determinants focus on employee engagement in financial sector with special reference to Hyderabad, Telangana. By utilization of simple percentage, correlation and ANOVA statistical techniques using SPSS software have been used for data analysis. The results of hypotheses tests which calculated in confidence level 95% indicated that all research hypotheses were confirmed.

Keywords: Employees, Engagement, Human Resource Management, Rewards, Empowerment.

1. INTRODUCTION

Rewards for Employee Engagement can be powerful tools for employee motivation and performance improvement. Reward means something given for performance. Employee Engagement is a fundamental concept in the effort to understand and describe, both qualitatively and quantitatively, the nature of the relationship between an organization and its employees. Employee Engagement is an important feature in retaining excellent employees and for improving performance. Many types of rewards and recognition have direct costs associated with them, such as cash bonus stock awards, and wide variety of company paid perks. The primary objective of providing Reward and Recognition is to encourage and motivate the employees to do better performance Rewards and Recognition are one of the motivation aspects in Human Resources.

Rewards are given to employees to achieve desired goals. Rewards system should be closely aligned to organizational strategies. These strategies could be designed to faster innovation to provide unique products or services. Rewards may be monetary, or non-monetary. Monetary rewards include cash bonus, stock awards, company paid perks, gift certificates. Non monetary rewards and recognition including compliments, extra time off, ceremonial awards, and small trinkets such as mugs, t-shirts, sets of pens and pencils. Rewards and Recognition are very useful to reinforce good performance.

2. LITERATURE REVIEW

(Juan et al., 2016) Rewards & knowledge management is seen to have a supportive role in determining the level of engagement. Engagement influences the employees' beliefs, attitudes and behaviors in the workplace, and eventually, makes an impact on the culture of knowledge sharing inside the organization. "Rewards also provides employees with solutions to the problems they face, in case those same problems have been encountered earlier and effectively addressed, this provides a supportive work environment within the organization. A support work environment with employees' needs, such as information or knowledge which they need for job aid employees for focused work, is considered to be the key determinant of employee engagement."

According to the report on Trends in Global Employee Engagement published in 2015 (Trends 2015), the employee engagement rate varies from fifty-seven percent to seventy one percent depending on the differences in regions and markets, and on the global level the average stands at sixty-two percent. As the economy grows, the employee engagement rate is gradually increasing, however, research has show that many of the companies are still struggling with finding sufficient facilities to provide growth opportunities for employees and other top engagement driving factors. The employee engagement rate in the European region accounts for fifty seven percent, in which the statistics in Finland are not particularly mentioned.

According to Siddiqi (2015), employee work engagement is about making the employees attentive and focused at work to reach some common goal. Work engagement is a distinct and unique construct consisting of cognitive, emotional and behavioral components associated with individual role performance. It creates positive influence among the employees and would further enhance the interest of their workplace.

According to Nawaz, Hassan, Hassan, Shaukat, & Asadullah (2014), when employees are given values by empowerment and training, the employees feel a sense of consideration tend to show engaged behavior. The engaged employees are motivated to become more creative and innovative in their job. Some of the components of employee engagement identified by Vance (2006) are enthusiasm for work, long-term commitment, organizational pride, alignment to organizational goals, flexibility, job satisfaction, etc.

Baumann & Stieglitz (2014) in their empirical research found that low powered rewards are more beneficial than high-powered rewards as it tends to increase the competition among the employees and more project proposals will be submitted which can de-motivate employees. However, the incentives depend on organization and environment i.e. smaller firms may follow high incentive as efforts of each employee can make the difference.

Global drivers of employee engagement according to Swarnalatha & Prasanna (2013), confident in the future of the organization, work-life balance, enthusiasm towards work, career growth opportunity, work safety, corporate responsibility efforts, support and opportunity knowledge and skills, rewards and recognition, trust and confidence on the superiors, and co-workers give their very best. These drivers were unified into four main macro drivers, namely, leadership, management skills and recognition, skill improvement opportunity and exciting work and genuine employee welfares provided by the organization. In this research, leadership style, rewards and recognition and training and development were considered.

3. RESEARCH OBJECTIVES

- To determine whether rewards affect employee engagement
- To distinguish effect of monetary and non –monetary effect of rewards on employee engagement
- To examine the effectiveness of reward schemes this helps in employee engagement.

3.1 Hypothesis of the Study

H₀ (Null Hypothesis): Reward system is not significantly associated with employee engagement

H₁ (Alternative Hypothesis): Reward system is significantly associated with on employee engagement.

4. RESEARCH METHODOLOGY

Data Collection: The primary source was collected by questionnaires.

Primary source: The primary source of data is applied for getting the required and relevant information directly from the department heads in the course of discussion with Jr. Managers. The following are the data collected through primary source. The Different rewards are provided by the selected companies under Service Industry. Discussion with the employees & through questionnaire.

Secondary Source: The secondary source of data was collected through obtaining rewards and files from the integrated product development unit of Karvy & Angel Broking. some part of Data was collected from the Internet. The institutional guide gave us the remaining necessary information and the staff relating to administration gave me all the necessary information to complete the study.

Sample study

The sample selected for gathering the data is based on 'random sampling' technique to give rewards to the Karvy & Angle Broking employees a sample size of 200 employees was considered, who underwent job related to rewards and recognition center in Karvy .

Analysis

The data has been analyzed after collection and a study was made by classifying tabulating and drawing graphs in order to draw conclusions to the subject.

Tool: Correlation & ANOVA (Single)

5. ANALYSIS AND INTERPRETATION

Table: 1 Data Analysis table showing rating parameters and respondents preferences
Values in Percentages (%)

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Company offers a comprehensive benefits package?	38	3	8	30	22
2. Company offers better benefits than other companies?	12	13	29	28	17
3. I know the value of my benefits?	23	16	16	37	9
4. The benefits offered provide security for me and my family?	33	1	19	26	22
5. The Benefits department provides accurate and helpful information?	39	3	3	37	18
6. Company pay policy helps attract and retain high performing employees?	29	26	11	5	29
7. I feel I am adequately paid compared to my colleagues at other companies?	25	20	19	32	4
8. My pay matches my job performance?	19	15	29	37	1
9. My supervisor is always trying to make sure I am fairly rewarded?	31	3	30	19	18

Source: Primary Data

- From the above results it is depicted that 38% respondents strongly agree regarding comprehensive benefits package 30% said as disagree 22% of them said as strongly disagree 3% of them said agree 8% of them opined Neutral.
- From the above results it is depicted that companies offers better benefits than other companies 12% respondents Strongly agree 13% said as agree 29% of them said as Neutral 28% of them disagree 17% of them opined strongly disagree
- From the above results respondents of 23% people Strongly agree about their benefits 16% of them agree 16% opined neutrally 37% disagree 9% said as strongly disagree.
- From the above result values 33% of respondents Strongly agree towards the benefits offered & security for them and their family 1% agree 19% people Neither agrees nor disagree 26% people disagree 22% people are strongly disagree.
- From the above result values regarding Benefits department provides accurate and helpful information 39% respondents said Strongly agree 3% as agree & neutral equally 37% of them disagree 18% viewed as strongly disagree.
- From the above result values regarding Company pay policy helps attract and retain high performing employees 29% respondents said as Strongly agree 26% said as agree 11% of them opined as neutral 5% said as disagree 29% views as strongly disagree.
- From the above result values regarding feeling adequately paid compared to colleagues at other companies 5% of them said as Strongly agree 20% said as agree 19% of them said as Neutral 32% said as disagree 4% of them strongly disagree.
- From the above result values regarding pay matches job performance 19% of them Strongly agree 15% said as agree 29% of them opined neutral 37% of them disagree 1% said as strongly disagree.
- From the above results it is depicted that supervisor is always trying to make sure I am fairly compensated 31% of them Strongly agree 3% said as agree 30% said as Neutral 19% said as disagree 18% of them said as strongly disagree.

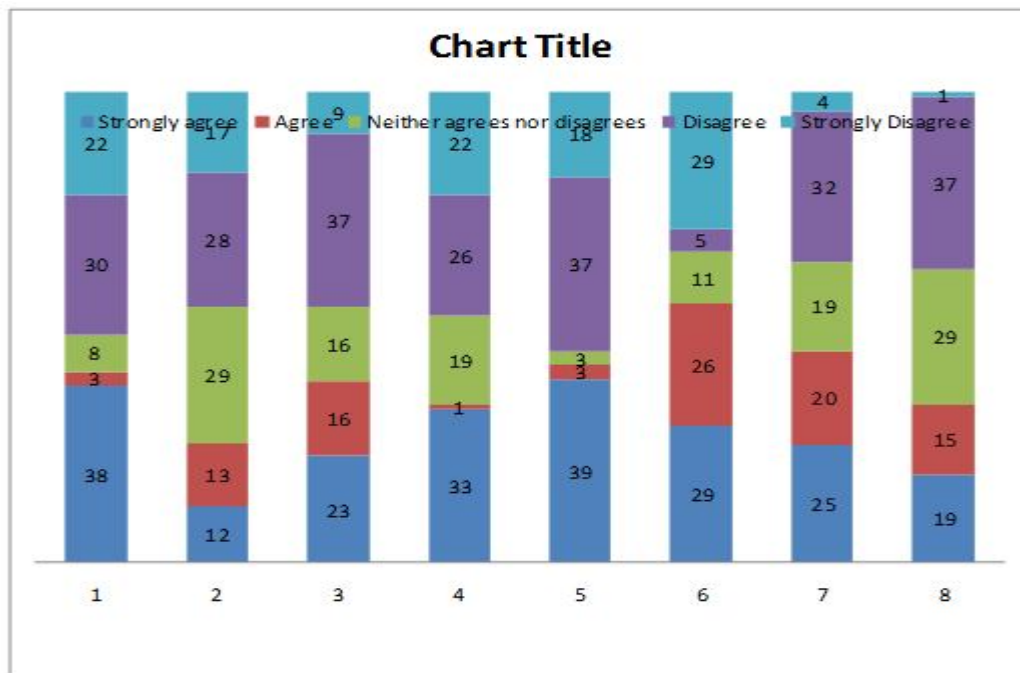


Table 2: Data Analysis using Correlation technique among respondents opinion

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
Q1	1								
Q2	-0.03589	1							
Q3	0.056608	0.005044	1						
Q4	0.186862	0.079528	0.036054	1					
Q5	-0.02549	-0.07998	-0.05684	-0.08565	1				
Q6	-0.16732	-0.02184	-0.09424	0.018526	0.06943	1			
Q7	-0.1451	0.102502	0.058382	-0.02289	-0.07651	0.000383	1		
Q8	-0.0806	-0.06676	-0.00476	0.101892	0.104256	0.123045	-0.13352	1	
Q9	0.097477	0.115062	-0.03535	0.015929	-0.02729	-0.18127	0.059361	-0.16626	1

Source: Primary Data

Inference:-From the above correlation of factors department provides accurate and helpful information is more correlate with supervisor and always trying to make sure everyone are fairly compensated from the above analysis most of Tables are less correlated with each other.

Table 3: Data Analysis using ANOVA technique among respondents opinion

ANOVA: Single Factor						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	4.64	8	0.58	0.308292	0.96306	1.948778
Within Groups	1676.27	891	1.881336			
Total	1680.91	899				

Source: Primary Data

Interpretation: - if $F > F_{crit}$, we reject the null hypothesis. This is the case, $0.30 < 1.94$. Therefore, we ACCEPT the null hypothesis. The above result values depicts that reward management results to Employee Engagement and enhances organizational performance is the opinions given by the respondents for the study.

6.0 FINDINGS OF THE STUDY

- Majority (38%) of respondents strongly agree regarding comprehensive benefits package. Results depicted that companies offer better benefits than other companies, 29% of them said as Neutral 28% of them disagree.
- 23% people strongly agree about their benefits.
- 33% of respondents Strongly agree towards the benefits offered & security for them and their family.
- Benefits department provides accurate and helpful information 39% respondents said strongly agree.
- Company pay policy attract and retain high performing employees, 29% respondents said as strongly agree 26% said as agree.
- Result values regarding feeling adequately paid compared to colleagues at other companies, 32% said as disagree 4% of them strongly disagree.
- 29% of them opined neutral & 37% of them disagree regarding pay matches job performance.
- Results depicted that supervisor is always trying to make sure regarding fairly compensation, 31% of them strongly agree and 30% said as Neutral.

6.1 RECOMMENDATION FOR STUDY

- There should be a permanent display about the rewards and recognition to make clear awareness among the employees about the different rewards provided in their organization to improve employee engagement.
- Most of the rewards and recognition's provided to the managers & executives only. The companies should also provide to the employees.
- The management should conduct the survey to collect the opinions of employees regarding the rewards and recognition to know their satisfaction level. So, as to improve the effective reward system which helps to employee engagement.
- The workers representatives should be involved in management decision making process regarding the rewards and recognition.
- The management should update its rewards systems in order to motivate the employees from time to time.
- The management is encouraging the employees for their outstanding performance and at the same time it should have perfect counseling for the employees who are about to reach their target.
- The rewards and recognitions provided by the organization should be satisfaction as the success of the organization largely depends.
- The training and relation should be improved and trade union should actively participate in where ever the workers are brutally suppressed.
- Reward revision should be facilitated as per needs/requirements employee engagement. Timely rewards revisions reduce 100% problems.

7.0 LIMITATION OF THE STUDY

Time was the major constraint as the mentioned period was not enough to collect the data in detail. Secondary source information availability was largely restricted to internet and online journals. A sample size was restricted to only 200 employees. The collected information mainly depends on the interviews, survey findings and the Internet.

8.0 CONCLUSIONS

Employee engagement represents the level of commitment employees feel toward their employers and their jobs. The higher the level of engagement, the more likely an employee will go the extra mile to perform well and be an advocate for the company.

Finally it is concluded that Rewards and Recognition of the organization it effectively on employees. Rewards and Recognition programme is used to develop the employee performance and skills. This organization is providing more festinates to employees. The organization is providing new type of techniques in the organization. The updated programme, and Rewards provided by the organization to employees in all levels of areas.

While there could be many reasons behind an employee's failure to engage, this article will focus on two key motivators – reward and recognition. According to a recent survey, there is a strong correlation between satisfied employees and recognition for their work. In fact, more employees who worked for a company with a recognition program stated that they were content with their jobs. Although monetary reward ranked as the first place stimulus, many employees valued alternatives such as:

- In-person recognition from a manager or a peer
- A company or team-wide email recognizing the individual
- A title promotion
- A raise or other type of monetary bonus
- Extra vacation days

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AWARENESS AND USAGE OF E-JOURNALS: A STUDY AMONG POST GRADUATE STUDENTS OF PANDIT DEENDEYAL PETROLEUM UNIVERSITY (PDPU), GANDHINAGAR**Sureshkumar B. O.¹ and Dr. Gitaben Shah²**Librarian¹, Pandit Deendeyal Petroleum University, GandhinagarResearch Guide², Department of Library Science, C U Shah University, Wadhwan**ABSTRACT**

Developments in IT brought e-journals as basic information sources to post graduate as well as research community. Here we tried to study among the Post Graduate students at PDPU on the awareness and use of e-journals. A descriptive survey design was adopted for the study and a population of three hundred and eighty (380) post graduate students of PDPU was used as the sample for this study.

This study is an attempt to find out whether the users of PDPU prefer the electronic journals are able to satisfy the information needs of the users. This paper also tries to study the overall user satisfactions, problems that are faced by the students while accessing the e-journals.

Keywords: E- Journals, User Study, Usage of e-journals. Organization and Management of E-Journals.

1. INTRODUCTION

With the advance of Information Technology and latest communications systems, there is a paradigm shift in the usage of traditional print journals to electronic journals in higher education institutions. Libraries are now allocating sufficient funds for the procurements of e-resources and make available to their users. E-resources including e-journals are used as efficient retrieval and fulfill the information needs. That is why many libraries are now going for digital or e-resources, which are found to be less expensive and more useful for easy access. This is especially helpful to faculty and students who have limited time to access the libraries.

In this article, we had tried to examine the views of PG students on the Awareness and Usage of E-Journals for their study and research. Now-a-day with the development of information technology there has been a shift from traditional print journals to electronic journals (e-journals). So e-journal have become major resources in any kind of teaching and research work, and every user has to depend on e-journals portal to complete his/her work. E-journals are called by various names, such as e-journals, virtual journals, paperless journals, online journals, scholarly e- journals, networked journals, and digital journals.

1.1 ABOUT PDPU

Pandit Deendayal Petroleum University (PDPU) has been established by GERMI as a Private University through the State Act enacted on 4th April, 2007. PDPU's 100 acre campus is located in Gandhinagar, which is the capital city of Gujarat. PDPU offers multiple courses ranging from engineering, arts and management along with maximum exposure and opportunities to its students through various national and International exchange programs with Best Universities worldwide. For development of its faculties and staff the University endeavors for various Joint Exchange and Research programs.

The University offers programs to address the need for trained human resources in the domains of Science, Technology, Management and Humanities. It intends to broaden the opportunities for students and professionals to develop core subject knowledge which are duly complemented by leadership training interventions, thereby helping the students to make a mark in the global arena. This objective is being further addressed through a number of specialized and well-planned undergraduate, post-graduate and doctoral programs as well as intensive research projects.

1.2 SCHOOLS@PDPU

School of Petroleum Management offers M.B.A. in (a). Energy & Infrastructure and (b). General Management , Ph.D., Post Graduate Diploma in Petroleum Management for Executives (PGDPM-X) and Management Development Programmes.

School of Petroleum Technology offers B.Tech., M.Tech. and Ph.D. in Petroleum Engineering. It is academically engaged in creating a high quality talent pool for the hydrocarbon sector across the entire value chain.

School of Technology offers B.Tech. in the fields of Civil, Electrical, Mechanical, Industrial, & Chemical Engineering, besides the Ph.D. Program. It also offers M.tech in Nuclear & Solar Engineering.

School of Liberal Studies offers four year Bachelor programme in the field of Liberal Studies, M.A. in Public Administration/International Relations /Political Science as well as the Ph.D. programs.

PDPU LIBRARY

The PDPU Library have been automated using Koha- an open source international user- friendly library package. The software facilitates automated circulation (issue-return) of books and speedy access to bibliographic, location and availability information of the books in the library. The catalogue is available on the Internet for inquiring about books.

2. AIMS, OBJECTIVES AND SCOPE

This study helps us to study the student's knowledge about e-journals, how they are accessing it. The results of this study could be very helpful to all users including faculty members as well as students of PDPU. The results also help to grow up the interest of using e-journals which are subscribed to PDPU. Therefore, the study aims at achieving the following objectives:

- To explore to what extent PDPU subscribe to e-journals.
- To identify how users can access and use of e-journals in PDPU library.
- To find out the problems of e-journal subscription in PDPU library.
- To seek PG students opinions about e-journals facilities for fulfillment of their academic requirements.
- To offer suitable solutions of the problems for the development of e-journals services in PDPU.

3. LITERATURE REVIEW

Many studies tell us that using of e-journals articles has increased during the last decade and has been boosted by the application of Information and Communication Technologies (ICTs) in scholarly communication. The awareness and usage studies of e-journals appear in the literature in the late 1990s when a large number of e-journals had become widely available

Ali, N. (2005) studied the user's search behavior of using electronic resources at IIT Delhi Library. He further discussed various aspect on user behavior on using E-resources which are very helpful for library professionals to improving library services qualitative and quantitatively

Dadzie, Perpetua S. (2005) Electronic information sources are becoming more and more important for the academic community. Electronic resources such as e-journals, e-books, e-databases, web resources, e-serials amongst others are easily accessible in remote areas.

Clajus, G. & Maier, C. (2001) found that, libraries have transformed into digital and virtual libraries where books, journals and magazines have changed into e-books, e-journals, and e-magazines. This has increased the global dissemination of information

Fuzaka and Ishikawa (2008) With the explosion of information accessible via the internet, coupled with the increasing sophistication of our users with regard to information-seeking behaviour, our future role must be in stressing value-added service in the delivery of information.

Very few respondents of that study thought that e-journals have no disadvantages at all, and most of the respondents preferred print version in the situation where both versions were available, but many used both versions equally. (Smith 2003) on the other hand, explored the role of e-journals currently play in faculty's weekly scholarly reading habits.

4. RESEARCH METHODOLOGY

We conducted a survey with a structured questionnaire. We had selected 380 PG students of different academic departments of PDPU, who use PDPU Library. The questionnaires were developed in such a way that, to collect data and information regarding their electronic journals access and usage, and their level of satisfaction about PDPU online journal services. It also tries to explore their awareness, purpose and problems facing while accessing e-journals. Also tries to find out their expectations, as well as their opinions and valuable suggestions regarding the improvement of service and subscriptions of e-journals at PDPU.

We personally met the students with the questionnaire and requested them to provide necessary information in the questionnaire. Out of 380 questionnaires distributed, 320 were collected and used for analysis. Therefore, the response rate was 84%.

5. POPULATION

Category of User: Out of the 320 questionnaires collected, 142 are MBA (44 %), 92 are MA (29%) and 86 are M. Tech (27%) students. Figure 1 shows user distributions of the respondents:

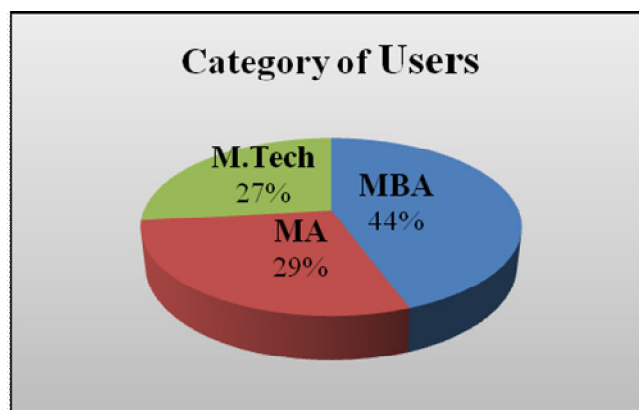


Figure 1

6. FINDINGS & DISCUSSION

i. Access of e-journals in PDPU

PDPU library have various e-Journals on purchase/subscription basis and provides its e-journals services only for all faculty members, students, researchers, officers and staffs of PDPU. The e-journals are linked to the PDPU library website (<http://library.pdpu.ac.in/>)

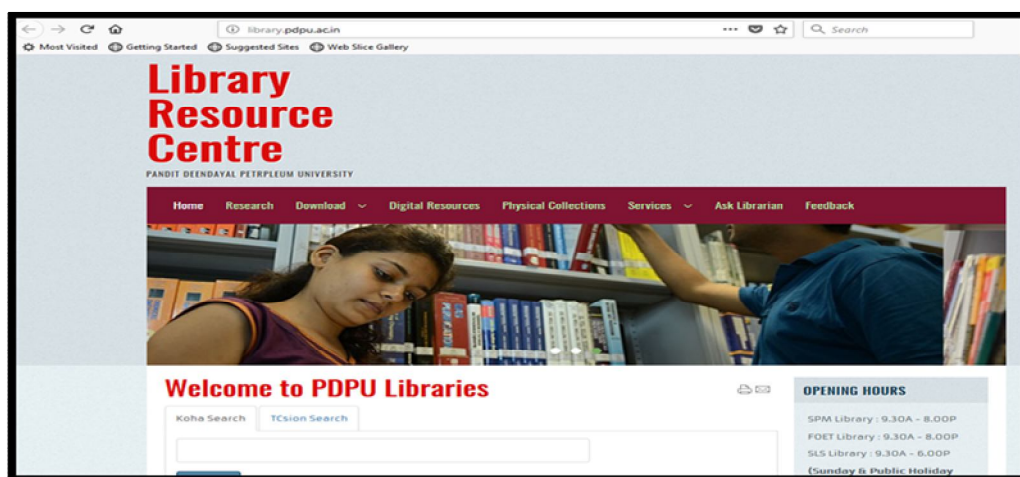


Figure 2

ii. Online Journals facilities (<http://library.pdpu.ac.in/journals-a-z>)

PDPU library provides e-journals service and other online resources within PDPU campus. All these digital resources are licensed for the non-profit educational use of the PDPU academic community. The use of these resources is governed by copyright law and individual licensed agreements. These services are activated through IP authentication.

There are total 8424 e-journals subscribe to PDPU, which covers different subject contents. The major e-journals packages are listed below:

- ACS
- ASCE
- ASME
- EBSCO – Business Source Premier
- IEEE Explore
- JSTORE
- One Petro
- Sage Journals

iii. Awareness on e-journal service

While analyzing the question: Are you aware of the availability of e-journals at PDPU?

It is found that, **70%** respond “**Yes**” and **30%** respond “**No**”. Those who are answered positively (yes), most of them are senior students and those who are answered negatively (no) most of them are first year students, which indicates that majority of them have aware about e-journals availability at PDPU.

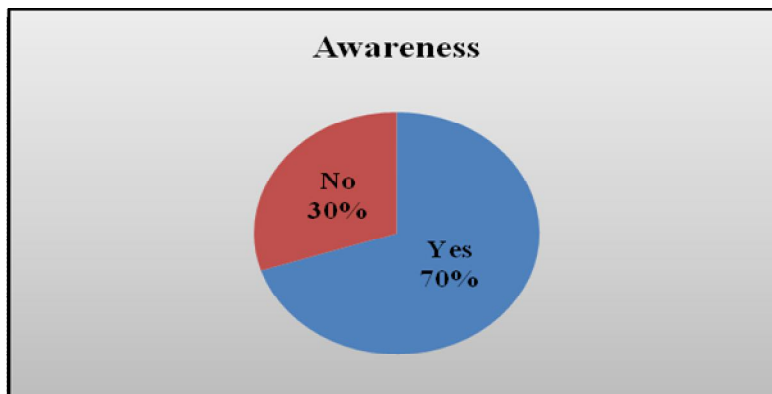


Figure 3

iv. How often access to E-journals (Frequency of use)

The users were asked about, how often access to E-journals:

It was found that most of the **42 %** users access to electronic resources **every day**, **33 %** accessed electronic resources a few times **every week**, **15 %** accessed at least **once a week**, **3 %** accessed at least **once a fortnight** and **7 %** users accessed electronic resources at least **once a month**. Here we found that, most of the PDPU library users used e-journals everyday, which is good sign. Below figure 4 shows the details.

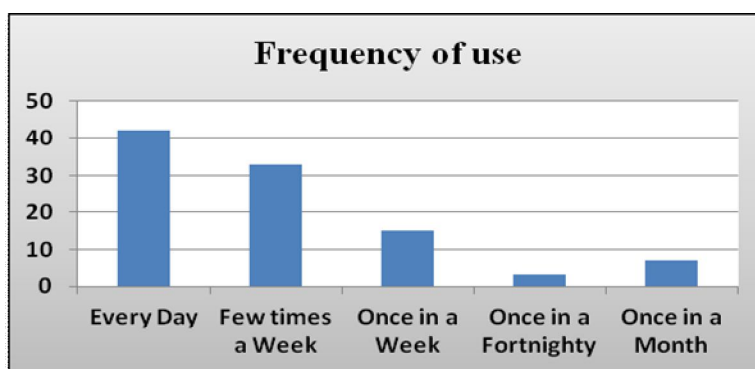


Figure 4

v. Ease of Access of E-journals from Library Website

From the analysis it has been found that, the navigation to E-Journals from library websites is high (Good). Because **47 %** users revealed that ease of access is **high** and **9 %** says it is **very high**. **26 %** has of the opinion of average, 16% used their level of easy navigation as **below average**, simultaneously **2 %** used their level for easy navigation in **low**. So, overall easy navigation to E-Journals in PDPU library web site is high. Figure 5 shows the details.

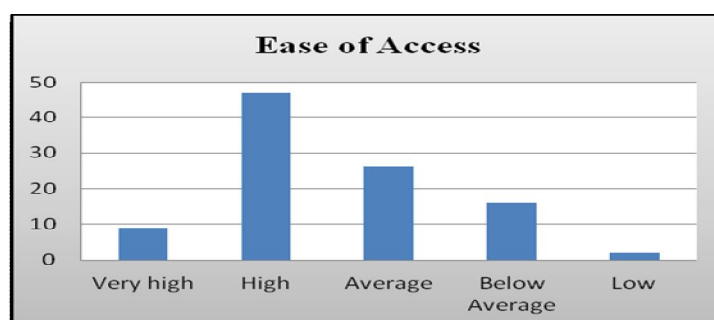


Figure 5

vi. Purpose of Using E-Journals

Respondents were asked: “For what purposes do you use electronic/online journal?”

According to the respondents, 54 % users mostly used e-journals for learning, 35 % used for current information, 6 % for research purpose and 5 % used for professional achievements'. Here, it is found that, more than half of respondents used e-resources for learning purposes. Result indicates that electronic journals are mostly used for 'learning needs' followed by 'current information'. It was also found that the e-journals are least used for 'research purpose' and 'professional achievements'. See Figure 6

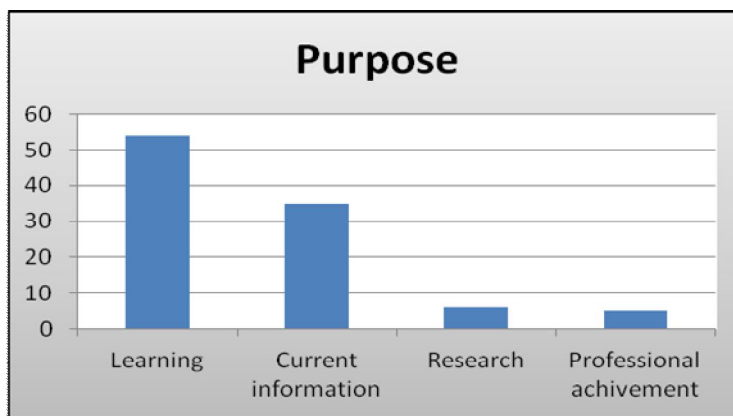


Figure 6

vii. Features of E-journals

The users were also asked for what features of e-journals they considered to be the most important for the efficiency of their research/study. Analyzing the respondents reply, it was found that most of the users prefer to use e-journals for **Quick and timely access (51%)** than other features. The second most users considered to the most important features of e-journals are for **Up-to-date information (22 %)**. Next features are: **Save the time (14%)**, **Links to related items/ reference linking (10%)** and **Allows remote access (3%)**. See figure 7.

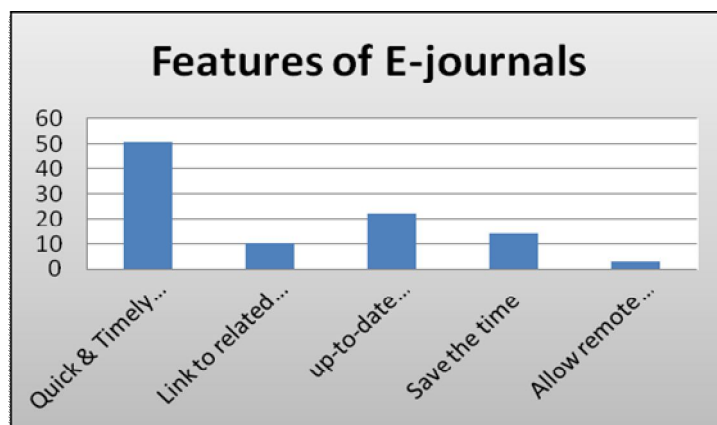


Figure 7

viii. Importance of e-journals and their use

The following question was asked:

"Do you agree with this statement 'Electronic journals are one of the most important parts of learning and research?'".

The responses of the respondents are as; **Yes: 88 %** and **No: 12%**

The result demonstrates that the strong and predominant role of e-journals in learning and research. It also shows that 88% of those who use electronic journals which strongly underlines the conclusion that "electronic journals are one of the most important parts of learning and research."

ix. Overall User Satisfaction

From the analysis of the questionnaires, it was found that, the overall user satisfaction levels of e-journals are excellent. More than half of the users are very satisfied with the e-journals use.

It means that **4%** users are **not satisfied**, **12%** respondents marked their satisfaction level in below average, but **48 %** replied that, in an **average** they are satisfied with the above factors, **28 %** used their satisfaction status as **high** and **8%** percent used as **very high**. So, it was found that more than half of the users are generally satisfied with the e-journals use. See Figure 8.

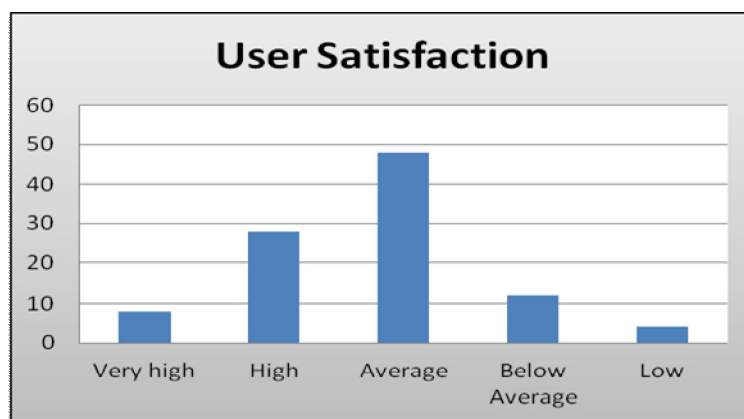


Figure 8

x. Problems of using E-journals

As per the filled in the questionnaires, here found some problems that are faced by the users when they are using e-journals. Some of the major outcome is revealed through the figure 9.

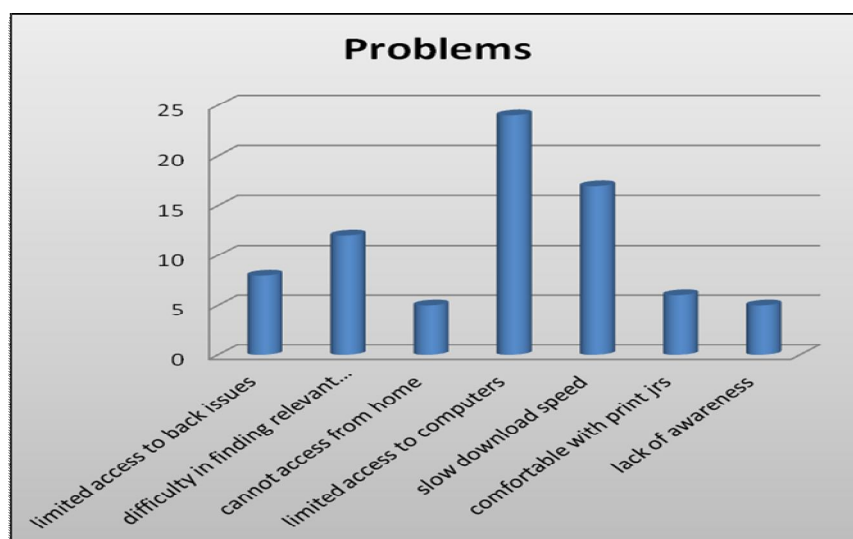


Figure 9

7. CONCLUSION AND RECOMMENDATIONS

The purpose of this study was to study the awareness and usage of e-journals among PD students at PDPU. This paper confirms that a large number of e-journals are made available in PDPU. This study also reveals that, a majority of PG students of PDPU use e-journals for their learning purpose.

It was found that, sufficient e-journals are available at PDPU and users are generally satisfied with these materials. Majority of the users are of the opinion that, they are aware about e-journals and it is easily accessible to them. The study explored the following major problems regarding access and usage of e-journals at PDPU:

- Lack of adequate computer lab facilities
- Lack of training and orientation program
- Lack of knowledge about the links to e-journals
- Lack of knowledge and awareness of e-journals among few students
- Cannot access from home / outside campus

In order to overcome the problems, this study also suggests that:

- ✓ PDPU should increase the bandwidth of internet connection,
- ✓ Should increase the number of computers.
- ✓ PDPU should arrange more training programs for users

- ✓ Appoint more information professionals with ICT skills
- ✓ Always take suggestions or opinions for subscribing new e-journals.
- ✓ All subscription should have both ip base and user id & password.

The study concludes that e-journals resources are essential tools for their study and research of postgraduate students of PDPU.

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IMPACT OF ARMED CONFLICT UPON WOMEN: A QUALITATIVE ANALYSIS FROM A GENDERED PERSPECTIVE

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ABSTRACT

*The existing literature on women and conflict based on conflict zones around the world suggest that women experiences armed conflict differently than men and the impact of armed conflict upon women differs in comparison to men as well. The primary reason for this lies in the unequal gender relations present in the societies where armed conflict takes place. Keeping this in mind, this research paper has attempted a qualitative **analysis** of the impact of armed conflict upon women in Bongaigaon and Chirang districts of Assam from a gendered perspective. The findings of the study suggest that armed conflict has tangible adverse impact upon women exposing them to new and grave vulnerabilities which are further aggravated by the unequal gender relations present in a patriarchal society. However, the study also finds evidence of women's agency made possible by unexpected windows of opportunity created by an unfamiliar social and gendered landscape caused by the conflict situation.*

Keywords: Armed Conflict, Women, Gender.

INTRODUCTION

The term 'conflict' is one with multiple meanings. It has its origins in the Latin word *confligere* which literally means 'to strike together' (Barash & Webel 2002). According to Michal Nicholson, a conflict exists when two people wish to carry out acts which are mutually inconsistent (Nicholson 1970). Louis Kriesberg, in a similar manner, defines conflict as 'a relationship between two or more parties who (or whose spokesmen) believe they have incompatible goals' (Kriesberg 1973). In this study, the term 'armed conflict' has been used to denote primarily the internal conflicts and the intra-state conflict which manifests itself in the form of terrorism, insurgency and ethnic violence. Hence, the operational definition of armed conflict situations for this study can be stated as those situations created by the internal and intra-state armed conflicts between the State and various terrorist and insurgent organisations along with the ethnic clashes between various groups.

Currently, the three major areas of conflict in India are in Jammu and Kashmir, in the North-Eastern states and in central and eastern India where Maoist rebels operate. North-Eastern states (especially Assam, Manipur, Mizoram and Nagaland) have witnessed separatist group's insurgency which has left 40,000 people killed in the fighting since 1979 (Drahoňovská 2010).

Assamⁱ has been a victim of terrorism, insurgency and ethnic violence for decades now. The birth of United Liberation Front of Assam (ULFA) marked the beginning of insurgency in Assam. Its objective was to liberate Assam from the clutches of the illegal occupation of India (Centre for Development and Peace Studies 2008). However, the origin of ULFA lies at the backdrop of Assam Agitation (Assam Movement)ⁱⁱ which finally resulted in the signing of Assam Accord in 1985 (Bhattacharyya 2012). ULFA was born on April 7, 1979 at Sibsagarⁱⁱⁱ under the leadership of Paresh Baruah. ULFA supported the cause of ousting illegal migrants from Bangladesh which helped it to gain popularity among Assamese^{iv} people. But, later it completely changed its agenda and attitude. As M.C. Arunkumar writes, "United Liberation Front of Assam (ULFA) raised the issue of Assamese Nationalism and gave it a militant and radical turn" (Arunkumar 2011). Apart from foreign infiltration and a fear of losing their regional identity; many other factors played the role of catalyst in providing fuel to insurgency and ethnic violence in Assam such as neglect of central government and failure to fulfil the expectations of the people, lack of local leadership to raise the people's voice at the national stage and lack of economic development. Such factors have not only resulted in ULFA, but many other outfits in the state such as National Democratic Front of Bodoland (NDFB) formed in 1988 with the demand of a separate state and Bodo liberation Tigers (BLT). Clashes between Bodos and Muslims, which is another major group in Assam, have acquired violent forms more than once; in 2008 which resulted in 55 deaths and 200,000 displaced people and very recently last year which has left 400,000 displaced people fleeing to the refugee camps and many dead (Bhattacharyya 2012). Apart from ULFA and Bodo insurgency, Assam has also been affected by insurgent movements initiated by Karbi^v and Dimas Tribes, the Adivasis and also the Islamists (CDPS 2008). The whole conflict situation has been further aggravated by failure of the government to understand the ground realities and State response which took military counter-terrorism measures as the primary weapon to curb insurgency in the state. The Armed Forces (Special Powers) Act is a clear example of it.

ARMED CONFLICT AND WOMEN

Literature on conflict has been mostly gender blind which ignores the role of women in conflict completely (Behera, 2006). Navnita Chandra Behera mentions the stereotyped notion of 'men make wars and women make peace'. Such stereotypes characterise men as active and women as passive, men as agents and women as victims, men as rational and women as emotional. Thus women are underrepresented and misinterpreted in terms of gendered causes, costs and consequences violence has on women's lives (Behera, 2006). Traditionally history provided no chronicle of women's experiences of conflict and organised political violence (Manchanda, 2001). However, now we know that women are not just a passive victim, but an active agent in conflict situations. The experiences of women of armed conflict situations drastically differ from that of men. One prime reason for this difference is the existing gendered inequalities between men and women in society.

Impact of armed conflict upon women is multidimensional. Sexual violence against women during armed conflict including rape, molestation and other forms of sexual abuse is a very important issue which has strong gendered connotations. It is a form of cultural violence against women which is committed by considering women as symbolic and physical markers of community identity (Manchanda, 2001). Another important problem that conflict situations create for women is that it takes away the men. This problem also has strong gendered implications. Men usually take care of the public sphere and perform the traditional role of bread winners. However, traditionally being in a secondary position in relation to men in terms of unequal gender relations, lack of education or training and lack of decision making power, women face a new set of previously unknown responsibilities in the absence of men, which increases women's vulnerability during conflict situations. Another important issue raised by conflict situation for woman is conflict induced migration. Conflict blurs the distinction between public and private sphere for woman and in case of forced migration women are pushed into a whole new world of suffering. Rita Manchanda rightly observes that, "The women refugee/IDP^{vi} represents the epitome of marginalisation and the disenfranchisement of the dislocated. Her identity and her individuality are collapsed into the homogenous category of 'victim' and community, devoid of agency, unable and incapable of representing herself, powerless and superfluous" (Manchanda, 2004). Furthermore, living in refugee camps creates further hardships for women and especially young girls as they have to live in conditions where food is scarce and the environment is unhealthy and prone to violent sexual abuses. Sexual abuse, forced prostitution, trafficking, abduction becomes common for women in refugee camps. Another factor that aggravates the sufferings of women in conflict situation is the inadequacy of the national and international laws that protects women against violence. Judith Gardam writes that most of the human rights law fails to take into consideration the ground realities of women in conflict situations (Gardam, 1997).

From the preceding discussion two inferences can be drawn. First, it is undeniable that Assam represents a region that has been adversely affected by armed conflict. Under such a situation, women must be a very significant segment of the population affected by the condition of armed conflict in the state. Second, the impact of armed conflict upon women has strong gender connotations.

OBJECTIVES OF THE STUDY

Keeping this in mind, this study takes up two objectives. First, to understand the impact of armed conflict upon women in Bongaigaon and Chirang Districts. Second, the study has attempted to explore the ways in which women have responded to such impact; in short to explore the evidence of women's agency in these two districts. While pursuing these two objectives, gender or a gendered perspective remains central to this research work which again the existing literature suggests to be vital in order to have a deeper understanding of the issue at hand.

FIELD OF STUDY

The field of study for this research paper comprises of the Bongaigaon and Chirang Districts of Assam. The district of Bongaigaon was created on 29th September, 1989 from parts of Goalpara and Kokrajhar districts with its headquarters at Bongaigaon Town. The district has again been divided to create Chirang District in 2004. Bongaigaon District has a total area of 1,093 Square KM. and a density of 676 Square KM. The district has a total population of 738,804 of which 375,818 are male and 362,986 are female. Of this population 85.14% resides in the rural areas while only 14.86% lives in urban areas. It has a sex ratio of 966 females/1000 males. Average literacy in the district is 69.74. Male literacy in the district stands at 74.87 while female literacy rate is at 64.43. (Census 2011a)

Chirang District was created as a part of the BTAD in the year 2004. It was carved out of Bongaigaon and Kokrajhar Districts. Now Chirang functions as one of the four districts of BTAD with Kajalgaon as its headquarters. The Chirang district is bounded by Bhutan in the north, Bongaigaon in the south, Baksa and Barpeta in the east and Kokrajhar district in the west. Chirang District has a total area of 1,923 Square KM. and

a density of 251/Square KM. The district has a total population of 482,162 of which 244,860 are male and 237,302 are female. It has a sex ratio of 969 females/1000 males. Average literacy in the district is 63.55. Male literacy in the district stands at 70.24 while female literacy rate is at 56.65. (Census 2011b)

METHODOLOGY

Bongaigaon and Chirang districts have witnessed a long period of armed conflict which has left thousands affected by it. However, there is no readily available data on the basis of which an exhaustive list of these victims could be prepared. Hence, with the help of 'Forum for Terrorist Victims Family, Assam', a civil organisation created to further the cause of the victims of armed conflict in the state; the necessary data was collected. The forum had the details of approximately 400 families affected by armed conflict in Bongaigaon and Chirang districts which constitutes a total of approximately 1500 affected population.

The universe of the study covers adult women of 18 years and above who are direct and indirect victims of armed conflict i.e. terrorist/insurgent activities or ethnic violence. The direct victims of armed conflict are those women who have been injured themselves in such conflict. The indirect victims are comprised of those adult women who are the immediate family members (mother/wife/daughter/sister) of someone who have been injured or killed in such conflict. Although the universe of the study is far wider, the unavailability of appropriate data has limited the reach of this study and consequently a very constricted sampling frame of 350 respondents could be prepared which is comprised of 185 women from Bongaigaon and 165 women from Chirang district. Out of this sampling frame of 350, 100 women, 50 from each of the districts, were selected using simple random sampling method as the respondents for this study.

This research paper attempts to conduct a qualitative study of the impact of armed conflict upon women and their response towards them in Assam from a gendered vantage point. Although, in all conflict zones around the world there exists certain commonalities in this regard, the contextual realities differ. Hence, to understand the unique contextual realities of armed conflict and women in Assam, exploratory research design has been employed for this study. The study is based upon primary data collected through personal interviews conducted using an interview schedule and case studies conducted with the intention of acquiring an in-depth understanding of the issue at hand. Thus, both quantitative and qualitative methods have been engaged in this study.

SOCIO-ECONOMIC BACKGROUND OF THE RESPONDENTS AND NATURE AND EXTENT OF THE IMPACT OF ARMED CONFLICT UPON THEM

Before diving into an analysis of the impact of armed conflict upon women in Bongaigaon and Chirang Districts, a glance on the background of the respondents is warranted. The respondents in this study belonged to different age groups. 32 respondents belonged to the age group of 15-30, 37 belonged to the age group of 31-45, 17 to 46-60, 6 to 61-75 and 8 respondents belonged to the age group of 75 and above. Regarding marital status of the respondents, it was found that 14 of the respondents were married, 23 of them were unmarried and 63 of the respondents were widows. Majority of the respondents were found to be Hindus which were 84% of the total respondents. The rest of the respondents (16%) were Muslims. Community wise the respondents of this study exhibited heterogeneity.

This study also shows that Koch Rajbanshi, Bengali and Muslims and Bodos are the communities to which majority of the respondents in this study belong. The educational status of the respondents depicts extremes. While majority of the respondents (32) were illiterate, the next largest section among the respondents was graduates who constitute 20% of the total respondents. As 32% of the respondents belongs to the age group of 15-30 years this educational picture can be understood.

As far as the economic background of the respondents is concerned, the picture is bleak at best. While 72% of the respondents found to have an average monthly income of 1,000-10,000 Rs. only 23% had an average monthly income of 10,001- 20,000 Rs. A miniscule number of 2 respondents had an average monthly income of 20,001-30,000 Rs. Primary source of income was found to be Agriculture (38%) and Small Business (22%). Besides these the respondents were also dependent on Animal Husbandry (14%) and Government Services (12%). The rest of the respondents (14%) were engaged in various activities belonging to the unorganised sector. When asked who is engaged in the primary income generating activity of the family, only 19 of the respondents said that they were involved in that activity. In the cases of the rest of the 81 respondents, they were dependent upon another member of the family who is engaged in that income generating activity.

Now, let us come to the details of the respondents, specific to armed conflict situation and their experience of it. Of the total respondents in this study, 6 respondents were the direct victims of armed conflict, as in they were injured themselves in armed conflict situation. All of these 6 respondents were injured in insurgent activities

perpetrated by National Democratic Front of Bodoland (NDFB) during the period of 2011-2015. The rest of the respondents (94) are the indirect victims of armed conflict, as in someone in the family of these respondents have either been killed or injured in armed conflict situation. It is important to mention here that only those women whose closest kin or immediate family member such as son, husband, father and brother had been killed or injured in armed conflict situations were selected as respondents for this study. Although, it was found that all the family members of the respondents had been killed, not injured; in armed conflict situations.

Out of the total 94 respondents who are the indirect victims, 19 lost their sons, 52 lost their husbands, 15 lost their fathers and 8 lost their brothers in armed conflict situations. In case of 85 of the respondents, their family members were killed in terrorist/insurgent activities perpetrated by different Groups. In the cases of 61 respondents out of these 85, their family members were killed in terrorist/insurgent activities of United Liberation Front of Assam (ULFA), in the cases of 31 respondents, their family members were killed by NDFB and in the case of 2 respondents Bodoland Liberation Tigers (BLT) was involved. The family members of 9 respondents were killed in ethnic violence between Bodos and Muslims. Of these incidents, 10 occurred during the period of 1990-1995, 30 incidents occurred during 1996-2000, 39 incidents occurred during 2001-2005 and 15 incidents occurred during the time period of 2011-2015.

IMPACT OF ARMED CONFLICT UPON WOMEN IN BONGAIGAON AND CHIRANG DISTRICTS.

The ways in which armed conflict situation exerts its impact upon women is heterogeneous in the true sense of the term. Because of the general underlying socio-political and economic conditions and even because of the personality of a particular individual may determine what kind of impact armed conflict will exert upon that particular individual. Hence, to categorise and generalise the impact of armed conflict upon women is extremely difficult. However, in this study, based on the findings, the impact of armed conflict has been divided into three broad categories which are Personal/Emotional, Social/Familial and Economic/Financial.

Personal/Emotional Impact of Armed Conflict

Respondents were enquired about the impact of grief caused by the loss of a loved one. They were asked if their grief had affected their level of participation in community. 85% of the respondents responded negatively to this question. However, 15% responded positively. 10 of these respondents said that participating in community affairs reminded them about their lost ones and that they don't feel welcomed. 5 of the respondents said that after the incident they prefer to be alone and avoid ceremonies etc. Respondents were also asked if they think that their grief over the loss of their loved ones had affected their families negatively. Most of the respondents (88%) responded negatively to this query as well.

Sexual Harassment of and Assault upon women is a very significant feature of armed conflict situations. Moreover, women are selectively abused as sexual abuse of women percolates to insult and humiliation of the community to which they belong. Thus, women face sexual assaults as they are considered a symbol of pride and honour of a community. In this study, respondents were enquired about incidences of sexual harassments occurred with them after the death of their loved ones. As this query was applicable to only a certain age group, the question was posed selectively to approximately 70 respondents. 21 respondents responded positively in this regard. All these respondents commented that they had faced more than five of such incidents. Further, all these respondents also commented that propensity of such incidents increases as they are women and widows.

Social/Familial Impact of Armed Conflict

Respondents were enquired if the behaviour of their neighbours changed after the injury/death of their family members in armed conflict. While all the respondents responded positively, 36% of the respondents remarked that the behaviour of their neighbours changed a lot or 'to a great extent'. However, 64% of the respondents considered that change in behaviour to be 'very little'. When asked about the nature of this behaviour, only 34% of the respondents said that their neighbours were willing to extend help towards them. While 47 respondents said that their neighbours were sympathetic to their condition, 19 respondents remarked that their neighbours tried to distance themselves from the respondents.

This same query was made to the respondents in regard to their relatives. 42 respondents commented that their relatives were sympathetic to their condition and 19 respondents said that their relatives actually helped them. While 24 respondents commented that their relatives were completely ignorant to their condition 15 respondents commented that their relatives feared that the respondent will become a burden upon them and tried to distance themselves. All the respondents who gave this response were widows who had lost their husbands in armed conflict.

When enquired about the views of the respondents on why this change in the attitudes and behaviours of their neighbours and relatives occurred, all the respondents (100%) agreed that the injury/death of their family

members in armed conflict is the reason behind it. Respondents were also asked how they felt about this change in the attitude and behaviour of their neighbours and relatives towards them. 58 respondents felt they cared, 26 respondents said that they felt uncomfortable and 16 respondents commented that they felt neglected.

In order to explore the role played by family members and relatives in the lives of the respondents further, respondents were enquired about their place of residence before and after the injury/death of their loved ones. The responses of the respondents revealed that before the incident, 56 Respondents lived with their husband's and his family, 20 respondents lived with their parents, 21 respondents lived separately from their families on their own and 3 respondents lived with some other relatives.

When asked if they have changed place of living after the incident, 39 responded positively. It was found that after the incident, 29 Respondents lived with their husband's and his family, 23 respondents lived with their parents, 45 respondents lived separately from their families on their own and 3 respondents lived with some other relatives. From this data it can be deduced that 27 respondents who were living with their husbands and his family, started living separately on their own after the incident and 3 such respondents started living with their parents.

It becomes clear from the data that after the incident, 27 of the respondents, who were living with their husbands and his family earlier, started living separately on their own. Further, 3 of the respondents living with their husbands earlier started living with their parents after the incident. When enquired about the reasons for this change in place of living, 8 respondent remarked that it was their wish to live with their parents, 2 respondents said that she chose to live with her parents as it was easy to reach work from there, 12 Respondents quit living with their husband's families because of dispute over property after the death of their husbands and 9 respondents commented that they stopped living at their husbands' as they could not tolerate the behaviour of the members of their husbands' families. It is important to mention here that in most of these cases share of husband's property was denied to the respondent by the husband's family after his death.

It was found that none of the respondents who were widows, remarried. Those respondents were asked whether they wished to get remarried or not. 22 replied positively. These 22 respondents were again asked if they wished to get re-married, why didn't they? 9% of those respondents stated having children as the reason, 14 % stated religious and social customs don't allow, 41% stated that their husband's family was against it, another 9% of the respondents stated that their parents didn't allow it and 27% of these respondents said that they didn't remarry as people might not approve such a step.

Two questions were specifically directed to the young, unmarried respondents. They were asked if they had to quit their studies after the incident and if they are being forced to get married soon by their families. While 9 respondents responded positively to the first question, 20 respondents responded positively to the second question. Such responses show that the direct burden of hardship on the family generally falls upon the young women who are seen as burdens to the family.

Economic/Financial Impact of Armed Conflict

Economic/Financial Impact upon the respondents found to be significant. In the cases of 81 respondents the member of the family who got killed in armed conflict was the primary breadwinner of the family. 87% of the respondents remarked that the death of the family member has brought financial hardship to their families and that this financial hardship has affected their future plans and aspirations adversely. 73 respondents who were mothers were asked if they think that the financial problems will affect their children's future (Education, marriage etc.). 52 responded positively in this regard.

45 of the respondents believed that the incident has set them on a path in which they will face many difficulties in their old age due to financial troubles and lack of companionship caused by the death of their husbands. 15 of the respondents felt that they be become a burden upon their families in their old age. This feeling was stronger in the cases of the respondents without children.

88 respondents out of 100 respondents received some sort of financial compensation from the Govt. While 79 of the respondents received between Rs. 1000 and Rs. 100000; six of the respondents received in between Rs. 100001 and Rs. 200000. Only three of the respondents received more than 2 Lakh. Further, although 88 respondents received condensation from the Govt. only 8 respondents remarked that the compensation has been able to support the financial status of their family in a substantial way.

In the event of the death of the husband in armed conflict, the respondents have to bear previously unknown responsibilities. One such responsibility is the financial matters of the family. Respondents were asked if they have sufficient knowledge banking services and schemes. Only 36 respondents responded positively in this

regard. 33 respondents remarked that they found it extremely difficult to handle financial and official matters after the death of their husbands. Such experiences of women are the results of women's lack of exposure to the public arena and a general lack of willingness to prepare women for such roles as our society is still considering women as someone whose rightful place is 'home'.

Such an attitude is clearly reflected in the finding of the study that only 2 respondents had a job before the incident. 98 respondents didn't have any job. The reasons as stated by the respondents are insufficient education (56%), inability to get a job (4%), Lack of wish or willingness to get a job (5%) and Husband and Family Members didn't allow getting a job (33%).

Out of these 98 respondents, 23 were forced to get some job after the incident to support the family and themselves financially which make the total number of respondents having jobs 25. Out of these 25 respondents, engaged in some form of job or income generating activity, 21 remarked that they find it very difficult to do that job along with their household duties. Only 6 of these respondents felt that their job or income generating activity provides them substantial financial security.

Finally, 76 out of 100 respondents commented that the incidents have caused financial troubles for their families and those financial troubles have lowered the position of their families in the society.

RESPONSE: EVIDENCES OF WOMEN'S AGENCY: FOUR CASE STUDIES.

Women's agency in armed conflict situation entails that women are not just the passive victims of armed conflict. On the other hand, they actively respond to the impact of armed conflict. There are numerous examples of such agency in Sri Lanka, Afghanistan, India and many other countries. (See Manchanda 2004). Keeping this in mind, this research paper has attempted to highlight evidences of women's agency in Bongaigaon and Chirang Districts. To do that, this research paper has taken up 4 case studies, 2 from each district.

Case 1

Indira Boruah, age 36, lives with her parents in Barpara, Bongaigaon District. Her husband, Mahanta Kalita was killed at the age of 30 when he got caught in an armed clash between the Police and ULFA Militants on 25th June, 2002. The respondent was married just six months before the incident. She has no children. The respondent now runs a beauty parlour adjacent to her parents' house. Although, the respondent is apprehensive about her future and she was open about being sad for becoming a burden over her parents, she clearly mentioned that she enjoys her independence. The respondent voluntarily shared that she was working as a teacher before her marriage. She had to quit the job after the marriage. The respondent made it abundantly clear that she enjoys working now and that she also adores the personal and financial independence her business provides her.

Case 2

Deepali Nath Ray, age 38, lives with her parents in Chitkibari Village of Bongaigaon district. Deepali has two sons. Her husband, Anukul Ray, was killed by Unidentified ULFA Militants (as stated in the police report) on 30th September, 2003. The respondent along with her two sons are dependent upon respondent's younger brother who is a teacher at a Government School. The respondent was clearly worried about the future of her sons and of becoming a burden upon her brother. However, she expressed that her family completely supports her. An NGO called 'Society for Victim Family' Kokrajhar helped her to acquire scholarships for her sons under NFCH and Project ASWAS under Assam Police. Since then she is actively engaged with the NGO and tries to help other people affected by armed conflict. The respondent commented that, what she does now being part of the NGO was unthinkable for her before the incident with her husband.

Case 3

Mahima Ray, age 30, lives alone with her son and three daughters in a worn out cottage in Borpathar, Moukhopara, Chirang District. Her husband was killed by ULFA militants in 2006. Her husband's family abandoned her after the incident. Financial hardship has forced her to send her eldest daughter to work as maid at someone's home. Her other two daughters had to quit school. The respondents take care of herself and her children on her own by rearing cattle, selling milk and doing odd jobs at neighbouring houses. The condition of the respondent is really poor financially and her future is uncertain. However, the respondent remarked that despite the hardships she enjoys her independence, making decisions on her own taking care of her children. No doubt the respondent is in a pitiable condition. Although, it can't be denied that she is empowered, at least in some sense of the term.

Case 4

Radhika Chauhan, age 35, lives in Bijni, Chirang district with her two sons and one daughter. Her husband, Sib Narayan Chauhan, was killed by NDFB in 2000. After the incident, Radhika had to leave her husband's family

as they were not supportive and denied her the share of her husband's property. The respondent now takes care of her children by doing odd jobs at neighbouring houses. She regretted that she didn't have higher education which would have made her able to get a decent job. The respondent is living in a really poor condition and worried about her children's future. Despite that, she is infused with confidence and stated that despite her hardships; she 'feels free' after she left her husband's family and that she enjoys her independence which inspires her to 'work harder for her children's future'.

The four case studies mentioned above are not indicative of very successful women's agency in armed conflict situations. However, they bear signs of women's agency and unique windows of opportunities that arise for women to develop their agencies if these opportunities are harnessed properly. Although, the condition of the respondents in this four cases are extremely poor, they have become aware that they have abilities that they didn't know about and that they enjoy the independence, freedom and the decision making abilities which are often denied to them just because they are women.

SUMMARY AND OBSERVATIONS

This research paper had taken up two objectives. First, to understand the impact of armed conflict upon women in Bongaigaon and Chirang Districts and second, to explore the ways in which women have responded to such impact. The first objective i.e. to understand the impact of armed conflict upon women in Bongaigaon and Chirang districts has been pursued using primary data collected through an Interview Schedule. The findings were placed under three categories: Personal/Emotional, Social/Familial and Economic/Financial Impact. A careful observation of these impacts of armed conflict upon women reveals that armed conflict is not the sole factor responsible. It was found that relatives distanced themselves from the respondents and isolated them after the incident which places the respondents in a very precarious position as women in a patriarchal society are raised to be dependent upon family and relatives from childhood. Respondents had to leave their husband's family and live separately on their own or with their parents. This also increases their vulnerability as living separately on their own is not something which a traditional society in Assam prepares women for and living with parents comes with a guilt of becoming burden over them as our culture makes women the husband's problem after marriage. Respondents widowed could not re-marry as society, culture and religion do not permit. Thus, they are in a disadvantaged position where society abandons them and prevents them from returning to the mainstream society as well.

As far as the economic/financial impact of armed conflict is concerned; the gendered nature of the process becomes crystal clear. Women are denied education, skills and qualities that prepare them to get a job or engage in an income generating activity from an early age. When armed conflict brings them face to face with that very task, it is not at all surprising that women find themselves totally unprepared and vulnerable. Very few respondents in this study were found to have jobs; many were forced to get jobs for supporting their families. The qualities of the jobs are inferior as the respondents had very less education.

It was also found that young respondents had to bear the burden of financial hardships of the family directly. They had to quit study and were forced to get married so that the burden on the family could be lightened. Such findings clearly indicate that the impact of armed conflict upon women is gendered and that the adverse impacts percolates to the subsequent age groups of women who always become the first choice to confer upon the lion's share of the disadvantages caused by an armed conflict situation.

The second objective of the study i.e. to explore the ways in which women have responded to such impact, has been pursued using case studies. Although, this study didn't find examples of successful women's agency in Bongaigaon and Chirang districts; undoubtedly it can be stated that evidences and potential for successful women's agency is present there. The failure of women in these two districts to develop successful agencies resides in the unequal gender relations which deprive them of the required skills and confidence to do so. Hence, it is arguable that women in Bongaigaon and Chirang district should be made capable of harnessing the tiny windows of opportunities that armed conflict situation presents to them.

CONCLUDING REMARKS

Assam has been a continuous victim of terrorism, insurgency, ethnic violence and state sponsored armed activities for decades now. Such a situation of armed conflict has affected the population in Assam in varied ways and it is beyond doubt that women in Assam are a segment of its population which has suffered a lot. It is important to understand that this adverse impact is caused by not only armed conflict but a combination of factors which are propelled by the inherent inequalities present in our society between man and women. Inequalities based on gender relations puts women in a vulnerable position in which they find themselves unable to cope with new conditions and demands of roles which were unknown to them so far. Despite such

conditions, the study observed evidences of women's agency and potential for it. Hence, this research paper strongly argues for steps towards ensuring gender equality for women and making women capable of developing their agency by capturing the windows of opportunities made available by the armed conflict situation.

NOTES

ⁱ Assam is a state of India situated in the North-Eastern part of the country.

ⁱⁱ“ Asom Aandolan” or Assam Agitation was a violent campaign spearheaded by the most influential student organisation in the state, the All Assam Student Union (AASU). This campaign was launched in order to get rid of and make Assam free from the grasp of illegal Bangladeshi immigrants. This campaign had huge popular support as the Bangladeshi migration to Assam started to threaten the peculiar regional identity of the Assamese people.

ⁱⁱⁱ Sibsagar is a district in the state of Assam. This district is situated in the upper Assam region of the state.

^{iv} Assamese Society denotes the local inhabitants of Assam. In that sense, the term ‘Assamese society’ cuts across ethnic identities cultures, languages and religion encompassing everyone in the state under one Assamese community. However, the term ‘Assamese’ refers to the Assamese language and also to the people speaking this language which happens to be the majority group in the state.

^v Karbis are one of the oldest inhabitants of Assam. They are primarily located in the Karbi Anlong District of the state.

^{vi} IDP stands for Internally Displaced Persons.

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