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Hybridity and Cultural Tensions in Derek Walcott's Poetry: A Postcolonial Perspective

Kazal Kumar Das

Abstract

The paper examines the paradoxes of pain and joy in Derek Walcott's fragmented and hybrid identities and racial and colonial tensions in his poetry. It also deals with Walcott's celebration of the hybridity and cosmopolitanism of Caribbean culture. The paper shows how Walcott never loses sight of his colonial past and how he remains critical of the forces shaping the future of his own culture. The paper points out how he confronts the conflicts of his European and African ancestry from the perspective of postcolonial reality. The paper makes a postcolonial analysis of Derek Walcott's one earlier poem, "A Far Cry from Africa" (*In a Green Night: Poems, 1948-60*, 1962) and two later poems, "Names" (*Sea Grapes*, 1976) and "The Sea is History" (*The Star-Apple Kingdom*, 1979) to highlight his search for a Caribbean history while exploring the racial, cultural and colonial tensions embedded in his Caribbean identity. It also shows the historical and political contexts in which he wrote these poems.

Derek Walcott, a Caribbean poet of African and European descent, was born on the island of Saint Lucia in the British West Indies in 1930. In his poems, he reflects the complex colonial history of the island and explores the process of identity making in the colonial and postcolonial Caribbean culture. "Saint Lucia like other Caribbean islands, has endured several centuries of colonialism, switching several times between French and British control to finally gain its independence in 1979" (Douillet 1). According to the Norton Anthology of English Literature (Introduction on Derek Walcott), "As a black poet, writing from within both the English literary tradition and the history of a colonized people, Walcott has self mockingly referred to his split allegiances to his Afro-Caribbean and his European inheritances as those of a "schizophrenic", a "mongrel" and a "mulatto of style". His background is indeed racially and culturally mixed: his grandmothers were of African descent; his grandfathers were white, A Dutchman and an Englishman" (Walcott 2586). In his poetry, he sometimes celebrates this cross culture inheritance and sometimes, it

becomes the source of pain and ambivalence. He also had a Methodist upbringing in a largely Roman Catholic society. His mother Warwick Walcott was a teacher at a Methodist elementary school, who provided her children with an environment where their talents could be nurtured. At that time, the minority Methodist community could be noticed and Walcott's family was a part of it. During the French colonial rule, the catholic culture was very dominant and Walcott's family was overshadowed by this dominant culture (Grimes 2017). Walcott had a deep love and fascination for English language but at the same time had his vexation for his postcolonial affiliations. Even as a school boy, Walcott knew he was not alone in his effort to sort through his vexed postcolonial affiliations. From the very beginning of his life, he felt a special resemblance with Irish writers like W.B. Yeats, James Joyce and J.M. Synge, whom he saw as fellow colonials. These writers have the same paradoxical disgust for the British Empire but their love for English language is also sincere. According to the Norton Anthology of English Literature (Introduction on Derek Walcott), "He has repeatedly asked how the postcolonial poet can both grieve the agonizing harm of British colonialism and appreciate the Empire's literary gift" (Walcott 2587).

In order to understand Walcott's poetry, it is important to have an understanding of the historical and the political background in which he wrote these poems. The Caribbean islands served in many poems of Walcott as a subject matter and inspiration. The Caribbean islands are consisted of several scattered islands between the North and the South America. The Caribs or the American Indian tribe occupied them before the arrival of Columbus in 1492. The British, the French and the Dutch gradually colonized the different islands at different times. The colonizers brought slaves to work on these islands from different parts of Africa. But with the Emancipation Act of 1863, the custom of slavery was put to an end. Then the colonizers started importing labor forces from China and India. Various Caribbean writers and poets tried to reconstruct the situation of these forced laborers who were brought to these islands. When Columbus discovered the islands, he assumed that the natives did not exist. The colonizers negated the existence of the natives let alone consider the position of the slaves and the indentured laborers. These people were displaced from their homeland and brought to an entirely different atmosphere to work forcefully. They were unable to communicate with each other because of the language barrier and gradually these diasporas developed a language of communication among themselves, such as Creole and Pidgin. They also developed a hybrid

culture by intermixing various cultures like African, Native American, Indian, French, British and Dutch. This hybrid culture was inherited by the later generations though they did not face displacement or firsthand colonization. The split identity caused by the inheritance of this hybrid culture resulted in cultural schizophrenia (Mehajan 2). The psychological condition of Walcott's split personality is depicted in "A Far Cry from Africa." The colonial, racial and cultural tensions are portrayed clearly in Walcott's later two poems, such as "Names" and "The Sea is History."

Derek Walcott in "A Far Cry from Africa" expatiates on the theme of split identity and anxiety caused by it in the face of the struggle in which the poet could side with neither party. The painful and jarring depiction of ethnic conflict and the split identity are the core points of this poem. In short, it is about the poet's ambivalent feelings towards the Kenyan terrorists and the counter terrorist white colonial government. The Kikuyu (the Kenyan terrorists) also known as the Mau Mau fighters were an east African ethnic group and they conducted an eight year (1952-1960) campaign of violent resistance against the British colonial settlers (counter terrorist white colonial government) in Kenya (Walcott 2587). According to the persona of this poem, both parties were inhuman during the independence struggle in the 1950s. He can side neither of them since he shares both bloods in his veins.

In the first three lines of the first stanza of the poem, Africa is described as a huge beast and human beings are compared to flies. Africa is like an animal that has been skinned alive: "A wind is ruffling the tawny pelt/ Of Africa. Kikuyu, quick as flies, / Batten upon the bloodstreams of the veldt" (Walcott 1-3). The opening images of the poem are drawn from accounts of the Mau Mau uprising, an extended and bloody battle during the 1950s between the European settlers and the native Kikuyu tribe. Here the natives are compared to Jews and they are expendable as savages. The harsh relationship between the colonizers and the colonized is described here through a blood bath resistance:

> Corpses are scattered through a paradise.
> Only the worm, colonel of carrion, cries:
> "Waste no compassion on these separate dead!"
> Statistics justify and scholars seize
> The salients of colonial policy.
> What is that to the white child hacked in bed?
> To savages, expendable as Jews? (Walcott 4-10)

In the second stanza of the poem, the drama of human violence and atrocity is seen against the background of an immemorial Africa ringing with the beat of drums and the cries of wheeling ibises:

> Threshed out by beaters, the long rushes break
> In a white dust of ibises whose cries
> Have wheeled since civilization's dawn
> From the parched river or beast-teeming plain. (Walcott 11-14)

It is to be noted that atrocities are committed by both the sides. Human beings are worse than beasts because they have mastered the art of inflicting pains on their fellow beings. The white peace (a false peace achieved by the colonizers by killing the natives who resisted) is like an infectious disease which has been contracted by the dead. And human beings are afraid of this white peace contracted by the dead. Human beings mistake this native dread for courage:

> The violence of beast on beast is read
> As natural law, but upright man
> Seeks his divinity by inflicting pain.
> Delirious as these worried beasts, his wars
> Dance to the tightened carcass of a drum,
> While he calls courage still that native dread
> Of the white peace contracted by the dead. (Walcott 15-21)

In the third stanza of the poem, Walcott describes the atrocities which are committed in the name of ideologies. Colonialism imposes on its subjects many indignities but the most insidious one is a spiritual and cultural schizophrenia:

> Again brutish necessity wipes its hands
> Upon the napkin of a dirty cause, again
> A waste of our compassion, as with Spain,
> The gorilla wrestles with the superman. (Walcott 22-25)

There is a conflict between Walcott's allegiance to Africa and his indebtedness to European culture. The questions that the poem puts can only be taken as rhetorical. "Where shall I turn when there is no place to turn? How can I choose when the choice is impossible?" Provoked by western reports of Mau Mau atrocities in the Kenyan liberation struggle of the 1950s, the poem describes an agony of choice for West Indies, or at least for Walcott, between Africa and Europe. Edward Baugh in his *Derek*

Walcott: Cambridge Studies in African and Caribbean Literature aptly commented on the third stanza of the poem:

> The nexus of the humanizing power of poetry and the eloquence and subtlety of English also constitutes a major factor in the reconciling of opposites that is attempted in 'A Far Cry from Africa'. Even more so than with 'Ruins', A Far Cry' posits a well-nigh geometric balance of opposites, which proves deceptive on close examination. The poem's wide appeal to commentators on Walcott's work results no doubt from its neatly graphic paradigm of polarities, and its sanction in effect of the easy typecasting of Walcott as 'divided to the vein' (CP, 18). Provoked by Western wire-service reports of Mau Mau atrocities in the Kenyan liberation struggle of the 1950s, the poem describes an agony of choice for the West Indian, or at least for Walcott, between Africa and Europe. (Baugh 44)

Walcott asserts his life's dilemma at the end of the third stanza. He expresses his great fascination and love for the English tongue but at the same time he cannot forget the atrocities and crimes that have been committed against his people by the Empire. Harold Bloom in *Derek Walcott (Bloom's Modern Critical Views)* wrote, "Using the English tongue he loves does not preclude his moral outrage at the crimes that the Empire has committed against his people" (54). Walcott's poetry is at once torn and enlivened by the conflict between his allegiance to Africa and his indebtedness to the English language:

> I who am poisoned with the blood of both,
> Where shall I turn, divided to the vein?
> I who have cursed
> The drunken officer of British rule, how choose
> Between this Africa and the English tongue I love?
> Betray them both, or give back what they give?
> How can I face such slaughter and be cool?
> How can I turn from Africa and live? (Walcott 26-33)

The title of the poem is 'a far cry' that indicates an impossible thing. The poet is writing about an African subject from a distance (writing from Saint Lucia) and he is hearing the poem as a far cry coming to him. It also indicates the poet's subconscious cry for Africa. Paul Breslin wrote in *Nobody's Nation: Reading Derek Walcott*:

> "A Far Cry from Africa" defines the colonial poet's dilemma more explicitly, in more fully imagined symbolism. Even the title serves

> notice that close attention will be rewarded: it plays on the idiom "a far cry from," thus evoking the poet's awareness of cultural as well as physical distance from Africa, even as he is moved by its cry across the Atlantic. (Breslin 60)

Walcott fails to forget the cruelty that has been attributed and imposed on his ancestors and he is also greatly fascinated with the Empire's literary gift that is English language. Thus the condition of Walcott is like the existence of Trishanku (in between-neither in heaven nor in the world). However, Walcott is unable to turn away from his English identity and at the same time he fails to negate the inheritance of his African ancestry. Frantz Fanon in his *Black Skin, White Masks* theorizes this psychological condition as "Negrophobia". Fanon wrote in his book that "the black man lives an ambiguity that is extremely neurotic" (169). In the "collective unconscious" of the black man lies that being black means being "wicked, spineless, evil and instinctual, just the polar opposite of being White" (169). Therefore, in "A Far Cry from Africa", Walcott confronts this psychological dilemma but the paradoxes of his identity remain unresolved.

The cultural, colonial and racial tensions in the collective Caribbean identity have been depicted more vividly in Derek Walcott's later two poems "Names" and "The Sea is History." In these poems, Walcott tries to illustrate the moment of origin of the Caribbean race. At the very onset of the poem "Names", Walcott explains how his race came into existence with no nouns, no horizon, no future and with no memory.

> My race began as the sea began,
> with no nouns, and with no horizon,
> with pebbles under my tongue,
>
> with a different fix on the stars. (Walcott 1-4)
> I began with no memory,
> I began with no future, (Walcott 8-9)

The significant aspect is the transition from "my race" and "I began" to "our souls" and "our names." This shift actually traces the growth of sensibility from an individual to a collective level. Walcott writes "My race began as the sea began." African slaves were brought to these islands via the sea and their agony is portrayed like the cry of the Osprey in this poem. They had to leave their motherland and were brought to an unknown territory. The memory of their homeland and their own culture are lost with the passage of time and by coming in contact with a

completely different culture. The image of the Osprey's cry depicts the agony and condition of those displaced people.

> A sea-eagle screams from the rock,
> and my race began like the osprey
> with that cry,
> that terrible vowel,
> that I! (Walcott 23-27)

The cry is an agonized cry of the displaced people in search of an identity of their own in the midst of strangers, a complete new culture and in a total strange land. The binary opposition between the black and the white has been sorted out when Walcott starts to trace the beginning of the Caribbean race. Walcott fails to trace down the moment as "the mind was halved by a horizon." He fails because the history of the Caribbean island was reported and documented by the European colonizers. The remaining option for Walcott is to rewrite the history from a subaltern point of view. But this challenge is also very complex as those African slaves and indentured laborers spoke different languages and dialects. They were forced to learn the colonizer's language. The colonized people started to adopt it with different pronunciations and mispronunciations. Paul Breslin wrote:

> The horizon divides, separating one part of the mind from another, breaking the unity of the primal state. It also evokes the separation of past from present, and of Old World from New. Though the "race" must have begun prior to the memory of a past or the anxious projection of a future, it no longer inhabits that beginning. When, the poem asks, did the transition occur? The speaker has "never found that moment," despite his searching. For the West Indian, brought from Benares, Canton, or Benin, "the horizon sinks in the memory." One cannot remember the moment at which one began to remember. It is as if one had "melted into a mirror" (*SG,* 32). (Breslin 60)

In the second part of the poem, Walcott describes how the colonizers named everything in the islands after the places and structures of Europe. The colonizers tried to recreate their own glories and histories of Castille, Versailles and Valentia on those islands as they were displaced and dislocated also from their homeland. They attempted to recreate a replica of their homeland on these islands.

> Where were the courts of Castille?
> Versailes' colonnades

> supplanted by cabbage palms
> with Corinthian crests,
> belittling diminutives,
> then, little Bersailles
> meant plans for a pigsty,
> names for the sour apples
> and green grapes
> of their exile. (Walcott 42-51)

The colonizers put their endeavors to teach their language to the colonized people for their own benefit because language is a hegemonic force. The French words spoken by the teacher must be repeated after him by the students in "the fresh green voices" to create a new language.

> Listen, my children say:
> moubain: the hogplum,
> cerise: the wild cherry,
> baie-la: the bay,
> with the fresh green voices
> they were once themselves
> in the way the wind bends
> our natural inflections. (Walcott 63-70)

The poem ends with a question of the colonial teacher and subsequently the pathetic and immature answer of the colonized people. The annoyance, abuse and disappointment of the teachers are also demonstrated here.

> and children, look at these stars
> over Valencia's forest!

> Not Orion,
> not Betelgeuse,
> tell me, what do they look like?
> Answer, you damned little Arabs!
> Sir, fireflies caught in molasses. (Walcott 77-83)

The students perceives the stars as "fireflies caught in molasses" instead of the constellations of Orion or Betelgeuse. The metaphor suggests the condition of the African people. Just like the trapped fireflies in molasses, the African people can emit light but they are eternally caught in the physical and ideological trap of the colonizers.

Derek Walcott in "The Sea is History," talks about his own ideas of history by encapsulating them in a form of narrative of images. It shows his sense of disillusionment in respect of the origin of the Caribbean history. He portrays the condition of his own people by taking references from the history of the suffering people. The poem traces the history of the African slaves and compares them to the mythical events in the Bible. It is densely enriched with various images from the Bible. In the first part of the poem, Walcott shows the parallel of the African slaves transported to the islands with the flight of the Jews in the Genesis in search of the Promised Land.

> First, there was the heaving oil,
> heavy as chaos;
> then, like a light at the end of a tunnel,
> the lantern of a caravel,
> and that was Genesis. (Walcott 5-9)

In this poem, Walcott uses both the Biblical allusions and the sea as a metaphor. The "grey vault" of the sea is the keeper of history of the Caribbean people. The sea is the history because it witnessed the suffering and agony of the people and also the changes that happened there. The expansive nature of the sea bears the testimony of the complexity of the Caribbean history and the suffering of the people.

> Where are your monuments, your battles, martyrs?
> Where is your tribal memory? Sirs,
> in that grey vault. The sea. The sea
> has locked them up. The sea is History. (Walcott 1-4)

According to Walcott, history cannot be understood by the documentations, monuments, martyrs, battles and renaissance of the colonizers. Rather it is actually locked up in the grey vault of the sea. While delivering an interview with J.P. White, Walcott said:

> Nothing can be put down in the sea. You can't plant on it, you can't live on it; you can't walk on it. Therefore, the strength of the sea gives you an idea of time that makes history absurd . . . And by history I mean a direction that is progressive and linear. With the sea, you can travel the horizon in any direction, you can go from left to right or from right to left. It doesn't proceed from A to B to C to D and so on . . . The sea does not have anything on it that is a memento of man. (CDW, 158–159)

Edward Baugh aptly commented in this context that "The sea is like a consciousness that contains, absorbs and transcends history." In the course of the poem, the white master asks his black slave "but where is your Renaissance?" The black slave could point out the white master as they had no renaissance. Instead the slave in an innocent manner says, "Sir, it is locked in them sea-sands / out there past the reef's moiling shelf, / where the men-o'-war floated down;" (Walcott 34-36).

There are both reminiscence and suffering when Walcott portrays "the spires lancing the side of God / as His son set, and that was the New Testament." There is the reference of Jesus Christ, the son of God, who sacrificed his own life for the betterment of mankind. The Emancipation Act of 1863 was also like a deliverance for the black community as slavery was abolished. But the joy vanishes quickly because "jubilation, O jubilation— / vanishing swiftly / as the sea's lace dries in the sun." It actually unleashed a different type of violence because in the West Indies, communities failed to live as a homogenized group of people. Walcott describes the conflict and tension of his own people in the poem asserting "and then each rock broke into its own nation."

Walcott also criticizes the political and social institutions of the newly established independent states. The "synod of flies" is the council of priests, the "secretarial heron" is the bureaucrat and "the bullfrog bellowing for a vote" is the politician. The new states have miles to go in respect of culture and politics for "a rumour without any echo / of History, really beginning." In this poem, Walcott criticizes the traditional concept of history as recorded and documented events. He also points out the secret agenda of the colonizers behind this documentation.

In conclusion, it can be said that Walcott in his poems explores the colonial, cultural and racial tensions embedded in Caribbean history and identity. In the poems, "A Far Cry from Africa," "Names" and "The Sea is History", Walcott presents the complexities of colonial, racial and cultural tensions vividly. The poems also uncover the mystery of suffering of the Caribbean people and at the same time, they represent a celebration of hybridity and cosmopolitanism of Caribbean culture. But according to Homi K Bhabha and Salman Rushdie, hybridity is actually a critical position. In *The Location of Culture*, Bhabha sees hybridity as "repetition of discriminatory identity effects" and this repetition "turns the gaze of the discriminated back upon the eye power" (112). Rushdie sees hybridity as a "vintage point in a postcolonial postmodern world, which allows one to question both the host-land and the homeland" (Mahajan 2).

Works Cited

Baer, William, ed. *Conversations with Derek Walcott*. University of Mississippi Press, USA. 1966. Books.google.com. N.p. 2019. Web. 5 February 2019.

Baugh, Edward. *Derek Walcott*: *Cambridge Studies in African and Caribbean Literature*. Cambridge University Press, Cambridge, New York, 2006. Print.

Bhabha, Homi K. *The Location of Culture*. Routledge, New York, 1994. Print.

Bloom, Harold. *Derek Walcott*: *Bloom's Modern Critical Views*. Chelsea House Publishers, Philadelphia, 2003. Print.

Breslin, Paul. *Nobody's Nation: Reading Derek Walcott*. The University of Chicago Press, Chicago and London, 2001. Print.

"Derek Walcott." *The Norton Anthology of English Literature*. 6th ed., Vol 2., New York: W.W. Norton, 2002. Print.

Douillet, Catherine. *The Quest for Caribbean Identities: Postcolonial Conflicts and Cross-Cultural Fertilization in Derek Walcott's Poetry*. Semanticscholar.org. N.p., 2019. Web. 20 July 2019.

Fanon, Frantz. *Black Skin, White Masks*. Grove Press, New York. 2008. Print.

Grimes, William. *Derek Walcott, Poet and Nobel Laureate of the Caribbean, Dies at 87*. The New York Times. Nytimes.com. N.p., 2019. Web. 26 August 2019.

Mahajan, Nidhi. *Cultural Tensions and Hybrid Identities in Derek Walcott's Poetry*. inquiriesjournal.com. N.p. 2019. Web. 6 September 2019.

Resistance against Patriarchal Programming:
A Case Study of Nora in *A Doll's House*

Md. Nahid Islam

Abstract

Taking a cue from the ways patriarchal programming subjugates women in every sphere of society as shown by Henrik Ibsen in *A Doll's House* this study tries to discover a way out from the oppression of patriarchy. The study analyzes the growth of Nora who learns to understand how patriarchy operates after finding out the points of self-contradiction of patriarchal programming and resist its ideologies which are normalized through systematic programming. The study also discerns that a woman also has to learn to recognize her own self to get beyond patriarchy to achieve success in the quest for enlightenment.

Keywords: Patriarchy, Patriarchal Programming, Recovering Patriarchal Woman

Henrik Ibsen portrays the strive of a woman towards her recovery from being subdued by patriarchy in *A Doll's House*. Nora, the protagonist of the play, is being programmed to internalize the ideals, norms, and values of patriarchy. Traditional gender roles established by patriarchy oppress women in various ways successfully justifying inequities. A woman is programmed not to understand these. 'Recovering Patriarchal woman', this term is introduced by Lois Tyson in her book *A User-Friendly Guide to Literary Theories*. She calls herself that saying, "I was socially programmed, as are most women and men, not to see the ways in which women are oppressed by traditional gender roles. I say that I'm recovering because I learned to recognize and resist that programming." (Tyson 86) Women who are programmed by patriarchy need to recognize and accept that they are programmed. They need to learn to resist the programming to start the de-programming process and recognize their own individual self and its characteristics before they can fully recover. This learning period will arm her to get beyond the patriarchy. Nora, who was programmed by patriarchy in the initial stages of the text, starts her journey in this learning period to deprogram herself to get beyond patriarchy.

A prominent feminist Simone de Beauvoir observes in her book *The Second Sex* that men are always considered as contingent beings. A woman on the other hand is Man's other, having roles that are often self-sacrificial. Even with the sacrifice women are not treated as equals with men, either in relation to their husbands or society. They are treated like playthings "doll" to be precise. Most of the time in the text Helmer, Nora's husband calls her by names like, "my lark", "squirrel" (Ibsen 23), "spendthrift", "feather brain" (24), "sweet little lark" (28) and, "sweet little song-bird" (29), etc. He acts like she is his child or toy to mess with. He has a marginal attitude towards her. He dehumanizes Nora to maintain his higher spot in the hierarchy as a patriarchal male. It becomes more evident with his marginal attitude towards Nora when he says, "Bless me! Little Nora talking about scientific investigations?" (146) This thought reveals his prejudiced and unfair patriarchal programmed viewpoint on traditional gender roles. Nora is like a showpiece or trophy that serves in the process of beautification of his home and his reputation. To a husband programmed by patriarchal gender roles, his wife is his property not a human being and in a patriarchal society, marriage is used like a suffocating contract of confinement rather than a peaceful partnership. Helmer thinks that after marriage his wife "becomes his property." (160) A renowned French feminist and philosopher, Luce Irigaray has propounded that there are only two options left for women. According to her women are bound "to keep quiet (for anything a woman says that does not fit within the logic of patriarchy will be seen as incomprehensible, meaningless)" and "to imitate patriarchy's representation of herself as it wants to see her (that is, to play the inferior role given her by patriarchy's definition of sexual difference, which foregrounds men's superiority)" (Tyson 101-102) Nora at the initial parts of the text behaves accordingly too. Nora is seen to fulfill the prescribed role of being a wife and a mother almost from the beginning of the text. Her role is restricted to activities like beautifying the home, meeting the needs of her husband and children, and singing and dancing prettily and seductively for her husband which she needs to perform without any complaint or any deviation. Nora assures Helmer by saying, "I shouldn't think of doing what you disapprove of" (Ibsen 30) she does not even reveal how much she had done to save his life. She comprehends that it will be "painful and humiliating . . . for Torvald, with his manly self-respect, to know that (Ibsen 46) her. Helmer will then lose his status quo of the provider of the household given to him by society which will stain his ego with disgrace. Furthermore, she has done some copying works secretly to pay off her loan as it is illegal for a

woman to obtain a loan without her husband's consent. She had no employment experience because in the patriarchal society it is not a woman's domain to earn money. So, as a patriarchal woman, she keeps quiet and follows the values and norms of patriarchy, and secretly goes against the norms to save her husband until the circumstances do not permit her. As in a patriarchal society, it would be really easy for a woman to ruin her entire life through one youthful mistake, happened in the Nurse's case, falling pregnant outside marriage. The Nurse had to give up her child to get the job of looking after other people's children to survive financially. Patriarchal programming programmed her to consider herself lucky to get such a lowly job since she has committed the sin of having a child out of wedlock. Mrs. Linden had to marry a financially solvent person rather than the person she loves to support her family. She had to abandon Krogstad whom she loved to support her mother and her brothers as they could not support themselves at that time. As in a patriarchal society, a woman has to be dependent on someone to survive.

Henrik Ibsen points out in his notes for a modern tragedy written by him in Rome on 19th October 1878, "A woman cannot be herself in modern society. It is an exclusively male society with laws made by men and with prosecutors and judges who assess feminine conduct from a masculine standpoint." (Ledwon 101) Luce Irigaray also asserts that women live in a world where virtually almost every meaning has been defined by patriarchy. Mrs. Linden informs about the law about borrowing, "a wife can't borrow without her husband's consent." (Ibsen 44) Even the law is carefully programmed by patriarchy to portray women as insignificant compared to men. After Nora gets caught by Krogstad about forging the signature of her father to borrow money from Krogstad in order to save her husband, Krogstad explains that "The law takes no account of motives." (Ibsen 72) She cannot take it. Astonished Nora asks, "Do you mean to tell me that a daughter has no right to spare her dying father trouble and anxiety? - that a wife has no right to save her husband's life?" (72) She "did it for love" (73) but the law of the patriarchal society does not consider that motive before treating her like a criminal. Nora begins to question the morals of the patriarchal society when she recognizes how it would criminalize her for an action that she believes to be morally acceptable because of the circumstances. Her sacrifices to save Helmer's life become inexcusable crimes in the eyes of the patriarchal society and its most dutiful representative, Helmer.

Just like any other woman Nora is living in an illusion created by patriarchy enchanted with sweet words and fake promises of people like her husband Helmer who is programmed by patriarchy. Her naïve comment, "You know how deeply, how wonderfully Torvald loves me, he wouldn't hesitate a moment to give his very life for my sake." (Ibsen 106) Her assumption is created from the fake promises of Helmer over the timeline of the text. It is ironical when Helmer says to Nora, "when it comes to the pinch. I shall have strength and courage enough. You shall see my shoulders are broad enough to bear the whole burden." (Ibsen 98) He even says, "Do you know, Nora, I often wish some danger might threaten you, that I might risk body and soul, and everything, for your dear sake," (Ibsen 151) These hollow promises of Helmer and his superiority complex enchanted Nora like any other woman to immerse herself in the programing of patriarchal society.

The disillusionment of Nora starts with an epiphany when "the miracle" which she was gloriously waiting for does not happen. Though Helmer plays the role of the strong and compassionate husband he explores his true nature after getting the letter from Krogstad revealing the money and forgery of Nora. Helmer fears that Krogstad may cause him a scandal. Instead of treating Nora with understanding and gratitude for her noble intent of saving his life, he threatens and blames her and then immediately begins to think of ways to cover up the ignominy that she has emitted on his family. At the time of danger, he forgets all the promises that he made and to him; his loving wife becomes a "Wretched woman" (Ibsen 153), an "unprincipled woman" (155) for him. Patriarchal programming fails to cover up its track for a bit and its ideologies come out in the open. Helmer's severe and selfish reaction is the final catalyst for Nora's awakening. Nora's innocence and faith in Helmer get shattered; so did her illusions. Nora starts to face the reality and the process of disillusionment starts the journey of her recovery as a patriarchal woman. She says, "Yes; now I begin fully to understand it." (Ibsen 154) Thus, she starts to recognize the programming and thinks about rearranging her life in quest of finding her own self. This quest will move her towards her recovery.

Patriarchal gender roles always tend to cast women as emotional or irrational and create a hierarchy to put women in the lower place. Those who are in the higher spot of the hierarchy tend to blame things on the lower ones using that false hierarchy. Helmer is no different from any

traditional patriarchal man. The money that Nora borrowed was to save his life. She even kept quiet about it and continued to pay the "installments and quarterly interest that are terribly hard to provide for" (Ibsen 47) because it is very hard for a woman in a patriarchal society to enter into the domain of earning money. But the moment Helmer gets the first letter from Krogstad, he blames Nora bitterly. He exclaims, "Wretched woman – what have you done. . . all this disaster and ruin is brought upon me by an unprincipled woman!" (153-155) He forgets about all of those promises just like that. After getting the second letter from Krogstad Helmer was overwhelmed with great joy and shouted: "I am saved! Nora, I am saved!" (157), reveals his great selfishness. Then the façade of a loving and caring husband comes back on and he starts to manipulate Nora again with insincere apologies and fake promises. Nora is disillusioned and starts to see the illogical and self-contradictory nature of the ideology of the patriarchal programming. She says, "You don't understand me; and I have never understood you – till to-night." (161) She pronounces: "You have never loved me. You only thought it amusing to be in love with me." (163) Nora gets the epiphany that, she has been living a semblance throughout her marriage. Nora's knowledge about the truth grows to resist patriarchal ideologies like a recovering patriarchal woman.

Nora begins to understand that patriarchy undermines her which leads to an existential crisis. Her description of her secretly undertaking works to pay off the debts shows her ambition and determination. Her decision to break the law to save the life of her husband portrays her great love for her husband. Krogstad's blackmail and the trauma she got from the behavior of Helmer opened her eyes to save her underappreciated potentials which will help her on the road to get rid of the existential crisis caused by the programming of patriarchy. She understands how patriarchy made her lose her individual self. She expresses:

> While I was at home with father, he used to tell me all his opinions, and I held the same opinions. If I had others I said nothing about them, because he wouldn't have liked it. He used to call me his doll-child, and played with me as I played with my dolls. . . I passed from father's hands into yours. You arranged everything according to your taste. . . . our house has been nothing but a playroom. Here I have been your doll-wife, just as at home I used to be papa's doll-child. (163)

Patriarchy robbed the self from her and made her a doll in her father's house. Her life did not get better at Helmer's home. She just relocated

herself from one dollhouse to another. This painful realization makes her a recovering patriarchal woman and moves her to her journey of getting beyond patriarchy. Nora starts to resist patriarchal norms and values as represented by Helmer, an example of a traditionalist and patriarchal man. He tries to stop her journey towards her recovery. But she strongly opposes him and starts a journey to find her own self, a journey which is similar to the process of individuation that Jung defined as:

> Individuation is, in general, the process by which individual beings are formed and differentiated; in particular, it is the development of the psychological individual, as a being distinct from the general, collective psychology. Individuation, therefore, is a process of differentiation, having for its goal the development of the individual personality. Individuation is a natural necessity in as much as its prevention by leveling down to collective standards is injurious to the vital activity of the individual." (Wehr and Lauer 103)

When Helmer tries to stop her from her journey by reminding her of her duties, she resists. She performed her duties as a daughter, a wife, and a mother all this time but she neglected the most important duties of all the duties to herself. Helmer tries to remind her by saying, "Do I need to tell you what? Your duties to your husband and your children." (Ibsen 167) But Nora boldly responds: "I have other duties equally sacred. . . My duties towards myself. . . I believe that before all else I am a human being." (167) By giving priority to find herself leaving the roles of the wife and the mother she is trying to achieve self-awareness and self-possession. She realizes that she has neglected her duties to herself and that's why she wants to pursue herself. Helmer tries to stop her by reminding her about social shame saying, "To forsake your home, your husband, and your children! And you don't consider what the world will say!" (166-167) She resists that too. She does not put up a fake front anymore for the people of the society. She wants to find her place in the society too. She wants to be free from the confines of the stereotyped social codes and conventions and get out of the repressive influence of society. She declares: "I must make up my mind which is right – Society or I." (Ibsen 169) Nora learns to resist the ideologies programmed by patriarchy to recover herself.

Nora begins to apprehend the possibilities of patriarchy's manipulating religion for its purposes. She tries to resist those and get freedom from

them and try to learn about religion and society by herself and be self-reliant. She says, "I must try to educate myself." (165) As she was taught by others the code of life, she now wants to find out if it is right for herself and have a perspective of herself. She explains: "I know nothing but what Pastor Hansen told me when I was confirmed. He explained that religion was this and that. When I get away from all this and stand alone, I will look into that matter too. I will see whether what he taught me is right, or, at any rate, whether it is right for me." (Ibsen 68) She wants to develop her own viewpoint about religion rather than the perspective of others on it. She wants to nurture her own opinions in her quest of her own self.

Nora finds out the norms and values of patriarchy embedded in every sphere of life which deprived her to have a self and become self-reliant. She learns to resist the knowledge of books and the doctrines of her patriarchal husband. She also wants to test those so-called sacred social conventions which governed her life all this time. She wants to have a journey to discover herself and her position in this world through experiences rather than being taught by others' perspectives. She resists patriarchal programming to achieve the freedom to control and direct her own self.

Works Cited

Beauvoir, Simone de. "Introduction." The Second Sex. Rpt. in French Feminism Reader. Ed. Kelly Oliver. New York: Rowman & Littlefield, 2000. Print

Ibsen, Henrik. *A Doll's House*. Trans. William Archer. Dhaka: Friends Book Corner, 2014. Print

Ledwon, Lenora. *Law and Literature: Text and Theory*. New York: Routledge, 1995. Print

Tyson, Lois. Critical Theory Today: A User-Friendly Guide. 2nd ed. New York: Routledge Taylor & Francis Group, 2006. Print

Wehr, Gerhard, and Hans Erhard Lauer. *Jung and Steiner: The Birth of a New Psychology*. Trans. Magdalene Jaeckel. New York: Anthroposophic P, 2003. Print

Love, Dependence and Victimization in "Rappaccini's Daughter" and "Haimanti": A Comparative Study

Jakiya Sultana

Abstract

In this feminist study Beatrice from "Rappaccini's Daughter" by Nathaniel Hawthorn and Haimanti from the famous short story "Haimanti" by Rabindranath Tagore will be compared thoroughly under the lenses of feminism and gender equality. Though Hawthorne and Rabindranath are poles apart in their ideologies and background they do share traces of deep understanding of prevalent gender inequality of the society in their writings. Both Hawthorne and Tagore wrote many short stories and both of them have created strong female characters who play the central roles in those works. Beatrice from "Rappaccini's Daughter" and Haimanti from "Haimanti" belong to this category. Hawthorne in "Rappaccini's Daughter" and Tagore in "Haimanti" have respectively shown that Beatrice and Haimanti's deaths are the result of the strict codes of the patriarchal society that they live in. Though the setting of one story is in Europe and the other one is in India, both Beatrice and Haimanti suffer and die as a result of the mistreatment of the male characters around them. Their too much dependence on others also intensifies their victimization. In this paper the aim is to find out how the tragedy of these females are intensified by the strict code of conduct of the masculine world. In doing so their relationship with their partners, Giovanni and Opu respectively, will also be analyzed. Whether their partners' passivity and inactiveness intensified their tragedy and suffering will also be taken into account.

Keywords: Feminist consciousness, patriarchy, courageous, victim, passivity

Tagore wrote most of his short stories between 1881 and 1897. Almost all of these stories depict some female characters who represent the traditional and patriarchal concept of women of the time. Tagore had a strong consciousness about injustices and wrongs done to women and wrote about how these victimized them, taking away their agency and their freedom. Whether Tagore was a feminist writer or not is a matter of

great debate and critics are divided in their opinions. Some claim that Tagore was a feminist as he has created characters like Giribala, Mrinal and Charulata who sought to find out a place of their own in the society. On the other hand, some critics are of the opinion that Tagore's feminist ideology and feminist consciousness was not consistent throughout his writing career as he has moved between conservatism and radicalism. But whatever his position is, one thing is clear that Tagore was concerned about the suppression of women and the denial of their rights by the Bengali Hindu patriarchal society. When Tagore wrote "Haimanti" in 1914, the West was already experiencing the first wave of feminism. It is through Tagore's writing that the East got introduced with it.

Like Tagore, Nathaniel Hawthorne was also a gender conscious writer. Throughout his career he has created female characters like Hester, Miriam, and Zenobia who are in many ways the true epitome of female superiority. These characters challenge male dominance and try to create their own identity in the society. In this regard Richard H. Millington says, "Hawthorne uses his admirable female characters to represent an adequate, complex and comparatively free relation to life." (The Meanings of Hawthorne's Women) He also suggests that Hawthorne has created female characters like Beatrice to indicate that women can also think and can become ethically more powerful and heroic than their male counterparts. When Hawthorne was writing, America was experiencing the first wave of feminism. Most of the male writers of Hawthorne's time had biased patriarchal ideas and misogyny was the governing principle of their writings. Though Hawthorne was not outwardly different from them, his writing had feminist overtones that made his female characters strong, independent and powerful. According to   Anda Stefanovici, "Hawthorne never intended to view women as unimportant or as threating Eves, but, rather as men's vital, emotional, intellectual, and spiritual partners, he wanted to say women are companions not threats." (428)   Hawthorne's "Rappaccini's Daughter" was published in 1844 and from that time it has been considered as one of Hawthorne's most characteristic compositions that contains gothic qualities paired with ambiguous and complex symbolism and an underlined feminism. Though Hawthorne was not an avowed feminist, characters like Beatrice certainly separates him from other misogynistic writers of his time.

The story of "Haimanti" is set in the 20th century Kolkata. Narrated from Opu's point of view. it is the story of a young woman named Haimanti. She is seventeen years old and married to a man who is two years older than her. Opu's family arranges the marriage as they expect a large dowry from the girl's family. Everything goes well until Opu's father realizes that Haimanti's father is not that much wealthy and Opu's family starts to torture Haimanti. Though Opu is sympathetic to his wife, he is unable to go against his family. As a result, Haimanti dies and when the story ends we get an indication that Opu would shortly get married with another girl from a wealthy family. On the other hand, "Rappaccini's Daughter" is set in Padua –an Italian city in a distant and unspecified past. Giovanni Guasconti arrives in Padua and rents one of the old buildings of the town. Soon he notices a small garden near his apartment. He is fascinated by the beauty of the flowers and also of Rappaccini's daughter, Beatrice whom he first sees in the garden tending flowers. He discovers with suspicion that whatever insect comes close to her, dies. He later finds a secret entrance to the garden and his courtship with Beatrice starts. We come to know that this garden is made by Rappaccini with different poisonous flowers which he carefully cultivates to experiment with them. Then appears Baglioni who is the mentor of Giovanni and a rival of Rappaccini's profession. Baglioni hates Rappaccini and warns Giovanni to be aware of both Rappaccini and his daughter. He hands Giovanni an antidote to cure Giovanni and Beatrice from being poisonous. Beatrice drinks the antidote first in an attempt to save Giovanni. She dies but before death she accuses Giovanni and Rappaccini for their mistreatment and make them responsible for her death.

The most striking similarity between Beatrice and Haimanti is that they both are the victims of the patriarchal society. Beatrice 's world is usually crowded with the males who control her and abuse her in many different ways. We never hear anything about her mother and the absence of a mother figure certainly makes her naïve and even more dependent on others. She has spent her entire life within the garden created by her father and doesn't have any connection with the outer world. Like a god, old Rappaccini looks over his daughter in an effort to regulate all her actions. Within the garden which in many ways has an underlying similarity with Eden created by God, Rappaccini holds the ultimate power and Beatrice represents Adam with all his meekness and complete obedience. We never find any affectionate dialogue between Rappaccini and Beatrice though it

is clear from Beatrice's behavior that she loves him unconditionally. Rappaccini confines his daughter into the garden and refuses to concentrate to her any wishes. As a dominating father he enslaves his daughter to meet his own desires. He deliberately makes Beatrice poisonous by letting her nurture toxic plants only because it will help him execute experiments with poisonous flowers. She thus becomes a mere instrument in Rappaccini's hands. Barbara Ellis defines Rappaccini's relationship with Beatrice: "Her father wants her beautiful enough to win a husband, dependent enough to remain in his home, obedient enough to do his bidding, and compliant enough to be molded to his standards." (2) Rappaccini justifies his action by calling the poison in Beatrice "marvelous gifts against which no power nor strength could avail an enemy?" (20) Rappaccini is able to control his daughter because the society he lives in gives him the facility to dominate and victimize women like Beatrice. Rappaccini has the strength of knowledge, a strength that offers him God like power- the power to both create and destroy. In the story Rappaccini creates Beatrice as not only poisonous, but he also destroys her by not paying heed on her feelings. She has become poisonous by working so long in the garden which is stuffed with poisonous plants. She has certainly become what her father intends her to be in an exceedingly patriarchal society as she is within the control of her father to obey him. Apart from Rappaccini, the other two males harm her without any specific reason. Giovanni harms her by not realizing her true motives. Though he professes to love her, he never lets any chance to go to taunt her. From the very beginning he is suspicious about her. His imagination of Beatrice is often a mixture of affection and horror. At one moment he idealizes her beauty and virtue but in the subsequent moment she appears to him to be sort of a demon. Similarly, Pietro Baglioni harms Beatrice without any specific reason; he hates Beatrice as he fears that she competes for his chair as she is intellectually superior though neither Beatrice nor Rappaccini ever mentions it within the narrative. Baglioni's fear is groundless as Beatrice denies instantly by saying, "though I have grown up among these flowers, I know no more of them than their hues and perfume;". (Hawthorn 11) Baglioni harms Beatrice only because he is jealous of Rappaccini and she is an easy target. Giovanni always fears to lose control over Beatrice, while Baglioni's groundless fear is generally the result of the male ego concerned with the thought of losing superiority. It seems as if all the males are against Beatrice only because she is a

woman and as a woman she must suffer. Richard Brenzo defines it as, "though she never deliberately harms any of them, and though the men profess to have her good in mind, is nevertheless destroyed by them." (152)

In "Haimanti" Tagore tells us the story of the eponymous protagonist victimized by the hypocrisy of the early 20th century patriarchal Hindu society. The time when Tagore wrote "Haimanti", the Bengali middle class society was strictly patriarchal. Women were restrained and controlled by men in all ways. Hindu patriarchal society took religion as its tool to disgrace women in terms of social position and rights. Alison Macdonald defines it as, 'Traditional upper caste Hindu family strict ideas of honor and shame, purity and pollution dominate a woman's life and strict hierarchies of age and gender dictate the ways in which women and men behave towards each other. Women are expected to be dutiful, respectful and submissive wives and self- sacrificing mothers." (2) According to the Hindu tradition of that time a married woman was always the possession of the husband and her in-laws. At that time marriage was an institution that legalized the exploitation of women. In "Haimanti" Tagore has used the metaphor of a man eating a tiger to show the severity of the situation by saying, "In our country, a man who has been through marriage once is no longer daunted by the prospect. His attitude towards women resembles the disposition of a tiger who has once tasted human flesh. (4) It indicates that the moment a woman is married she loses all her freedom as an individual and becomes just a possession of the husband and in-laws. The husbands cannot support the wives' rights as they don't have their individual existence to them. As Tagore points out Opu's understanding about the marital relationship of the most hindu families as "Past the vows, they cease the first opportunity to feast on their wives". (14) A woman's status in her in-laws' house depends on the amount of dowry she brings with her. For this reason, we see that Haimanti's father -in- law wanted to arrange the marriage as early as possible though he knew that Haimanti is a bit older than other girls as Tagore says, "Despite of her age, the dowry was too substantial to be ignored and so the great hurry." (3) And later when it is discovered that her father is not that much wealthy as was thought earlier, she is humiliated and punished to such an extent that she dies. But we must remember that Tagore had a feminist consciousness. He was ahead of his age in the sense that he discovered the inherent strength of the female

characters like Haimanti in his works. He has made it clear that these women though suppressed by the patriarchal society have the will power and the strength to establish their identity as individuals in this connection, Samdatta Mandal writes: "Tagore was definitely a feminist but not of the traditional kind. All his female protagonists demand some sort of 'space' or 'domain' and this makes his stories suitable material for exemplifying the women question." From the very beginning of the story Haimanti appears to be a woman with an independent mind. She is raised by her father who allows her to experience intellectual freedom. She thus becomes a symbol of the modern and progressive woman in Tagore's fictional world. But it is the norm of patriarchy to eliminate everything that threatens its supremacy and in the story Haimanti's tragedy proves it. She is an ill- fated woman who suffers as a direct consequence of patriarchy.

It is to be noted that both Beatrice and Haimanti have free spirits. Their moral and ethical strength enable them to stay true to themselves till the end of their lives. In "Haimanti", Haimanti is the only female character that possesses this quality. She has honesty which compels her to stay honest in every situation. This becomes evident when she refuses to simply accept her in-law's falsity to hide her true age and rejects her father in-law's advice to tell a lie about it. As a real epitome of honesty she later answers her infuriated mother- in -law: "My father never lies" (Tagore 20) Another evidence of her integrity comes out when Opu in an attempt to save her lies to his father that she (Haimanti) is sick and tried to take her out from the house for a while. But when Opu's father asks her the reason, she declares, "I am not suffering from any disease". (Tagore 29) Haimanti has her personal ideology which makes her independent and courageous but at the same time it also makes her lonely in her in laws' house. She doesn't have anybody to reveal her thoughts and she becomes an outsider in her own home. As Tagore declares, "And so in this bylane of Calcutta city, she held silent dialog with the mute sky through her window grille". (27-28) As a woman she has to suffer silently and cannot express her emotions because it is strictly forbidden by the patriarchal society which takes a woman's silence as a trait of her surveillance. To quote Viswanath, "a woman has to learn to communicate through non-verbal gestures, not voice the tensions inherent in patriarchal family structures nor make any emotions explicit" (qtd in Macdonald 4). Tagore has created Haimanti as a sensitive woman. The inhuman treatment that she receives from her in-

laws makes her depressed and grief stricken. Though she never complains about anybody, her unexpressed pain takes its toll and she dies.

At the beginning, Beatrice appears to be quite passive having no control on things happening to her. But later on Hawthorne gradually reveals her personality as a woman of free spirit who can think independently. And at the end she appears almost like a heroic figure in her sacrifice and death. She decides to drink the antidote first not only because she loves Giovanni, but also to prove her independence as a human. She seems almost like a martyr in her final words which goes on like this: "I would fain have been loved, not feared, . . . But now it matters not; I am going farther, where the evil, which thou hast striven to mingle with my being, will pass away like a dream . . ." She addresses Giovanni as, "Farewell, Giovanni! Thy words of hatred are like lead within my heart – but they, too, will fall away as I ascend." (Hawthorne 20). In this speech Beatrice has presented her true motives; she reminds her father that she has her own will power and can sacrifice her life for her love. It is also a revolt against her lifelong captivity designed by her father who though was able to make her body poisonous, couldn't corrupt her soul. Here she questions the futility of the male dominance which aims to silence the other sex in the name of protection and safety. For Giovanni, she wants to make him realize that she not only has physical charms but also has the strength and willpower to take decisions about her life. It is a direct attack to the male ego who cannot perceive the females anything beyond their physicality.

Both Beatrice and Haimanti have lovers who are very much passive in their love relations and it is the passivity of these males that intensifies their tragedies. In "Rappaccini's Daughter", Giovanni's feeling for Beatrice is not that of love but almost of an inner psychological hatred. Though at first he is greatly charmed by her beauty, he later realizes that she has something that he doesn't possess-honesty and a pure heart which unwillingly "forces him to confront his own earthliness and 'imperfection'." (Fetterley 29) Giovanni never tries to understand Beatrice and her feelings. He is always judgmental about her and doesn't hesitate to rebuke her bitterly. At one moment he desperately wants to be with her but in the next moment he wants to get rid of her. She is both an angel and a demon in an instance. Hawthorne presents his dilemma as below:

It mattered not whether she were angel or demon; he was irrevocably within her sphere, and must obey the law that whirled him onward, in

ever-lessening circles, towards a result which he did not attempt to foreshadow; and yet, strange to say, there came across him a sudden doubt whether this intense interest on his part were not delusory; whether it were really so deep and positive a nature as to justify him in now thrusting himself into an incalculable position; whether it were not merely the fantasy of a young man's brain, only slightly or not all connected with his heart. (9)

Giovanni attempts to separate Beatrice's soul from her physical body as he thinks it is poisonous and harmful. Thus, he fails to realize and accept her what she is. Laura Stallman (1995), in her essay defines Giovanni's motive by saying he (Giovanni) lacks the depth of character as he perceives and responds to Beatrice from a physical level and fails to perceive her as a real person rather than as a symbol of evil. Giovanni loves the beautiful Beatrice with all the physical charms and is horrified when compelled to perceive her as poisonous. Giovanni has "a weak and selfish and unworthy spirit"(Hawthorne 19) and cannot perceive Beatrice's inner beauty. When Beatrice says "though my body is nourished with poison, my spirit is God's creature"(Hawthorne 19) he fails to realize the true meaning of it and concludes that she is evil. From the beginning Giovanni had a fantasy about Beatrice and picturized her as a beautiful girl with ordinary attributes. When he realizes that the real Beatrice is far more independent than the ideal Beatrice of his dreams his male ego gets frustrated. This comes out clearly in their last meeting when Giovanni accuses her: "'Yes, poisonous thing! . . . Thou hast done it! Thou hast blasted me! Thou hast filled my veins with poison!" (Hawthorne I8). The motives behind this accusation were certainly frustration and jealousy which play a vital role in Beatrice's tragic death.

 In the same way, Haimanti's husband Opu is a very passive character. He loves his wife and wants to give her the freedom that she wants. But he is afraid of his parents and doesn't have the mental strength to revolt against his parents' mistreatment towards Haimanti. At one point in the story he declares, "I could give her all save freedom for I hadn't freed myself" (Tagore 27) He secretly calls Haimanti's father to take her away as her health deteriorates but cannot assert himself strongly when his parents refuse to let her go. This ultimately causes her death. Opu as an educated man can understand the reasons of Haimanti's suffering and knows the ways to eliminate it, but is too weak to take the action himself. His

passivity and fear of what might the society say makes him a typical member of the patriarchal society. He accepts, "What is the merit of human civilization if we cannot give precedence to appearance over truth, if we fail to sacrifice the individual in the name of the family, know you not?" (Tagore 32). As a man he abides to the norms of his society and lets other people decide what is good for his life. And when the story ends we come to know that he is getting married again now with a girl from a rich family with the promise of a lot of dowry. Here we wonder if Opu was a little bit more courageous and confident, he could have easily avoided the tragedy of Haimanti and could be the perfect match for her.

Both Beatrice and Haimanti are beautiful women. Apart from their physical beauty, they have pure souls and it is their spiritual beauty that makes them more attractive to their partners. Beatrice as a young and beautiful woman has the richness and depth of her soul and her physical beauty heightens her attractiveness even more. Roy R Male describes Beatrice as, "the first of Hawthorne's fully developed women—dark, exotic, ambiguous in her 'poisonous' combination of sexual attractiveness and angelic purity". (55) Though most of the time Beatrice has no control over the incidents that happen with her, she never ceases to impress us with her gentility and honesty. As a woman she is a mixture of physical beauty and spiritual purity- qualities that make her vulnerable sometimes, but also give her the strength to fight back. In the story we always meet Beatrice in the midst of the garden, either taking care of the flowers or talking with Giovanni or Rappaccini. But whatever the occasion is, she is always connected with the richest and the most beautiful flowers of the garden. But it is her beauty that makes her more vulnerable in the hands of men like Giovanni and Rappaccini. She is a beautiful flower which can be admired only from a distance but cannot be touched or intimidated with. Hawthorne describes her status: "here were another flower, the human sister of those vegetable ones, as beautiful as they --more beautiful than the richest of them--but still to be touched only with a glove, nor to be approached without a mask." (3) Rappaccini confines Beatrice in an attempt to protect her beauty and chastity from the outside world thus ruining her freedom altogether. Giovanni is greatly fascinated by Beatrice's beauty as soon as he sees her and feels the urge to be with her which he cannot avoid. But he fails to realize the depth of her character which Hawthorne emphasizes a number of times in lines like, "had Giovanni known how to estimate them, . . . would have assured him that

the real Beatrice. . . was a heavenly angel." (17) Beatrice is repeatedly connected with 'fountain' an image which connects her with the mysterious nature and at the same time heightens her spiritual purity. There is a kind of transparency in her and whatever she says, it seems to come straight from her heart. There is never an attempt to hide her feelings. Still the most philosophical speech comes from her lips when she warns the love sick Giovanni to be aware of the difference between dream and reality and declares, "Forget whatever you may have fancied in regard to me." (Hawthorne 11)

Like Beatrice, Haimanti has something very beautiful in her character and mind. Throughout the story Tagore repeatedly emphasizes on her physical beauty which becomes even more attractive and strong with her courageous and independent mind. Opu on his first glimpse on her picture describes her as, "A rather plain face with a pair of simple-looking eyes and her body draped in a simple sari. But the combined effect stirred something deep within me which I cannot express in words." (Tagore 9) As a girl of seventeen, she has enjoyed the freedom of the outside world more than any other girl of her age. She has seen a lot and learned a lot. Like Beatrice she doesn't know what motherly love is and has loved her father dearly. Unlike any other girl of her age she loves to study books. She has seen the world with her father who has made her equally open minded and sensitive like himself. In spite of her knowledge and upbringing, she tried to get along with her in-laws' family and their norms but failed as they were too biased to accept her as she was. But they couldn't change her nature as she remained as pure and unaffected as before. As Opu describes her : "This seventeen-year-old on whom shone all the light of youth was yet to wake up from the lap of early adolescence. She was like the ice-cap on a mountain peak on a sunny morning. The sun had arisen but the ice was yet to melt. I know how spotless and sparkling she was, how very pure." (Tagore 15) Haimanti stands for beauty, honesty and innocence. Like Beatrice, she also becomes a martyr in her death. She died silently but even in her silence there was a silent revolt against the patriarchal society. She stands for all the women who suffer enormously but quietly in the name of marriage, custom and religion.

According to some feminist critics, women when presented in fiction share the same insignificant existence as they experience in real life. As Rivkin and Ryan describe, "the long tradition of male rule in society which silenced women's voices, distorted their lives, and treated their

concerns as peripheral." (765) Women are always presented in fictions. But when the writer is a male then there frequently arises a question whether he is gender conscious or a biased misogynist. A lot of criticism have been done on both Hawthorne and Tagore to determine their stand about feminism. Both Nathaniel Hawthorne and Rabindranath Tagore wrote at a time when the world was experiencing the first wave of feminism. People were getting conscious of the rights of women and there was a sense of urgency to change their status in the society. Beatrice from Hawthorne's "Rappaccini's Daughter" and Haimanti from Tagore's short story "Haimanti" are surely the byproducts of these sentiments. In "Haimanti" Tagore has attempted to promote the idea that a wife is more than a material possession and a companion and soul mate to the husband. The same type of message can be found in "Rappaccini's Daughter" where Hawthorne has presented women beyond their physical beauty- as something more precious that requires more careful handling by men. Though Hawthorne and Tagore can't be termed as feminists in the strict sense of the term, both of them created characters who through their actions became the representative of the victimized women folk under patriarchal suppression. Beatrice and Haimanti are young, beautiful and self-confident women who though don't fight openly for their rights against the meanness and dishonesty of the patriarchal society, they do present the writers' ideology that men should treat women as human beings. Both Beatrice and Haimanti promise life, happiness and prosperity for the men of their worlds, but the men fail to realize that. Their unconsciousness and sometimes passive disinterestedness make the women feel themselves unimportant and as a consequence of it, they both die. Beatrice and Haimanti are the martyrs of the cruelty of the contemporary patriarchal society.

Works Cited

Barbara, Ellis. "Some observations about Hawthorne's women". *Willa* 2 (1993): n.pag. Web.25 Jun. 2019. < http: // scholar.lib.vt.edu/ ejournals/ old_ WILLA / fall 93/ k_ ellis. Html>

Brenzo, Richard. "Beatrice Rapaccini: A Victim of Male Love and Horror." *American Literature* 48:2 (1976):152-164.Web. 23 Jun. 2019.

Fatterley, Judith. "Women Beware Science: 'The Birthmark.'" *The Resisting Reader: A Feminist   Approach to American Fiction.* (1978): 22-29. Print.

Hawthorne, Nathaniel. "Rappaccini's Daughter".

>>..www.columbia.edu/itc/English/f1124y_001/resources/Rappaccinis_Daughter.pdf

Macdonald, Alison. "'Real' And 'Imagined' Women: A Feminist Reading of Rituporno Ghosh's Films." *UCL*, 3(2009): 4.Web.6 may.2019.

Male, Roy R. *Hawthorne's Tragic Vision*. New York: Norton & Co. Inc., 1957. Print.

Mandal, Somdatta. "Was Tagore a Feminist? Re-Evaluating Selected Fiction and their Film Adaptations." *Boundaries of the Self: Gender, Culture and Spaces*. ED. Debalina Banerjee. Newcastle: Cambridge Scholars Publishing, 2014.83. Print.

Millington, Richard. "The Meaning of Hawthorne's Women". *Hawthorne in Salem* N.p., n.d. Web.01 Oct.2019., http://www.hawthorneinsalem. org/page/10482.

Rivkin, Julie, and Michael Ryan. "Introduction: Feminist Paradigms". Literary Theory: an Anthology. Ed. Julie Rivkin and Michael Ryan. New Jersey: Blackwell Publishing, 2004. 765. Print.

Stallman, Laura. "Survey of Criticism of "Rappaccini's Daughtrt" by Nathaniel Hawthorne". *Criticism of "Rappaccini's Daughter"* Virginia Commonwealth University, 1995. Web 25 July 2019. <archive.vcu.edu/ english/engweb/eng372/rappcrit.htm>

Stefanovici, Anda. "Nathaniel Hawthorne's Women: Tradition and Modernity." *Diacronia*,1 (2005):428. Web. 22 Jun. 2019.

Tagore, Rabindranath. *Haimanti: Of Autumn*. Trans. A. Datta. Print

Portfolio Management and Efficient Portfolio Construction of Listed Companies in Bangladesh

Hasan Ahmed

Abstract

The aim of this study is to know the activities of portfolio manager and to construct a portfolio of stocks that will maximize the return and also minimize the risk of an individual. Therefore, this study is an initiative to demonstrate how to simply construct such analysis. Twenty companies have been selected from different industries on the basis of some criteria. These selection criteria are: all the companies are listed in DSE, they are listed on or before 1 January 2007 except Grameenphone limited and Marico Bangladesh. And all of them are 'A' Category securities. These stocks have a P/E ratio less than 25 and pay dividend yield of 4.5 or higher. There are no extreme movements in pricing and all the assets giving cash dividend and stock dividend on regular basis. A monthly risk-free rate is calculated which is the average T-bill rate of last five years. Taking into consideration the data regarding price, cash dividend, stock dividend, right share offer, stock split information etc. of the selected companies, the return, risk and covariance have been calculated. Later on this study works on the eight basic scenarios such as- Maximizing theta, maximizing theta for a given risk, minimizing risk, minimizing risk for a given return without allowing short sale and maximizing theta, maximizing theta for a given risk, minimizing risk, minimizing risk for a given return allowing short sale. The entire report is a fundamental analysis of asset valuation. Solver function is used through excel worksheet to find out portfolio weight to be complied with given eight scenarios.

Key words: Portfolio management, portfolio construction, Risk and listed companies

1. Introduction

Various new methods and concepts have emerged in financial portfolio construction, risk management and financial performance evaluation since Markowitz's (1952) pioneering work and he used the variance of returns as a measure of risk. Every organization might have more than one portfolio; they address distinct business areas or objectives. Proposed

initiatives become part of the portfolio when they are identified, selected, and/or approved. (PMI, 2008a and b). Platje (Platje et., 1994) told a portfolio is a combination of projects which are managed in a coordinated way to provide increased profit. The project management manages the projects of an organization to ensure that the right number of projects will be done through the dissemination of the required resources to them.

Furthermore, the portfolio is a means to give importance by the organization long term (Munson and Spivey, 2006), making the long term clear direction for the organization (Miller and Evje, 1999). Anderson (2008) showed that the prime objectives of portfolio management are defining goals and objectives, making trade-offs, managing risks, monitoring portfolio performance and achieving the organization's objectives. The three well-known objectives of portfolio management are: maximizing the value of the portfolio, linking the portfolio to the strategy and balancing the portfolio (Cooper et al., 1998). Active portfolio management indicates the involvement of making precise investment for outperforming an investment benchmark index. The risk reduction is considered a goal of creating an investment return larger than the benchmark by considering and using large number of factors and strategies for constructing the portfolio (Sushant, 2018).

This study is constructed using stock exchange data from the time period January 2007 to January 2017. Twenty stocks which are listed in Dhaka Stock exchange enlisted companies based on certain preferences and criteria are selected to construct efficient portfolio. This report includes eight basic scenarios such as- Maximizing theta without allowing short sale, maximizing theta allowing short sale, minimizing risk without allowing short sale, minimizing risk allowing short sale, minimizing risk for a given return without allowing short sale, minimizing risk for a given return allowing short sale maximizing theta for a given risk without allowing short sale, maximizing theta at a given risk allowing short sale.

Finally, the analysis helps an investor take the right investment decision as it suggests right selection with right within the selected asset portfolio.

2. Scope of the Study

For achieving the result, it is required to gather data from various investors. For this, the study focused on the price, volume, EPS, economic conditions, P/E, interest rate and other criteria of different companies. Thus, it identified the limitations and the weaknesses of the issue.

This study also focused on primary and secondary data for analysis derived from various investors. Though all the investors in Dhaka Stock Exchange Ltd. were the research population then also data is collected from different investors and consultancy firm as samples. Therefore, it has been done with confidence that the selected samples are truly representative of the population.

3. Objectives of the Study

The main objective of this study is to get a definite idea about the Investment analysis, activities of portfolio management and to know how to construct efficient portfolio.

1. To reveal the affect of price on portfolio formulation
2. To find out the number of different securities which affect in portfolio construction?
3. To know linkage between price earnings ratio and portfolio formulation
4. To reveal the causes behind portfolio formulation of different securities.
5. To reveal the impact of the economic condition during portfolio formulation
6. To assign right on the stock based on risk and return objectives
7. To calculate the Risk-Free Return
8. To know how to calculate portfolio variance
9. To guide an investor or a portfolio manager into taking the right decision

4. Methodology

This study is constructed on the basis of real stock exchange data from the time period January 2007 to January 2017, twenty years monthly data of 121 month. Quantitative approach has been used in this study. Primary data have been collected about price; dividend, right share & bonus share from the DSE and from internet and secondary data collected from annual report of listed companies, various academic Text-Books, monthly review of Dhaka Stock Exchange, publication about stock exchange activites and price index etc.

Stocks have been selected from eight industries through convenient sampling and taking monthly price data from January 2007 to January 2017.Microsoft word, Microsoft Excel and Run the solver have been used to analyze data.

5. Literature Review

In the earlier decades, several researchers tried to use different ways so as to forecast decision relating to share markets. Here is delineated some previewed analysis works associated with analysis sectors and attempted to seek out the constraints to enhance the analysis method higher than before.

Markowitz (1952) has formulated a fundamental and most accepted model for portfolio choice, by launching the usage of expected rate of return and expected risk for a portfolio. He has determined the risk-minization benefits related to holding a distributed portfolio of resources. After, variety of authors have tried to calculate the rate at that risk-minimization, advantages are perceived because the numbers of securities in a portfolio are broadened.

Sharpe (1964) narrated the benefits of employing an explicit model of the link among the securities for pragmatic application of the Markowitz portfolio analysis techniques. A computer program has been formulated to utilize full benefits of the model.

Leea S. C. and Junior W. E. (2018), studied on 274 asset management corporations relating to portfolio construction and risk management in Brazil and revealed that the modern portfolio theory is broadly used than the post-modern portfolio theory, and quantitative portfolio improvement is a smaller amount typically used than the general rule of specifying most concentration limit for any single asset. Moreover, the findings indicate that the normal distribution is used over parametrical distributions with asymmetry and kurtosis to calculate price in danger, among different findings.

Kapoor N. (2014), studied monetary Portfolio management: summary and deciding in investment method in India and proposed two approaches which are maintained by the investor in portfolio construction. One is conventional approach of selection of the securities to be enclosed within the portfolio and the other is modern approach that offers more concentration to the method of screening of portfolio. One is the approach

of selection of securities to be included in the portfolio and the other is Modern approach that gives more attention to the process of selecting the portfolio.

Professor Statman (1987) mentioned that if people are going to take individual common stocks in their investment portfolios, they ought to hold over a hundred and twenty different randomly particular stocks. This variety would permit them to avoid taking suboptimal portfolio which had more risk and little cost adjusted returns compared to market index fund.

Willian Bernstein is an investment consultant and the writer of efficient frontier: An online journal of practical asset allocation. His research, "The 15-Stock diversification Myth," indicates that holding a smaller number of stocks does not offer foolproof diversification. Mr. Bernstein set 98 indiscriminately selected 15-Stocks portfolios from S & P 500 companies that are presented in that index throughout ten year from 12/89 to 11/99. He estimated returns on a buy and hold strategy over these ten years.

According to Kenneth E. Homa & Dwight M. Jaffee (1971), while predicting share price, again realism might be introduced. Particularly, short sales of stock, the tax treatment of short term and long-run capital gains, bills maybe different assets, all may be introduced into the simulation. Lastly, more applied use may be made of timing implications of the model if predicts are done on monthly or weekly basis.

According to Martin Feldstein (1980), full understanding of the equilibrium relation between share prices and inflation needs extending the present analysis in varius ways. A more exposed portfolio model might realize asset demand equations from the expected utility maximization and will acknowledge that some institutional holdings are actually passive ways for people to hold assets in a tax-oriented way. Martin Feldstein (1980) also mentioned in his study that the simplification and the capital stock remaining unchanged ought to be substituted by an additional dynamic model that acknowledges the impact of inflation on capital collection.

According to the Chief Director of CPD (Centre for Policy Dialogue) Dr. Debapriya Bhattacharya's (2006) study, throughout the first ten months of FY06 the Dhaka Stock Exchange (DSE) monitored a reduce in all of its share price indices. All Share Price Index (DSI) reduced by (-) 340 points from 1486.34 in March 2005 to 1146.33 on March 2006. The General

IndexAB is also reduced by -427.5 points from 1919.3 to 1491.8 during the same year. Surprisingly, the prime shock derived from the performance of the first category companies–the DSE20 index lost 605.0 points, declining from 2030.3 to 1425.3 throughout the period under consideration.

It appears that the current liquidity problem in the financial market is one of the main causes for the consistant decline in share prices and indices. Following the present liquidity problems in the banking sector, high deposit rate rendered by banks and moneytary institution might have inspired little earners to deposit their money in banks instead of investing in the capital market (Dr. Debapriya Bhattacharya, (2006)). From this study I got a concept that there might be a linkage between share price and present call money rates.

John Mauldin (2003) used such a technique, whereas adding alpha or excess returns over purchase and hold, remains volatile as euphemism (that's a technical term) and is wrong more than 40% in most countries. It's simply that once it is right, the returns are more. This additionally means that there might be specific random entry/trend following variables. Though the research showed that oil prices and stocks, particularly if there are large fluctuation in oil, tend to move in another direction. Here I found that though John Mauldin (6) revealed a relationship between share price and oil price, but it is not correct in more than 40% of the time in most countries. So, I have attempted to know this link using various ways to see whether the importance level might be high.

This article of R. Smyth and M. Nandha (2003) studies the link betien exchange rate and stock prices in Bangladesh, India, Pakistan and Sri Lanka using daily data over a six-year time from 1995 to 2001. Both the Engle-Granger two-step and Johansen co-integration processes recommend that there is no long term equilibrium link betien these tow monetary variables in any of the four countries. Granger causality tests reveal that there is a unit-directional causality running from exchange rates to stock prices in India and Sri Lanka, but in Bangladesh and Pakistan exchange rates and stock prices are interrelated.

Theoritical framework of the Study

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┌──────────────┐      ┌──────────────┐      ┌──────────────┐
│10. Investment│─────▶│1. Brief ideas│─────▶│ 2. Portfolio │
│   Sectors    │      │ on portfolio │      │              │
│              │      │ formulation  │      │              │
└──────────────┘      └──────────────┘      └──────────────┘
       ▲                                            │
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┌──────────────┐                            ┌──────────────┐
│9. Objective  │                            │ 3. Portfolio │
│   of PM      │                            │ investments  │
└──────────────┘                            └──────────────┘
       ▲                                            │
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┌──────────────┐                            ┌──────────────┐
│8. Phases of  │                            │ 4. Portfolio │
│  Portfolio   │                            │ construction │
│ Management   │                            │              │
└──────────────┘                            └──────────────┘
       ▲                                            │
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┌──────────────┐   ┌──────────────┐   ┌──────────────┐
│7. Portfolio  │◀──│6. Assumptions│◀──│  5. Modern   │
│ Management   │   │  of Modern   │   │portfolio     │
│              │   │  Portfolio   │   │theory        │
│              │   │ Theory (MPT) │   │              │
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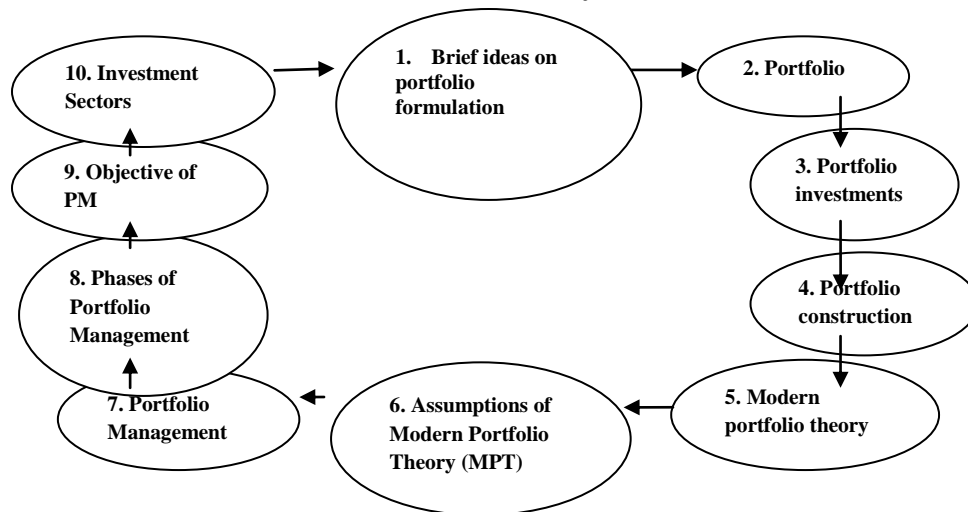
6. Analysis of Portfolio Investment

Portfolio investment is completed through the analysis of following steps as basic Analysis of portfolio management, economy analysis for portfolio management, economic prediction for portfolio management, industry analysis for portfolio management, company analysis for portfolio management and designing the portfolio construction method

Investments are revised using some methods which are identification of the universe of funds for the review, quantitative testing, questionnaires, qualitative factors and formal review

There are some methods of selecting Stocks such as screening and filtering, idea generation, comparing and analyzing, insights, risk/return calculations and investment decisions. In modern global economy, weeding through large amounts of data to reach at an investment conclusion is very complex. But there are steps you can take to create a screening process to help sift through the large universe of ideas, and arrive at a manageable number that merit further investigation. Here, we'll take you through those steps which are the broadest view, company statistics, constructing the screen and narrowing the output.

7. Analytical Procedure

At the inception of analytical procedure detail industry analysis should be done and analysis involves Bank, Non-bank financial, Food and Allied

Industry, Telecommunications Industry, Pharmaceuticals & Chemicals Industry and Textiles Industry. Following are the reasons for selecting companies in industry.

Table 1: Category of companies

Industry	Company	Reasons for selection
Bank	1. Dutch-Bangla Bank Ltd. 2. Brac Bank 3. Mutual Trust Bank 4. Southest Bank 5. AB Bank	1. Incorporating service sector in the industry. 2. To get benefit from cyclicality of business. 3. Consistent growth in company performance in terms of earnings and other operation.
Non-Bank Financial Institution	1. IDLC Financing 2. United Financing Limited	1. Low P/E ratio than other competitors indicating value stock. 2. Consistent dividend payment history and Consistent growth in operational and financial performance 3. Belongs to market category A. 4. Brings diversity in the portfolio because its belongs to service industry rather than manufacturing
Food and Allied	1. Apex Food 2. British American Tobacco Bangladesh. 3. Olympic Industries Ltd.	1. Food and allied industry is less affected by business cycle and have lower systematic risk which results in lower overall portfolio risk. 2. High and consistent dividend paying stock. 3. Company with very good history of operation and performance. 4. Market category A with regular trading records

Telecommunication-ns	1. Grameenphone ltd.	1. Highest market Capitalization Company in our country. 2. Highest market share in the industry. 3. Highly liquid stock with regular trading. 4. One of the blue-chip companies in our country. 5. Stable growth company with further prospects.
Pharmaceuticals & Chemicals	1. Beximco Pharmaceuticals Ltd. 2. Square Pharmaceuticals Ltd. 3. GlaxoSmithKline (GSK) Bangladesh Limited 4. ACI Limited 5. Marico Bangladesh Ltd.	1. Pharmaceutical industry is less affected by business cycle because it produces necessary goods 2. Both Square and Beximco pharmaceuticals are in the leading pharmaceuticals company of Bangladesh. 3. Consistent cash and stock dividend over the years 4. Increasing price trend over the years. 5. Market category A.
Textile	1. Rahim Textile Mills Ltd.	2. Considerable growth 3. Significant company in the industry 4. Contributes to portfolio diversification. 5. Higher Profitable industry sector with low risk.
Engineering	1. Aftab Automobiles 2. Singer Bangladesh Ltd.	1. Contributes to portfolio 2. Diversification 3. High Profit with high high risk.
Tannery Industries	1. Apex Footwear Limited	1. Increased profit causing higher dividend. 2. Contributes to portfolio diversification

7.1 Company Analysis and Stock Selection

There are some underlying objectives of stock selection and portfolio construction. These are the return objective to earn current income and capital preservation, total return of the portfolio must be such that protects from the inflation and earns slightly more beyond that, the risk of the portfolio should be low to moderate, the investor is risk averse.

7.2 Constructing the Efficient Portfolio

Efficient Portfolio

The efficient frontier is the process of optimal portfolios that provides the best expected return for a specified level of risk or the minimum risk for a mentioned level of expected return. Portfolios that exist below the efficient frontier are sub-optimal, because they do not offer more return for the level risk. Portfolios that combine the right of the efficient frontier are also sub-optimal, because they have more risk for the specified rate of return.
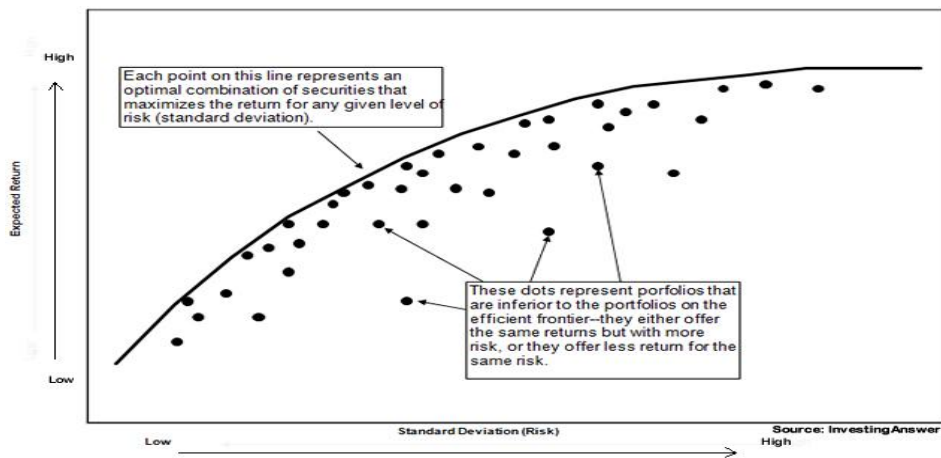
The above graph shows which portfolios are efficient and which are not.

7.3 Constructing the Efficient Portfolio:

From this point onwards this report will lead on how to construct an efficient portfolio-

Step 01: Selection of Asset Classes

The major focus was to diversify the portfolio so that the portfolio gives the maximum amount of return within a minimum risk level. Assuming the investor is a "Risk averse" person. So far the following industries have

been chosen to keep the portfolio diversified-Bank, NBFI, Food and Allied, Telecommunications, Pharmaceuticals & Chemicals, Engineering, Textile and Tannery Industries

The selected stocks are from: Dutch-Bangla Bank Ltd.**,** Brac Bank**,** Mutual Trust Bank**,** Southest Bank, AB Bank**,** IDLC Financing**,** United Financing Limited**,** Apex Food**,** British American Tobacco Bangladesh, Olympic Industries Ltd, Grameenphone Ltd, Beximco Pharmaceuticals Ltd, Square Pharmaceuticals Ltd, GlaxoSmithKline (GSK) Bangladesh Limited, ACI Ltd, Marico Bangladesh Ltd, Rahim Textile Mills Ltd, Aftab Automobiles**,** Singer Bangladesh Ltd and Apex Footwear Limited.

Step 02: Collection of Data

After determining the asset, the following needs to be done to prepare price data:

1) Collection of price data for last twenty years from DSE

2) Time horizon: The selected time horizon is one hundred twenty-one (121) months. It starts from June 2007 to January 2017.

3) At excel placement of data in the following format:

(Here, the author has shown only eight companies price data out of twenty and taking thirteen months price data out of one hundred twenty-one month's data because of space limitation. But all information is provided in the appendix)

Table 2: Collection of price data for different assets in different industry.

Time (monthly)	1 Apex Food	2 IDLC	3 Brac Bank	4 DBBL	5 MTB	6 Beximco Pharma	7 Square Pharma	8 BATBC
January , 2017	139.8	57.7	64.2	118.8	26.7	87.2	259.9	2494.4
December,2016	140.4	59	65.6	117.3	23.1	81.2	248.2	2483
November,2016	145.9	60.2	60.3	110	22.5	83.1	246.1	2538.7
October,2016	133.4	62.8	59.7	106.9	21.6	77.2	268.2	2566.5
September,2016	156.7	61	60.7	108.1	19.7	81.7	268.9	2519.1
August,2016	169.7	59	62.6	105.7	18	81.4	264.6	2446.7
July,2016	122.8	58.7	53	106.4	17.9	86.2	268	2640.8
June,2016	116.4	55.3	46.4	104.9	17.20	83.5	265.7	2700
May, 2016	118.2	54.1	41.5	102.5	16.20	82.6	260.3	2624.8

April,2016	120.6	52.8	44.7	103.7	15.00	81	253.4	2678.9
Marcch,2016	114.4	55.6	42.6	94.8	17.70	84.1	250.7	2550.2
February,2016	119.3	61.9	47	98.3	16.80	87.3	263.5	2797.5
January , 2016	105.5	62.5	48.5	103.1	18.30	86.4	258.9	3082.8

Sources: Calculated by the author

4) Repetition of this table for cash and stock dividend, stock split, right share offer price, right share ratio to prepare data for the 20years. (Here, the author has tried to show only dividend yield but all the information about adjustment of the cash dividend, stock dividend, stock split etc. will be found in the appendix)

Table 3: Dividend Yield

	1	2	3	4	5	6	7	8
Time (monthly)	**Apex Food**	**IDLC**	**Brac Bank**	**DBBL**	**Beximco Pharma**	**Square Pharma**	**BATBC**	**GP**
January, 2017	0	0	0	0	0	0	0	0
December,2016	0	0	0	0	0	0	0	0
November,2016	0.13708	0	0	0	0.060168	0.162536	0	0
October,2016	0	0	0	0	0	0	0	0
September,2016	0	0	0	0	0	0	0	0
August,2016	0	0	0	0	0	0	0	0
July,2016	0	0	0	0	0	0	0	0
June,2016	0	0	0	0	0	0	0	0
May, 2016	0	0	0.60240964	0	0.121065	0	0	0
April,2016	0	0	0	0	0	0	0	0
Marcch,2016	0	0.4496403	0	0	0	0	0.2156694	0
February,2016	0	0	0	0.40691	0	0	0	0.54559
January , 2016	0	0	0	0	0	0	0	0

Sources: Calculated by the author

Step 03: Preparation of Return Series

The return for a month is calculated using the following formula:

Dividend yield+ Capital gain

Both the components have two different ways to calculate them. These are described below.

1. Dividend yield:

To calculate dividend yield, we have to divide the cash dividend of current month by the price per share of previous month. (The calculation are already shown in previous)

2. Capital Gain:

To calculate the capital gain, we have to consider rest of the information.

Return = ($P1$*SP1+$P1$*SP1*SD+$P1$*RO1*SP1-P0-RO1*RR1)/P1

Where, P1 = Ending price, P0 = Beginning price, SD = Stock dividend, RO = Right share offering, RI = Total money invested to purchase the right share for each share including premium or discount, SP= Stock Split and CD = Cash dividend.

Table 4: Capital Gain

	1	2	3	4	5	6	7	8
Time (monthly)	**Apex Food**	**IDLC**	**Brac Bank**	**DBBL**	**MTB**	**Square Pharma**	**BATBC**	**GP**
January , 2017	-0.00429	-0.0225	-0.02180685	0.012626	0.134831	0.0450173	0.0045702	0.058024
December,2016	-0.03917	-0.020339	0.080792683	0.062234	0.025974	0.0084609	-0.022433	0.002464
November,2016	0.08567	-0.043189	0.009950249	0.028182	0.04	0.0101991	-0.01095	0.039167
October,2016	-0.17466	0.0286624	-0.01675042	-0.01123	0.087963	-0.00261	0.0184687	0.009181
September,2016	-0.08296	0.0327869	-0.03130148	0.022202	0.086294	0.0159911	0.0287404	0.019274
August,2016	0.27637	0.0050847	0.153354633	-0.00662	0.005556	-0.01285	-0.079331	-0.0446
July,2016	0.05211	0.0579216	0.124528302	0.014098	0.039106	0.0085821	-0.022417	0.078509
June,2016	0.18453	0.0216998	0.105603448	0.022879	0.05814	0.0203237	0.0278519	-0.00157
May, 2016	-0.0203	0.0240296	-0.07710843	-0.01171	0.074074	0.0265079	-0.020611	0.034104
April,2016	0.05141	-0.05303	0.046979866	0.085824	0.02	0.0106551	0.0480421	0.079545
Marcch,2016	-0.04283	-0.113309	-0.10328638	-0.03692	0.050847	-0.051057	-0.096973	-0.13139
February,2016	0.11567	-0.009693	-0.03191489	-0.04883	-0.08929	0.0174573	-0.101984	-0.00039
January , 2016	-0.14408	-0.0176	-0.00412371	-0.04365	-0.06557	0.020085	0.0429155	0.014414

Sources: Calculated by the author

Step 04: Calculating Mean Return

The mean return of a company over the last twenty years is simple the average of each month returns over the last twenty years. Mean return= average (January2007 return: December 2016 return)

Table 5: Mean calculation of return series

S.l No.		Annual Average Return	Standard Deviation	S.l No.		Annual Average Return	Standard Deviation
1	Apex Food	0.019157174	2.205966515	11	Rahim Textile	0.049981	4.891418438
2	IDLC	0.015609808	1.916877845	12	GP	0.040127	3.119050063
3	Brac Bank	0.021971126	1.57639972	13	Singer Bangladesh	-0.01802	8.25611172
4	DBBL	0.013391093	3.09122414	14	Apex Footwear Limited	0.015759	1.686817304
5	MTB	0.001697961	1.485103793	15	Southeast Bank	0.030927	2.521298583
6	Aftab Automobiles	0.025372816	2.991410484	16	AB Bank	0.022055	3.751937554
7	Beximco Pharma	0.011664809	1.729701876	17	ACI Limited	0.121995	9.985251028
8	Square Pharma	0.019854918	1.549451783	18	Marico Bangladesh	0.028682	1.991610053
9	BATBC	0.065910888	2.228730516	19	United Finance Limited	-0.07002	10.61837756
10	Olympic Industries	0.04680487	2.126590097	20	GlaxosmithKline	0.029155	1.666279177

Sources: Calculated by the author

Step 05: Calculating the Risk-Free Return

Risk free rate is calculated using monthly Treasury bill rate of last years. The source of these rates is the website of Bangladesh Bank. Each month's Treasury bill rate is averaged resulting in the monthly average T-Bill rate. Here we get the average rate 0.008067647 and calculation of Treasury bill rate is shown in appendix.

Step 06: Calculating Portfolio Variance

Calculating portfolio variance involes copy of mean return Transposed the value to a new sheet by following the guideline of transposing data, placed the risk-free rate beside of the mean series and calculate the portfolio excess return, excess return of portfolio= portfolio mean return-risk free

return, prepared the weight by allocating equal weight to all portfolios and preparation of the covariance matrix.

In this analysis the author has used the covariance matrix to calculate the covariance. Here, most of the covariances among all pairs of companies are positive except a few. That means asset returns move together in the same direction. Variance-covariance matrix for the selected securities is given below to have a clear understanding-

Table 6: Calculation of Variance- Covariance

	1	2	3	4	5
	Apex Food A	IDLC	Brac Bank	DBBL	MTB
Weight	0.05	0.05	0.05	0.05	0.05
	Covariance	Covariance	Covariance	Covariance	Covariance
Apex Food	0.07901	0.003384	0.011505	0.002833	0.00182
IDLC	0.000727	0.004443	0.010287	0.001655	0.003245
Brac Bank	0.002708	0.004971	0.010123	0.00328	0.006148
DBBL	-0.00569	-0.00199	0.000306	-0.00366	-0.00324
MTB	0.00022	0.003071	0.005238	0.000385	0.001949
Aftab Automobiles	0.002108	0.006008	0.00875	0.000952	-0.00074
Beximco Pharma	-0.00623	-0.0006	0.003511	-0.00256	-0.00151
Square Pharma	0.002246	0.00578	0.010916	0.004569	0.004746
BATBC	-0.00738	-0.00537	-0.00997	-0.00752	-0.01063
Olympic Industries	-3.4E-05	0.003288	0.003076	0.001857	0.002179
Rahim Textile	-0.00245	0.000496	0.010688	0.005531	-0.00363
GP	-0.00696	-0.00088	0.000357	0.000363	-0.00644
Singer Bangladesh	0.002055	-0.00019	-0.01128	-0.00746	0.002142
Apex Footwear Limited	4.39E-05	0.001072	0.003978	0.000786	0.002579
Southeast Bank	-0.0089	-0.00164	-0.01088	-0.00658	-0.0062
AB Bank	-0.00437	-0.00448	-0.00972	-0.00526	-0.00827
ACI Limited	-0.01315	-0.00361	0.020911	0.004214	-0.01055
Marico Bangladesh	0.010328	0.011577	0.00842	0.008943	0.00847
United Finance Limited	0.005272	0.005861	-0.01466	-0.0049	0.006054
Glaxo SmithKline	0.001326	0.004696	0.003602	-0.00128	0.000479

Sources: Calculated by the author

Step 07: Calculating Excess Return of Portfolio

Here the last step of portfolio construction is calculating portfolio excess retune, variance, Standard deviation, Sharp ratio (Theta Ө), Portfolio monthly return and total weight and individual weight of this portfolio for each company or portfolio assets.

Table 7: Calculation of Excess Return

S.l No.	Assets/ Stocks	Annual Average Return	Risk Free Rate	Excess return
1	Apex Food	0.019157174	0.00806765	0.011089527
2	IDLC	0.015609808	0.00806765	0.007542161
3	Brac Bank	0.021971126	0.00806765	0.013903479
4	DBBL	0.013391093	0.00806765	0.005323446
5	MTB	0.001697961	0.00806765	-0.006369686
6	Aftab Automobiles	0.025372816	0.00806765	0.017305169
7	Beximco Pharma	0.011664809	0.00806765	0.003597162
8	Square Pharma	0.019854918	0.00806765	0.011787271
9	BATBC	0.065910888	0.00806765	0.057843241
10	Olympic Industries	0.04680487	0.00806765	0.038737223
11	Rahim Textile	0.04998074	0.00806765	0.041913093
12	GP	0.040126704	0.00806765	0.032059057
13	Singer Bangladesh	-0.01802089	0.00806765	-0.026088537
14	Apex Footwear Limited	0.015758877	0.00806765	0.00769123
15	Southeast Bank	0.030927302	0.00806765	0.022859655
16	AB Bank	0.022054545	0.00806765	0.013986898
17	ACI Limited	0.12199536	0.00806765	0.113927713
18	Marico Bangladesh	0.028681741	0.00806765	0.020614094
19	United Finance Limited	-0.070017334	0.00806765	-0.078084981
20	GlaxosmithKline	0.02915459	0.00806765	0.021086943

Sources: Calculated by author

Table 8: Equal weighted Portfolio

Portfolio Excess Return	0.01653621
Portfolio Variance	0.00783449
Portfolio Standard Deviation	0.08851265
Theta Θ	0.18682311
Portfolio Return	0.00704366
Total	1

Sources: Calculated by the author

8. Scenario Analysis

Case 01: Maximizing Theta without Allowing Short Sale

When we are going to calculate portfolio weight by maximizing Theta without Allowing Short sale, we need to follow the following procedure-

- Run Solver add-in at excel
- Set theta value as the target cell with option maximize theta
- Select the weight vector cells for changing value
- Add constraints that total weight must be equal to 1
- Add constraint that none of the weight must be greater or equal to 0. That is we are not allowing short sell
- Press solve to run the solution
- Therefore, the result will suggest to construct a portfolio with the following weight-

$$\text{Theta } \Theta = 0.37890197$$

Table 9: Maximizing Theta without Allowing Short Sale

S.l No.	Assets/ Stocks	weight	S.l No.	Assets/ Stocks	weight
1	Apex Food A	0	11	Rahim Textile	0
2	IDLC	0	12	GP	0.107163
3	Brac Bank	0	13	Singer Bangladesh	0.102145
4	DBBL	0	14	Apex Footwear Limited	0
5	MTB	0	15	Southeast Bank	0
6	Aftab Automobiles	0	16	AB Bank	0
7	Beximco Pharma	0	17	ACI Limited	0.106985
8	Square Pharma	0.092934	18	Marico Bangladesh	0.071131
9	BATBC	0.374253	19	United Finance Limited	0
10	Olympic Industries	0.145389	20	Glaxo SmithKline	0

Decision:

According to the above-mentioned table we can conclude that an investor or a portfolio manager should invest in BATBC the highest precisely .69 of his investment. Secondly the investor can invest in Olympic Industry and GP of his investment. The rest which have zero weight are a bit risky investment so a risk taker investor might invest in these portfolios.

Case 02: Maximizing Theta Allowing Short Sale

When we are going to calculate portfolio weight by Maximizing Theta with Allowing Short Sale, we need to follow the following procedure-

- Follow all the steps described previously except the last one where the short sell is not allowed constraint is included

- Run the solver

- The result will suggest to construct a portfolio with following weight-

$$\text{Theta } \Theta = 0.52755703$$

Table 10: Maximizing Theta Allowing Short Sale

S.l No.	Assets/ Stocks	Weight	S.l No.	Assets/ Stocks	Weight
1	Apex Food A	-0.82941	11	Rahim Textile	0.082407
2	IDLC	0.159492	12	GP	0.140584
3	Brac Bank	0.223592	13	Singer Bangladesh	0.479273
4	DBBL	-0.36404	14	Apex Footwear Limited	-0.16668
5	MTB	-0.52732	15	Southeast Bank	0.07156
6	Aftab Automobiles	0.03336	16	AB Bank	0.028404
7	Beximco Pharma	-0.45997	17	ACI Limited	0.408565
8	Square Pharma	0.605259	18	Marico Bangladesh	0.235583
9	BATBC	0.796765	19	United Finance Limited	-0.11488
10	Olympic Industries	0.846515	20	GlaxosmithKline	-0.64907

Decision:

According to the above-mentioned table we can conclude that an investor or a portfolio manager should invest the highest on Olympic Indutry to be exact somewhat .85of its investment. Secondly the investor can invest in Beximco Pharma, DBBL and also can short sell, Apex food, MTB, and Apex Footwear Limited

Case 03: Minimizing risk without short sale

When we are going to calculate portfolio weight by Minimizing risk without allowing short sell, we need to follow the following procedure-

- Run solver add-in at Excel

- Set standard deviation value cell as target cell with option minimize standard deviation

- Run the solver

- The result will suggest to construct a portfolio with following weight:

Table 11: Minimizing risk without short sale

S.l No.	Assets/ Stocks	Weight	S.l No.	Assets/ Stocks	Weight
1	Apex Food A	0	11	Rahim Textile	0.085068
2	IDLC	0.004622	12	GP	0.074846
3	Brac Bank	0.094968	13	Singer Bangladesh	0
4	DBBL	0	14	Apex Footwear Limited	0.102148
5	MTB	0.146467	15	Southeast Bank	0.027773
6	Aftab Automobiles	0	16	AB Bank	0.00555
7	Beximco Pharma	0.047397	17	ACI Limited	0
8	Square Pharma	0.156513	18	Marico Bangladesh	0.096714
9	BATBC	0.043581	19	United Finance Limited	0.02788
10	Olympic Industries	0	20	GlaxosmithKline	0.086475

Decision:

According to the above mentioned table we can conclude that an investor or a portfolio manager should invest in MTB 0.1264 and Square Pharma 0.1565.of the total investment and on Apex footware and should not invest in Olympic and DBBL rest which have zero weight.

Case 04: Minimizing Risk Allowing Short Sale

When we are going to calculate portfolio weight by Minimizing Risk Allowing Short Sale, we need to follow the following procedure-

- Follow the first 3 steps mentioned previously

- Run solver

- The result will suggest to construct a portfolio with following weight

Table 12: Minimizing Risk Allowing Short Sale

S.l No.	Assets/ Stocks	Weight	S.l No.	Assets/ Stocks	Weight
1	Apex Food A	-0.06741	11	Rahim Textile	0.098028
2	IDLC	0.013438	12	GP	0.079491
3	Brac Bank	0.128847	13	Singer Bangladesh	-0.04938
4	DBBL	-0.00875	14	Apex Footwear Limited	0.148573
5	MTB	0.172974	15	Southeast Bank	0.017937
6	Aftab Automobiles	-0.00381	16	AB Bank	0.004883
7	Beximco Pharma	0.067353	17	ACI Limited	-0.01441
8	Square Pharma	0.16216	18	Marico Bangladesh	0.103368
9	BATBC	0.039317	19	United Finance Limited	0.036086
10	Olympic Industries	-0.10087	20	GlaxosmithKline	0.172182

Portfolio Standard Deviation 0.07599712

Decision:

According to the above-mentioned table we can conclude that an investor or a portfolio manager should invest in BATBC 0.039317 of the total investment and on Square Pharma .1627 and short sell shares of DBBL, ACI and Aftab Automobile.

Case 05: Minimize Risk with given return with Short Sale

When we are going to calculate portfolio weight by Minimizing Risk with given return without Short Sell, we need to follow the following procedure-

- Follow the first 3 steps described previously

- For set the given return set a cell to calculate portfolio return

- Now add another constraint to solver by setting the return to .025

- Run solver

- The result will suggest to construct a portfolio with following weight-

Table 13: Minimize Risk with given return with Short Sale

S.l No.	Assets/ Stocks	Weight	S.l No.	Assets/ Stocks	Weight
1	Apex Food	0.665926	11	Rahim Textile	0.031295
2	IDLC	0.004118	12	GP	0.025244
3	Brac Bank	0.040651	13	Singer Bangladesh	-0.01516
4	DBBL	-0.00333	14	Apex Footwear Limited	0.046651
5	MTB	0.053135	15	Southeast Bank	0.005693
6	Aftab Automobiles	-0.0008	16	AB Bank	0.001664
7	Beximco Pharma	0.019951	17	ACI Limited	-0.00402
8	Square Pharma	0.051413	18	Marico Bangladesh	0.032967
9	BATBC	0.012543	19	United Finance Limited	0.011579
10	Olympic Industries	-0.03226	20	GlaxosmithKline	0.052738

Portfolio Standard Deviation 13.62%

Theta Ө   0.149214099

Portfolio Return   2.50%

Decision:

The investor would choose apex Food 0.665926 of its investment. Then go for Square Pharma with 0.051413 of its investment and should Olympic, Berger, and DBBL.

Case 06: Minimize risk without given return with short sale

When we are going to calculate portfolio weight by Minimize risk with given return with short sale, we need to follow the following procedure-

- Follow all the steps mentioned previously

- Just remove the constraints that state not allowed short sell

- Run solver

- The result will suggest to construct a portfolio with following weight-

Table 14: Minimize risk without given return with short sale

S.l No.	Assets/ Stocks	Weight	S.l No.	Assets/ Stocks	Weight
1	Apex Food A	0	11	Rahim Textile	0.060137
2	IDLC	0.054192	12	GP	0.077353
3	Brac Bank	0.076458	13	Singer Bangladesh	0.041399
4	DBBL	0.014057	14	Apex Footwear Limited	0.067772
5	MTB	0.048764	15	Southeast Bank	0.053158
6	Aftab Automobiles	0.01422	16	AB Bank	0.027939
7	Beximco Pharma	0.028043	17	ACI Limited	0.046838
8	Square Pharma	0.098287	18	Marico Bangladesh	0.078204
9	BATBC	0.095041	19	United Finance Limited	0.03571
10	Olympic Industries	0.049829	20	Glaxo SmithKline	0.0326

Portfolio Standard Deviation 0.08330477

Theta Ө   0.25285495

Decision:

The investor would invest in BATBC, IDLC Brack bank of its investment and then they would invest and a little short sale in BeximcoPharma and Meghna Petroleum.

Case 07: Maximize return at a given risk no short sale allowed

- Here we are going to get the result that will suggest to construct a portfolio with following weight-

Table 15: Maximize return at a given risk no short sale allowed

S.l No.	Assets/ Stocks	Weight	S.l No.	Assets/ Stocks	Weight
1	Apex Food A	0	11	Rahim Textile	0.060137
2	IDLC	0.054192	12	GP	0.077353
3	Brac Bank	0.076458	13	Singer Bangladesh	0.041399
4	DBBL	0.014057	14	Apex Footwear Limited	0.067772
5	MTB	0.048764	15	Southeast Bank	0.053158
6	Aftab Automobiles	0.01422	16	AB Bank	0.027939
7	Beximco Pharma	0.028043	17	ACI Limited	0.046838
8	Square Pharma	0.098287	18	Marico Bangladesh	0.078204
9	BATBC	0.095041	19	United Finance Limited	0.03571
10	Olympic Industries	0.049829	20	Glaxo SmithKline	0.0326

Portfolio Standard Deviation 20.00%

Theta Ө   0.078853645

Portfolio Return   2.05%

Decision:

Here the investors would invest in Square Pharma, BATBC, Marico Bangladesh as the return from these investments is higher than the other stocks. The weight of Square Pharma is the highest.

Case 08: Maximum return at given risk with short Sell

- Here we are going to get the result that will suggest to construct a portfolio with following weight-

Table 16: Maximum return at given risk with short Sell

S.l No.	Assets/ Stocks	Weight	S.l No.	Assets/ Stocks	Weight
1	Apex Food A	-0.04004	11	Rahim Textile	0.072915
2	IDLC	0.056105	12	GP	0.071348
3	Brac Bank	0.075821	13	Singer Bangladesh	0.048674
4	DBBL	0.018289	14	Apex Footwear Limited	0.070842
5	MTB	0.049228	15	Southeast Bank	0.04939
6	Aftab Automobiles	0.01545	16	AB Bank	0.025669
7	Beximco Pharma	0.041839	17	ACI Limited	0.045815
8	Square Pharma	0.101647	18	Marico Bangladesh	0.072871
9	BATBC	0.080851	19	United Finance Limited	0.032129
10	Olympic Industries	0.067257	20	GlaxosmithKline	0.043904

Portfolio Standard Deviation 20.00%

Theta Ө   0.431085651
Portfolio Return   9.09%

Decision

Under this the investors would invest in BATBC precisely as the weight is 8.08%, which is the Maximum return, secondly the investors should invest in Brac Bank. Investor can short sale of shares of Apex Foods.

9. Conclusion

This study finds a typical category of different common technical analysis used in the capital market. This portfolio can be extended by adding more assets in the portfolio and may get better return minimizing the portfolio risk. However, this report excludes the inclusion of dividend price. Moreover, it does not use any type of fundamental analysis. It mainly focused on diversification of portfolio. Therefore, inclusion of dividend data and doing fundamental analysis before selection of asset can result in a more realistic and efficient portfolio. The result of this study will be effective in real-time access and encounter to information across projects

minimize cost, schedule prolongation, make it snug to specify fields where productivity can be optimized, bring maximum ROI to the company and expedite the decision making process. Finally, the findings will enable companies to identify the best investment opportunities and the methods of analysis might dictate the companies from speculation and manipulation to right decision aligned with their strategic vision and goals.

References

Anderson, T. E. 2008. Making GIG information assurance better through portfolio management. *CrossTalk* 21(7): 9- 11.

Bhattacharya Dr. D., 2006, State of the Bangladesh Economy in FY 2006 And Outlook for FY 2007, *Independent Review of Bangladesh's Development (IRBD),* Second Reading, 14-15.

Cooper RG, Edgett SJ, Kleinschmidt EJ (1998). Portfolio management for new products. Perseus Books, New York.

Feldstein. M., 1980, Inflation and the stock market, *The American Economic Review, Vol. 70,* No. 5, 839847.

John Mauldin, 2003, The Connection between Oil and Stock Prices, FLT Dec. Edition.

Kapoor N. (2014), Studied on Financial Portfolio management: Overview and Decision Making in investment Process. *International Journal of Research (IJR) Vol-1,* Issue-10 November 2014 ISSN 2348-6848.

Kenneth E. Homa & Dwight M. Jaffee, 1971, The supply of money and common stock prices, *Journal of finance, 26,* 1045-1066.

Leea S. C. and Junior W. E. (2018), Portfolio construction and risk management: theory versus practice. *RAUSP Management Journal Vol. 53* No. 3, 2018 pp. 345-365 Emerald Publishing Limited 2531-0488 DOI 10.1108/RAUSP-04-2018-009.

Markowitz, H. (1952), "Portfolio selection", *Journal of Finance, Vol. 7* No. 1, pp. 77-91

Miller, J.B., R. H. Evje. 1999. The practical application of delivery methods to project portfolios. *Construction Management and Economics* 17(5): 669-677.

Munson, J. M., W. A. Spivey. 2006. Take a portfolio view of CRADAs. *Research Technology Management* 49(4): 39-45.

Project Management Institute –PMI, (2008a). *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* 4th Edition. published by PMI, Newton Square, P.A.

Project Management Institute, 2008b. *The Standard for Portfolio Management,* Second Edition. published by PMI, Newton Square, P.A.

Platje A, Seidel H, Wadman S (1994). Project and portfolio planning cycle—project based management for multiproject challenge. Int. J. Project Management, 12(2): 101.

Sharpe, W. F., (1964). 'Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk', *Journal of Finance, Vol. 19*, No. 3, pp. 425-442.

R. Smyth and M. Nandha, 2003, Bivariate causality between exchange rates and stock prices in South Asia, *Taylor and Francis Journals,* 10, 699-704 Robert H. Rasche and Harold T. Shapiro, 1968, The F.R.B.-M.I.T. Economic model: its special features, *American Economic review*, LVIII, 2, 136-137.

Statman, M. (1987), How many stocks make a diversified portfolio? *Journal of Financial and Quantitative Analysis,* 22, 353-363.

Sushant. d. (2018) .Active Portfolio Management Strategy available at http://www.portfoliomanage ment.in/active-portfolio-management-strategy.html.

Managerial and Institutional Ownership Impact on Dividend Payout Policy: A Study of Non-Financial Companies Listed in Dhaka Stock Exchange

Md. Zakir Hosain
Dr. K. M. Zahidul Islam

Abstract

The aim of this paper is to examine the impact of managerial and institutional ownership on dividend payout policy in the listed non-financial companies of Dhaka Stock Exchange in Bangladesh by using 40 companies from six major categories (Engineering, Food and Allied, Fuel and Power, ceramic, textile and Pharmaceuticals & Chemicals) over a 10-year period from 2008 to 2017. Along with managerial and institutional ownership, the study considers nine control variables to identify the impacts on dividend payout policy. The collected data has been processed using multiple research technique including descriptive analysis, pair wise correlation analysis, relevant diagnostic tests, pooled ordinary least square, fixed effect method, and random effect method, to make the linkage among the variables. Robust standard error has been calculated to upgrade the efficiency of the models. The results suggest that Institutional ownership (INSOW) is significantly and positively associated with the dividend payout policy. The study is important to helping investors, policy makers and companies to appropriately address the issue of dividend policy. Some policy guidelines are suggested to the non-financial companies based on the findings of the study.

Keywords: Managerial Ownership, Institutional Ownership, Dividend Payout Policy, Panel Data, Dhaka Stock Exchange

JEL Classification: C33; G23; G35

1. Introduction

The non-financial sectors of Bangladesh are the huge contributors for the country's economic growth. When considering the equity market, often the question arises as to whether the non-financial companies should pay dividends to their shareholders' and if so, to what extent. Decisions on the allocation of the amount of earnings as a dividend and the retention of the

amount of earnings are often challenging. The owners of a company are shareholders. However, not all shareholders are concerned about whether to express their views on the policies adopted at the Annual General Meeting (AGM), particularly in the decision on dividend payouts. The ownership of the companies in Bangladesh is controlled and regulated by a few related shareholders. A small number of the companies have separated ownership. The ownership structure represents the equity contribution with reference to votes and capital. According to Mintzberg, (1984) public limited companies are regulated by their owner, either by direct management or direct management supervision. Managerial ownership and institutional ownership may have different interests in many companies. Most of the cases, managerial ownership enjoys the dominating power at the board of directors to take the dividend decision.

It is generally considered that institutional owner (INSOW) have greater capacity to collect information and are better monitors as well (Allen et al., 2000). Bangladesh's corporate boards are typically one-tier boards or boards of directors in numerous continental European countries, such as Germany, Finland and the Netherlands, but not Britain, France and Spain. No supervisory board exists. In one level, all executive and non-executive directors simultaneously carry out their duties (Rashid et al. 2010; Rashid 2011). In developing countries, firms nominate professional managers who do not have a share of equity within the corporation, however in most corporations, managers in Bangladesh are family members who have a large fraction of the company's ownership. The key weakness of the Bangladeshi stock market is an inadequate regulatory system and a lack of transparency. Sufficient financial data for equity market research as well as individual companies are not available due to different anomalies. Managerial and institutional ownership in Bangladesh of DSE-listed non-financial firms varies from one company to another. Some companies may have more managerial ownership and some companies may have more institutional ownership. The different composition of ownership may have an impact on the dividend payout policy.

 This paper aims, on the basis of the aforementioned argument, to fill the study gap by integrating the impact of managerial ownership (MAOW) and institutional ownership (INSOW) on dividend policy by controlling the nine variables of DSE listed non-financial companies in Bangladesh. Most of the previous research focuses on the connection between corporate ownership and firm performance, but there is an inadequate study that focuses on linkage between ownership structures and dividend

payout policy (Grainstein and Michaely 2005; Khan 2006, and Rozeff 1982). In this backdrop, this analysis tries to provide valuable insight into the impact of MAOW and INSOW on dividend decision.

This paper adds to the burgeoning literature regarding the topic in the context of an emerging economics. This study also contributes to the methodological side as well that uses more robust models to draw the conclusion about the influence of institutional and managerial ownership on dividend payout policies in Bangladesh. In corporate dividend decision-making, the owners can be regarded as reflecting the norm that gives guidelines to non-financial firms operating in Bangladesh. The research is critical in helping policymakers, investors and firms to resolve the problem of dividend policy adequately.

The reminder of the report is prepared as follows: section 2 includes the extensive discussion about literature. Developed theoretical framework and hypothesis are discussed in section 3. Study methods are given in section 4. Section 5 demonstrates the study findings and analysis. Section 6 incorporates the results and their interpretation based on the existing theories and findings of the earlier studies, and the final section is concluded with some policy guidelines.

2. Literature Review

The relationships of ownership structure (OS) and dividend payout policy (DPP) have been extensively studied by the academicians in the perspective of different countries, sectors, time and conceptual framework.

2.1 Theory Perspectives

The major theoretical backbones of dividend policy are the signaling theory, free cash flow theory and agency theory. Jensen and Meckling (1976) mainly focuses on the property right, agency problem and ownership structure of the firms, where two parties are involved such as agents (managers) and principals (Shareholder and other stakeholders). The conflict arises between the agent and the principal due to making full payment of divided and hold some proportion as retained earnings. Shareholders of the company are interested to receive all profit in the form of dividend, but managers want to protect their own positions. This way, they do not distribute all those earnings and keep some proportion of earnings for taking investment benefits. But the owners of the company believe that those retained earnings will be used on bad investment or loss projects either to go forward their own interests or due to incompetency.

In the perspective of agency cost, dividend payouts reduce the cost between shareholders and managers.

The earlier discussion has been continued by Jensen (1986) through the development of free cash flow assumption. The author states that management utilizes free cash flow to engage in a project with a negative net present value, even if owners are not interested in those projects. Firm managers are reluctant to payout dividends to their shareholders. This issue motivates the firm managers' to reduce the free cash flow in their hand and invest that project where the cost of capital is higher than the expected return. This is the reason for conflict between the manager and shareholders.

Signaling theory is the concept of delivering information to investors about the firm's future earning, growth, and prospects. Miller and Modigliani developed a theory in 1961 for the perfect equity market; their DPP is independent of the firm valuation. However, some years later, a more convincing argument was put forward by Ross and Ezra (1977), John and Williams (1985), Bhattacharya (1979), Miller and Rock (1985). The hypothesis is focused on asymmetry information, as management have more information than external investors on the distribution of cash dividends. The adjustment in the payment of dividend can be seen as a signal to shareholders and external investors regarding the future earnings prospects of the firm.

Besides these three ideas, dividend life-cycle theory, Mueller (1972) suggests that companies spend minimal funds in pursuing potential products and the increase of profits. The company then undergoes a rapid period of risky business growth, expanding its client base and taking advantage of market potential. After this period of expansion, the companies enter the "mature stage" at which the capacity of businesses to decrease growth and the cash flows generated from current activities outweigh the potential for sustainable investment.

2.2 Empirical Evidences

A research was conducted by Zeckhauser and Pound (1990) on 286 firms across 22 industries in the United Kingdom. This study's sample was selected based on the Value Line Investment Survey by incorporating two groups. Of these two groups, one is representing the firms in which large shareholders are absent and another group representing the firms in which large shareholders (at least one shareholder holding above 15% share) are present. The researcher found that existence and nonexistence of large

shareholders in firms have not made any significant difference on dividend payout policy. La Porta et al. (2000) studied more than four hundred firms from thirty-three countries in the world and found that the firms of the country with high legal safety give higher dividends to the minority shareholders.

For the span of four years between 1994 to1998, Manos (2002) estimated and tested the private sectors companies listed on the Bombay Stock Exchange (BSE) and used cross sectional weighted least square (WLS) technique. The study clarified that insider ownership and government ownership have significantly and negatively impact on dividend decision whereas institutional, dispersed and foreign ownership have significant influence on dividend payout with a positive sign. The empirical result of the study also stated that that debt, risk, and growth opportunities as a control variables were positively associated with the decision on dividends. However, Short et al., (2002) figure out the favorable linage between institutional shareholders and dividend payout policy.

In the perspective of Japan, Harada and Nguyen (2003) have shown that the negative linkage between dividend payout ratio (DPR) and concentrated ownership occurs. Hofler et al., (2004) studied 100 firms from the Bonn database for 17 years of German firms; it is reported that there is no statistically significant correlation between DPR and institutional shareholders. However, Li and Huang (2004) figure out that the ownership of institution has a positive influence on dividends payout by using data from Chinese listed companies. Grinstein and Michaely (2005) applied panel regression analysis with the three sets of sub-period data over time between 1980 and 1996 on publicly traded firms of the U.S.A. Using this data set, the study found that there is a significant connection between institutional investors and dividend decision. Among the dividend paying firms, institutional investors favor companies that pay lower dividends over the companies that pay higher dividend. Khan (2006) investigated on the UK large quoted 330 firms reported that ownership concentration has an adverse outcome on dividend payout decisions after controlling unobserved firm-specific effects of panel data. As an ownership composition, the author argues that insurance companies positively influence the dividend payout decision.

Using data from 271 listed companies of Istanbul Stock Exchange (ISE) in Turkey, Sakinc & Gungor (2015) figure out that foreign ownership has a significant adverse effect on dividend whereas managerial ownership shows the insignificant negative impact on dividend payout policy as an

ownership composition variable. However, Wei et al. (2017) analyzed the linkage among concentrated ownership, dividend policy and firm performance for 580 Malaysian firms for 2005-2015. The outcome revealed that concentrated ownership has a positive linkage with low dividend payouts and performance of the firms. Lee and Lee (2017) investigated the relationship between shareholding levels by incorporating 180 firms for 2009-2013. The study found that firms with the largest shareholder as foreign investors had paid a higher dividend than firms with largest shareholders with domestic investors. Obaidat (2018) has identified a diverse relationship between share of ownership and dividend decision. This study also revealed that a large portion of shares of a firm's hold lie in institutions and board of directors.

A good number of researches have been carried out in Bangladesh to analyze the effect of the ownership structure on the firm performance of the DSE listed companies in Bangladesh. Farooque et al. (2007) have pointed out that ownership and firm performances are endogenously determined and found two way causality relationships between ownership structure and firm performance while linear and nonlinear relationships are presented on board ownership and performance. Imam and Malik (2007) explored the relationship by incorporating listed non-financing companies of Dhaka Stock Exchange for 2000 & 2003 and considered Holding Period Return (HPR) & Tobin's Q as profitability indicator and percentage of share of different types of owner as ownership indicator. The outcome of the study indicates that foreign ownership significantly and positively affects the firm performance due to good governance practice and the association is a monotonic one. Subsequently, the association between concentrated ownership and company performance has been explored by Farooque et al. (2010). The authors find that a positive co-deterministic correlation exists between concentration of ownership and firm performance.

The study of worldwide literature, including Bangladesh, reveals that no conclusive decision can be taken on the impact of managerial and institutional ownership on the dividend payout policy. Based on the author's expectation until now, no full-fledged study on this topic has been conducted in the context of Bangladesh. This backdrop creates an opportunity for researchers to continue their investigation on this topic. This paper would contribute to the current literature on linkage between ownership structure and dividend policy of listed non-financial firms of DSE by considering managerial and institutional ownership.

3. Theoretical Framework and Hypothesis Development

Figure 3.1 presents a theoretical framework of the present study that depicts the association between dependent and independent variables along the control variables used.
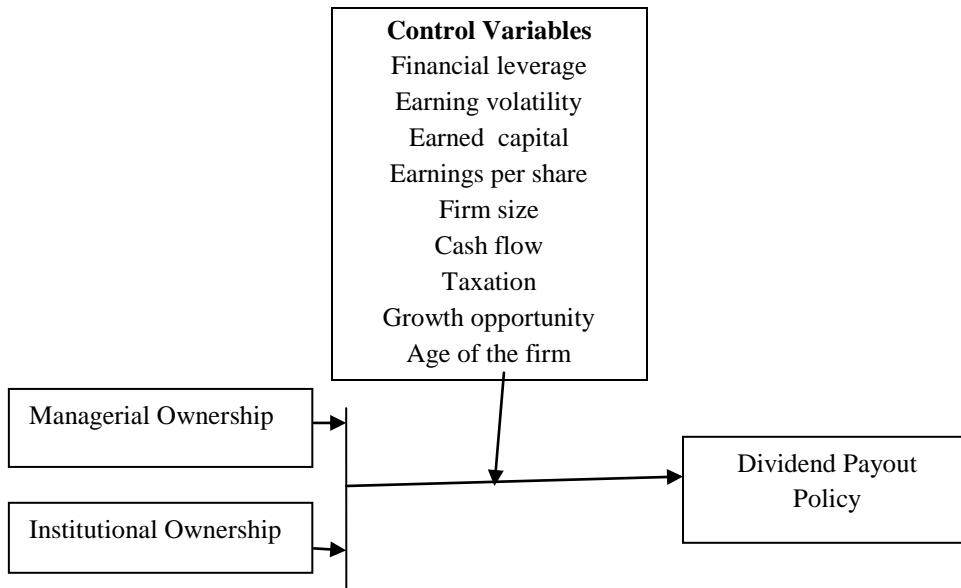

Figure 1: Theoretical Framework

3.1 Dividend Payout Policy

The company typically distributes a percentage of its earnings to shareholders. The portion of earnings that is provided to investors is called dividend. Dividend payout policy determines how much of an organization's profit will be paid to the investors and how much will be held (Al-Qahtani and Ajina 2017; Obaidat 2018). The cash dividend is used as the proxy for dividend payout decisions in this analysis.

3.2 Managerial Ownership

The part of the equity capital that is held by directors and/or sponsors / managers (both local and foreign) can be used as a proxy variable of managerial ownership. The linkage between managerial ownership (MAOW) and dividend payout policy is not consistent and can have both positive and negative impact because of agency problems, asymmetric information, and managers' view. Short et al., (2002), Afza and Mirza (2010) argued that if a large amount of the shares are held in the hand of

ownership concentration by management, they would have the incentives to reduce the payment of dividend and maintain the cash within the company as well as make private benefit for themselves. Sakinc & Gungor (2015) stated that management ownership as an ownership concentration variable has significantly and negatively effects on the dividend payout policy. On the contrary, Al-Qahtani & Ajina (2017) indicates that the firms in which a large proportion of share is held by managerial shareholders exert influences to pay more dividends as an opportunistic behavior of managers. This study therefore hypothesized that:

H1: There is a positive association between managerial ownership and dividend payout policy in the DSE listed companies in Bangladesh.

3.3 Institutional Ownership

Institutional investors are wealthy investors in the equity market in Bangladesh, such as merchant bankers, leasing firms, pension funds, mutual funds and other organizations. Greater emphasis has been paid to the monitoring role of institutional investors in dividend policy literature. The agency theory of Jensen and Meckling (1976) indicates that with reduced monitoring expenses, boards of directors are able to share with investors more of the profits. Al-Qahtani an Ajina (2017) argues that there is a negative interaction between institutional ownership and dividend payout policy. In contrary, Short et al. (2002) and Obaidat (2018) found out that institutional shareholders play a leading position in the dividend decision-making process. The companies with large institutional involvement provide shareholders with higher dividend due to the dominating role of institutional shareholders. In most developing economics, such as Bangladesh, the boards of directors' decision are directly influenced by institutional investors and the following relationship is thus devised.

H2: There is a positive association between Institutional ownership and dividend payout policy in the DSE listed companies in Bangladesh.

3.4 Control Variables

A variable that remains unchanged or held constant to reduce its influence on the result will also validate the actions of independent and dependent variables and the interaction between them. To assess the real effect of managerial ownership (MAOW) and institutional ownership (INSOW) on

dividend payout policy, this study considers nine control variables. In this paper, financial leverage has been used as a proxy variable of debt ratio. Highly levered firms pay lower dividends to increase their assets and make sure to pay interest expenses (Thanatawee, 2014).

The choice of the optimal dividend policy can affect product market risk, so it is necessary to control the inherent variability in the earning stream (Sindhu et al., 2016). Mature companies have undistributed surplus profit and therefore show a greater probability of making dividend payments as well as investment opportunity than young firms (Denis and Osobov, 2008). The size of the firms and the growth opportunity has been applied to the model as control variables to remove spurious effects. An earnings per share is a very strong measurement of any organization's performance, and it is one of the profitability indicators that is most commonly utilized that influences the dividend payout (Le and Le, 2017).

 Al-Najjar and Hussainey, (2009) have found out that larger firms appear to prefer to make more dividends because of their better capacity to rise outside finance at the lowest expense than smaller firms. The assumption of free cash flow implies that firms with excess free cash flow that reach beyond their existing investment requirements have a tendency to pay large dividends (Jensen, 1986). High rates of tax collection decrease the leftover benefits available for the allotment to the investors. As a result, shareholders receive the lower rate of dividend foam their invested funds. The age of the companies is specified as the number of year which is derived by the deviation between getting listed in Dhaka Stock Exchange Limited (DSE) and current year.

4. Methodology of the Study

4.1 Research Design

A research design is the blue print or the plan of a study. Due to the nature of the study, quantitative research approach has been followed. The study has used unbalanced panel estimation technique to gather data from listed non-financial companies of DSE in Bangladesh. The study focuses mainly on secondary data collected from the annual report of selected companies from the Dhaka Stock Exchange Library which relate to digitalized soft copies and hard copies of other sources, the BSEC annual report and the

DSE annual report. The market value of daily price quotation published by DSE, Investment journal (Share Bazar) has been used for collecting data. The time frame of the study is considered as 10 years from 2008 to 2017. A purposive sampling technique has been incorporated in selecting a particular company. The companies' selection criteria include (i) available annual report (ii) paid continuous cash dividend (iii) negative equity is removed (iv) available ownership information. The above criteria have been used by Hashemijoo et al., 2012; Rashid, et al., (2010) and Afza and Mirza, (2014). Based on these criteria, the researcher collected 40 samples from listed non-financial sectors of DSE in Bangladesh.

Table 1: Industry and observed year wise classification of the sample

Industry	Number of firms	Observed year
Food and Allied	4	40
Engineering	8	80
Fuel and Power	6	60
Ceramic	2	20
Pharmaceuticals & Chemicals	10	100
Textile	9	90
Total	**40**	**400**

The researchers quantify and interpret data obtained from different sources by using statistical techniques. Data analysis tools like MS Excel and Stata14 have been used for detail statistical analysis. The outcomes of these whole processes are aimed to meet to the objectives of the research.

4.2 Variables to be used in the study

This study used numerous variable as a dependent, independent and control variables by following studies of Al-Qahtani and Ajina (2017), Harada and Nguyen (2011), Hussainey et al., (2011), Obaidat (2018), Rashid, et al., (2010), Sindhu et al., (2016) and Thanatawee (2014). Table 2 provides the variables used in the study with their measures.

Table 2: Measurements of the Variables

Variables	Symbol	Measurement
Dependent Variable		
Dividend Payout Ratio	DPR	Cash Dividend paid to the common stockholders / Net Income
Independent Variables		
Managerial Ownership	MAOW	Number of ordinary share kept by directors and/or sponsors / Manager divided by total number of ordinary share
Institutional Ownership	INSOW	Number of ordinary share kept by Institutions / Total number of ordinary share
Control Variables		
Financial Leverage	FLEV	Total liability/ Total assets
Earning Volatility	EVOL	Standard deviation over the previous three years of the earnings ratio (EBIT /total assets)
Earned Capital	REE	Earned capital used as a proxy of life cycle theory (Net income after tax - cash dividend) / Shareholders equity
Earnings Per Share	EPS	Net Income after tax / Number of ordinary share
Firm's Size	FSIZE	Natural logarithm of total asset
Cash flow	CASHF	The cash flow of earning after tax plus annual depreciation divided by total assets
Taxation	TAX	By dividing the total tax by the earning before tax
Growth Opportunity	GROWT	Market Price Per Share/ Book Value Per Share
Firm's Age	AGE	Natural logarithm of years since listed in DSE

4.3 Model Specifications

In the first stage, the researcher tried to find for the presence of any mistake or error in the data set. In the second stage, descriptive statistics are used to summaries and describe the firms' variables. In the third stage, the researcher used pair wise correlation coefficient to see the relationship among the variables. In the fourth stage, different diagnostic test like

heteroscedasticity, multicollinearity, autocorrelation have been tested. Finally, based on panel data, the study used multiple research technique like Pooled Ordinary Least Square (POLS), Fixed Effect and Random Effect method to make the relation one variable to another.

This study has applied several models to fulfill the objectives of the study. The pooled ordinary least square method is one of the commonly used methods that assumes error terms to be free from independent variables, mean is zero, variance is constant, and residual are normally distributed. The pooled ordinary least square method is as follows:

$DPR_{it} = a + \beta_1 MAOW_{it} + \beta_2 INSOW_{it} + \beta_3 FLEV_{it} + \beta_4 EVOL_{it} + \beta_5 REE_{it} + \beta_6 EPS_{it} +$

$\beta_7 FSIZE_{it} + \beta_8 CASHF_{it} + \beta_9 TAX_{it} + \beta_{10} GROWT_{it} + \beta_{11} AGE_{it} + e_{it}$ …….. (1)

Here, e_{it} represent the error term or disturbance term; i = 1, 2, 3... 40; t =1, 2,3,…………….,10

Corresponding symbol are DPR: Dividend payout policy, MAOW: Managerial Ownership, INSOW: Institutional Ownership, FLEV: Financial Leverage, EVOL: Earning Volatility, REE: Earned capital, EPS: Earnings per share, FSIZE: Firm Size, CASHF: Cash flow, TAX: Corporate Taxation, GROWT: Growth Opportunity, AGE: Age of the firm.

The assumption of POLS, all errors are uncorrelated [Cov (e_{it},e_{js}) =E (e_{it},e_{js}) = 0], is unrealistic in case of panel data due to error terms of same element are probably going to be correlated with one another over the periods (Hill et al., 2011). The pooled ordinary least square method shows consistent result but fails to produce the unbiased result with the least square standard errors because of the violation homoscedasticity and no autocorrelations assumptions.

Fixed effect or Random effect method are acceptable compared to POLS when unobserved individual effect has become visualized (Baltagi 2005). The fixed effect model is a panel data estimation technique that controls the time-invariant unobserved individual attributes that can be connected with the observed explanatory variables. The influence of the omitted variables bias is also controlled by this model as the subject of one time would later have the same effect. However, in the addition of intercept of cross sectional unit relaxes the rigid assumptions of pooled ordinary least square that all errors are uncorrelated over time [Cov (e_{it},e_{js})]. Therefore, the modified model is as follows:

$DPR_{it} = (a+u_i) + \beta_1 MAOW_{it} + \beta_2 INSOW_{it} + \beta_3 FLEV_{it} + \beta_4 EVOL_{it} + \beta_5 REE_{it} + \beta_6 EPS_{it} +$

$\beta_7 FSIZE_{it}+ \beta_8 CASHF_{it}+ \beta_9 TAX_{it}+ \beta_{10} GROWT_{it}+ \beta_{11} AGE_{it} +e_{it}$ ...... (2)

Here u_i represents the individual characteristics of specific entities which are omitted from the regression. This model restricts the co-efficient of the explanatory variables to be common across the unit (i) and the time period (t).

Unlike other model, random effect model assumes that the entities of error terms are not correlated with predictors which require time-invariant variables that perform an explanatory function. Particularly, this model defines in specific individual features which may or may not affect the predictor variables. According to Brooks (2014), random effect model produces the idiosyncratic features of the entities by each intercept's random deviation (u_i) from the population intercept. So, the random effect model assumes that entity-specific error terms have zero mean and constant variance. Therefore, the modified model is as follows:

$DPR_{it} = a+ \beta_1 MAOW_{it} + \beta_2 INSOW_{it} + \beta_3 FLEV_{it}+ \beta_4 EVOL_{it}+ \beta_5 REE_{it} + \beta_6 EPS_{it}+$

$\beta_7 FSIZE_{it}+ \beta_8 CASHF_{it}+ \beta_9 TAX_{it}+ \beta_{10} GROWT_{it}+ \beta_{11} AGE_{it} +(u_{i} + e_{it})$. (3)

Here, i = 1, 2, 3,……………....,40; t =1, 2,3,…,……………10. u_i represents the individual error component of the specific entities and e_{it} is common error term that consist the composite error term W = (u_i + e_{it}). If individual error component (a_i) is correlated with explanatory variables that indicate fixed effect model provides consistent estimators over Pooled OLS estimators as error term (e_{it}) is correlated with explanatory variables. Conversely, if individual error component (u_i) is not correlated with explanatory variables then Pooled OLS estimators provide consistent result but unbiased as error term (e_{it}) is heteroskedastic and serial auto correlated. The most appropriate model could be selected based on the results of the various diagnostic tests for getting the consistent and unbiased estimates. This study applied three diagnostic tests such as F-test, Breusch-Pagan *LM* test and Hausman test.

5. Findings and Analysis of the Study

Table 3 presents the descriptive statistics of all variables for the entire sample of listed non-financial companies of DSE in Bangladesh over the period of 2008 to 2017.

Table 3: Descriptive Analysis

Variables	Observation	Mean	Standard Deviation	Minimum	Maximum
DPR	370	0.4372	1.4291	-23.779	6.2554
MAOW	400	0.5135	0.1634	0.1358	0.8296
INSOW	396	0.1779	0.1104	0.0096	0.6569
FLEV	400	0.5679	0.2079	0.1060	0.9687
EVOL	400	0.0209	0.0211	0.0007	0.1249
REE	400	0.0865	0.1595	-0.9367	0.6601
EPS	400	29.081	66.553	-23.198	879.62
FSIZE	400	21.536	1.8362	17.023	25.786
CASHF	400	0.0694	0.0694	-0.0627	0.5230
TAX	345	0.2949	0.3724	-1.1436	2.5317
GROWT	400	4.2774	5.1603	0.1211	70.871
FAGE	400	3.0494	0.5395	0.6931	3.7377

It is apparent from the above table that the means value of dividend payout ratio is 43.72 percent, with a 142.91 percent standard deviation. Managerial ownership and institutional ownership are 51.35 percent and 17.79 percent respectively, with the standard deviation of 16.34 percent and 11.04 percent. In Bangladesh, the average financial leverage of the companies is 56.79 percent, with a standard deviation of 20.79 percent during the time. It means that Bangladeshi non-financial companies are moderately depending on external financing compared to equity capital. Other control variables such as earned capital used as proxy for life cycle theory, size (log of total asset), cash flow, growth, taxation, age (log of since listed in DSE), earnings volatility measurement of the standard deviation of the previous three years (base year 2005) and earnings per share measurement per share base have also provided with the same statistics.

Table 4: Pair wise Correlation coefficients among the study variables

Particulars	DPR	MAOW	INSOW	FLEV	EVOL	REE	EPS	FSIZE	CASHF	TAX	GROWT	FAGE
DPR	1.00											
MAOW	-0.0348	1.00										
INSOW	0.0829	-0.3709*	1.00									
FLEV	-0.0322	0.2829*	-0.0285	1.00								
EVOL	0.0250	0.1929*	-0.0918	-0.0716	1.00							
REE	-0.1569*	-0.0213	0.0016	0.1519*	0.0914	1.00						
EPS	-0.0396	0.1310*	-0.1200*	-0.0445	0.0625	0.2860*	1.00					
FSIZE	-0.1399*	0.2029*	0.0300	0.0006	-0.1394*	0.1562*	0.0724	1.00				
CASHF	0.0319	0.2265*	-0.1849*	-0.1595*	0.4634*	0.3039*	0.4707*	0.1690*	1.00			
TAX	0.2721*	0.0102	0.0070	0.1230*	-0.0496	-0.0889	-0.0667	-0.1914*	-0.1239*	1.00		
GROWT	0.0463	0.1527*	-0.1258*	0.1953*	0.2006*	0.1553*	0.0533	-0.1277*	0.2738*	0.0043	1.00	
FAGE	0.0879	-0.1956*	-0.0115	-0.2630*	0.1969*	-0.0577	0.1070*	-0.1901*	0.2683*	0.0462	0.0903	1.00
The numbers in parentheses are the associated *p*-values related to the tests * represent the 5% level of significance												

The study has been carried out to assess the influence of managerial and institutional ownership on the dividend payout policy. By combining all variables considered in regression, the pair wise correlation coefficient matrix shown in the above Table 4. The ratio between Institutional ownership (INSOW) and managerial ownership (MAOW), and cash flow and earnings per share is the optimum correlation coefficients (negative and positive) at 5 percent significance level are -0.3709 and 0.4707 respectively. There are quite close to 10 percent of other coefficients. None of the variables of the pair wise correlation coefficient is 0.80 or greater, meaning that among the variables there are no multicollinearity problems (Lewis-Beck, 1980). In addition, this study executed the VIF test for panel data in the following table to determine the presence of multicollinearity among the variables.

Diagnostics Test: The study conducted three diagnostic tests namely Multicollinearity test, Autocorrelation and Heteroscedasticity Test. The result of the multicollinearity test among the study variables is presented in Table-5.

Table 5: Multicollinearity test (Correlation between predicators)

Particulars	Variance Inflation Factors (VIF)	1/VIF
MAOW	1.82	0.548794
INSOW	1.24	0.808924
FLEV	1.59	0.627201
EVOL	1.73	0.577329

REE	1.32	0.756606
EPS	1.48	0.675993
FSIZE	1.35	0.738657
CASHF	2.97	0.337055
TAX	1.08	0.925890
GROWT	1.20	0.834489
FAGE	1.37	0.729416
Mean	1.56	

Variance inflation factors and tolerance (TOL) are calculated for each of the regresses in order to determine the extent to which multicollinearity exists. The results of the tests indicate that the model does not suffer from a serious multicollinearity problems. If VIF is equal to or above 10 and the TOL level is equal to or below 0.10, then severe multicollinearity problems occur, according to Hair et al. (2010). To detect collinearity, the researcher measured the variance inflation factors (VIF). Variables with a VIF greater than 10 were removed in descending order from regression. Only variables with a VIF below 10 have been preserved to ensure that none of the independent variables are collinear with any of the other explanatory variables. Thus, in this research, multicollinearity is not a problem.

In this study serial auto correlation and heteroskedasticity problems have been tested by using Wooldridge test and modified Wald test and the results are presented in Table 6

Table 6: Autocorrelation and Heteroscedasticity Test

Summary of Wooldridge Test and Modified Wald Test		
Tests Groups		
	Wooldridge Test	**Modified Wald Test**
Null Hypothesis	No auto correlation in first order	No heteroscedasticity in the data
Test Statistics	F(Prob.>F)	Chi^2 (Prob.> $Chi^{2)}$)
	0.774 (0.3848)	1.6e+33*** (0.0000)
Note: The numbers in parentheses are the associated *p*-values related to the tests. *** represent the level of significance at 1%, ** be a symbol of 5% significance level and * denote the 10% significance level		

Within a panel data, the Wooldridge test estimator explains the correlation and tries to reject the null hypothesis that there is no autocorrelation in first order of the coefficient of all years. Acceptance of the null hypothesis suggests the absence of autocorrelation at a 5% significance level in the model. To diagnose the problem of heteroskedasticity (or constant variance) in the model, a modified Wald test has been used. The test results show that the data set is suffering from the above problems.

Table 7: Pooled OLS, Fixed Effect and Random Effect Models outcome without Robust Standard Error

Variables	Pooled OLS	Fixed Effect	Random Effect
MAOW	0. 5145***	1.0256**	0.6100**
	(0.1979)	(0.4905)	(0.2784)
INSOW	0.7264***	1.2319***	0.8936***
	(0.2586)	(0.3966)	(0.3080)
FLEV	0.2623*	-3.5537	0.2356*
	(0.1484)	(1.8273)	(0.1361)
EVOL	-3.6009**	-1.4873*	-3.2993*
	(1.5944)	(0.1591)	(1.9308)
REE	-1.6267***	-1.4873***	-1.5643**
	(0.1588)	(0.1591)	(0.7175)
EPS	-0.0008**	-0.0004	-0.0007**
	(0.0004)	(0.0005)	(0.0002)
FSIZE	- 0.0196	-0.0426	-0.0161
	(0.0148)	(0.0654)	(0.0178)
CASHF	2.7303***	1.7263**	2.5084**
	(0.5767)	(0.8660)	(1.0003)
TAX	0.4210***	.5156***	0.4757
	(0.0839)	(0.0854)	(0.3235)
GROWT	0.0079 *	0.0021	0.0043**
	(0. 0046)	(0.0047)	(0.0021)

Variables	Pooled OLS	Fixed Effect	Random Effect
FAGE	-0.0408	0. 1005	-0.0165
	(0.0473)	(0.1435)	(0.0657)
Constant	0.3272	0.1147	-0.1294
	(0.3774)	(1.2690)	(0.4597)
R-Sq	0.3838	0.3415	0.3783
F/Wald Chi2	17.21	14.57	47.31
Prob. > *F/Wald chi2*	0.0000	0.0000	0.0000

Standard estimates error are presented in parentheses. *, **, and *** signify significance level at 10%, 5%, and 1% respectively.

The pooled OLS, fixed effect and random effect approaches have been applied to analyze the influence of managerial ownership (MAOW) and institutional ownership (INSOW) on dividend payout policy after controlling other variables, namely financial leverage, earnings volatility, earned capital, earnings per share, firm size, cash flow, corporate taxes, growth opportunity, and firm age. Standard error values have been used for each coefficient in parentheses. The effect of all ownership variables shows that the coefficient of managerial and institutional ownership at 1% level of significance is positive in the case of the pooled OLS method. A remarkable point is that the R^2 value of the model is moderate which 38.38%, meaning that the model explains the dividend payout decision in general. In addition, F-test with P-values also indicates a good fit of the model. In the case of panel data, pooled OLS approach was widely criticized because the reliability and correctness of the coefficient do not adequately count the unobserved effects or individual impact concerns commonly in non-experimental research (Baltagi 2005).Therefore, FE and RE approaches have been used to cope with the unobserved heterogeneity. The MAOW and INSOW have the same signs and significant level as the observations in fixed and random effect.

Suitable models could be selected based on the outcomes of multiple diagnostic tests to achieve consistent and unbiased estimates. Multiple diagnostic tests results are presented in Table 8.

Table 8: *F* -Test, Breusch-Pagan LM Test, Hausman Test

Summary of the *F*- Test, LM Test, Hausman Test			
Tests Groups			
	***F*-Test**	***LM* Test**	**Hausman Test**
Null Hypothesis	All dummy parameters except one for the dropped are all zero (POLS)	Variance across entities is zero (POLS)	The fixed and random effect estimators do not differ significantly
Test Statistics	F(Prob. $> F$)	Chi^2 (Prob.$>$ $Chi^{2)}$	Chi^2 (Prob.$>$ $Chi^{2)}$
	2.79*** (0.0000)	26.74*** (0.0000)	33.36 *** (0.0002)
The numbers in parentheses are the associated *p*-values related to the tests * represent the ***, **, * significance level at 1%, 5%, and 10% respectively.			

For the model selection process, the study has been carried out with the F-test, LM test and Hausman test. *F* test could be used for verifying the correctness of fixed effect (FE) over POLS. On the other hand, the LM-test is performed to verify the accuracy between the POLS and random effect (RE) approach. The Hausman test might demonstrate that fixed effect is better than random effect model (Greene, 2003). The above Table 8 represents that both F-test and LM-test are significant at 1% level, meaning that both fixed effect and random effect are superior to pooled OLS. In the meantime, The Hausman test states that the model of FE is better than the model of RE as the p-value is less than 1%. The FE model remains an unbiased and consistent estimator. Therefore, the study follows the fixed effect outcomes for measuring the influence of managerial and institutional ownership on dividend decision.

The study has already found that group wise heteroskedasticity is present in the model by measuring the modified Wald test, but the Wooldridge test does not have an autocorrelation of the first order in the model. Therefore, in order to improve the model's effectiveness, particularly the fixed effect model, the analysis used a robust standard error method to resolve these problems.

Table 9: Pooled OLS, Fixed Effect and Random Effect Model outcome with Robust Standard Error

Variables	Pooled OLS	Fixed Effect	Random Effect
MAOW	0. 5145**	1.0256	0.6100**
	(0. 2209)	(0.7574)	(0.2784)
INSOW	0.7264***	1.2319**	0.8936***
	(0.2363)	(0.5476)	(0.3080)
FLEV	0.2623*	-3.5537	0.2356*
	(0.1466)	(0.2310)	(0.1361)
EVOL	-3.6009**	-1.4873*	-3.2993*
	(1.6794)	(1.9336)	(1.9308)
REE	-1.6267**	-1.4873**	-1.5643**
	(0..6916)	(0.7125)	(0.7175)
EPS	-0.0008***	-0.0004	-0.0007**
	(0.0003)	(0.0003)	(0.0003)
FSIZE	- 0.0196	-0.0426	-0.0161
	(0.0156)	(0.0510)	(0.0179)
CASHF	2.7303***	1.7263	2.5084**
	(0.8806)	(1.2097)	(1.0003)
TAX	0.4210	0.5156	0.4757
	(0.3150)	(0.3249)	(0.3235)
GROWT	0.0079 **	0.0021	0.0043**
	(0.0038)	(0.0018)	(0.0021)
FAGE	-0.0408	0. 1005	-0.0165
	(0.0467)	(0.1374)	(0.0658)
Constant	0.3272	0.1147	-0.1294
	(0.3175)	(.9779)	(0.4597)
R-Sq	0.3838	0.3415	0.3783
F/Wald Chi2	17.21	14.57	47.31
Prob. > *F/Wald chi2*	0.0000	0.0000	0.0000
Standard estimates error are presented in parentheses. *, **, and *** signify significance level at 10%, 5%, and 1% respectively.			

Table 9 shows the outcomes of selected models that institutional ownership (INSOW) has a significant positive impact on dividend payout policy for listed firms of DSE in Bangladesh and the estimated results meet our prior expectations. Managerial ownership is positive but insignificantly related to dividend payout policy. In the case of the fixed effect model, the R^2 value is 34.15% which moderately explains the model. Moreover, the model demonstrates a very small p-value of F-Statistics, indicating the overall significance of the model. Along with two control variables have significant negative impacts on dividend payout policy namely earning volatility (EVOL) and earned capital (REE).

6. Results and Discussion

The Fixed Effect (FE) model provides the unbiased and consistent estimators compared to pooled OLS method and random effect (RE) model. The estimated coefficient of institutional ownership is positive at the 5% level of significance based on the FE model. This outcome of hypothesis 2 fulfills our expectation; it implies that 1 unit rise in institutional ownership (INSOW) after controlling the other nine variables is expected to increase the dividend payout ratio by 1.23 units. This result is compatible with earlier studies like Short et al., (2002) and Obaidat (2018).

Policies adopted by the board of directors in Bangladesh are directly influenced by institutional investors. Thus, a large number of institutional ownerships could ensure better monitoring of outside management, reducing agency costs with the aim of expanding the value of companies. In order to create strong voting positions, institutional investors could take advantage of this opportunity to hold a large number of shares so that monitoring managers play an active role over small shareholders. In this respect, the presence of large external institutional shareholders as an alternative for dividends payout may be regarded as an instrument for reducing the cost of the agency.

This study examined the control variables affecting the dividend payout policy. On the basis of a fixed effect model with a robust standard error, earning volatility and earned capital have statistically a significant impact on the decision on dividends. Earning volatility is statistically significant at 10% level under FE model. If the volatility of earnings increases then the company pays fewer dividends to its shareholders, it means that a

company with fluctuating earnings is not interested to enhance the level of dividend. Normally, a company increases the dividend if they are certain that the company will have stable increase in earnings.

Earned capital measured as a proxy variable of life cycle theory of the firm has a statistically significant negative effect, which is compatible with the studies of Fama and French (2001). Different phases of life cycle theory of dividend state that a firm changes its dividend policy based on its available investment opportunity. Most of the non-financial listed companies of DSE in Bangladesh are young and these firms pay lower dividend for getting available investment options by their internally generated funds. The majority of DSE's non-financial listed companies in Bangladesh are young, and these firms pay lower dividends through their internally generated funds to make available investment opportunity.

7. Conclusion and Policy Implications

This paper aims to examine the impact of managerial and institutional ownership on dividend payout decisions by integrating forty non-financial companies of DSE in Bangladesh. The study incorporates the unbalanced panel data that are collected mainly from annual reports of selected companies from DSE which relate to digitalized soft copies and hard copies of other sources. The result obtained from the study is more reliable and robust because this study removed the heteroscedasticity problem by computing robust standard error. The findings of the study indicate that Institutional ownership (INSOW) is significantly and positively associated with the dividend payout policy.

The policy makers should give special attention by making legislative guidelines on how equity shares be allocated to different shareholders and in what proportion to ensure its proper balance among the shareholders in terms of ownership. Institutional ownership with experience and knowledge could help firms to reduce agency cost of equity through actively monitoring management. To ensure the good governance practices among the non-financial companies of DSE in Bangladesh, it is recommended that the proportion of institutional ownership of the firms should be increased to maximize the rights of minority shareholders.

However, this study has got some limitations. In Bangladesh, the companies do not disclose their all asset information properly due to the

tendency of secrecy. The annual report does not always reflect the position of the company. So, the researcher confronted difficulties to collect all the pertinent information. Furthermore, there is no uniform rule concerning the date of data preparation and presentations of financial statements of non-financial listed companies of DSE. Non-financial companies prepare their financial statements for their own suitable period. According to the guidelines of Bangladesh Securities and Exchange Commission (BSEC) in 2014, each company need to prepare it's their financial statement by accumulating all financial information from July 01 to June 30. In this typical case, the researcher has used the un-audited quarterly and semi-annually financial statements to adjust the financial data of a few companies for the last two years within the sampling period of the study.

Findings of this report would be useful to the investors in selecting a particular company from the capital market while making investment decisions and forming their own portfolios. Floor brokers and dealers of different securities can use the result of this paper to make sound investment decisions as well. Given some limitations of the study, a further analysis may be carried out to increase the sample size by including financial companies. In addition, other types of ownership structures such as individual ownership can be included to further examine the dividend payout behavior of the listed companies in Bangladesh.

References

Afza, T., & Mirza, H, H. (2010). Ownership structure and cash flows as determinants of corporate dividend policy in Pakistan. *International Business Research*, 3(3), 210-221.

Allen, F., Bernardo, A., & Welch, I. (2000). A theory of dividends based on tax clienteles. *Journal of Finance*, 55, 2499–2536.

Al-Najjar, B., & Hussainey, K. (2009). The association between dividend payout and outside directorships. *Journal of Applied Accounting Research,* 10(1), 4-19.

Al-Qahtani, T, H., & Ajina, A. (2017)**.** The impact of ownership structure on dividend policy: Evidence from Saudi Arabia. *Journal of Emerging Issues in Economics, Finance and Banking,* 6(1), 2187-2202.

Baltagi, B.H. (2005). *Econometric Analysis of Panel Data.* 5th ed, Chichester, England: Wiley, 63-119.

Bhattacharya, S. (1979). Imperfect information, dividend policy, and the bird in the hand fallacy. *Bell Journal of Economics and Management Science*, 10(1), 259- 270.

Breusch, T. S., & Pagan, A. R. (1980). The Lagrange multiplier test and its applications to model specification in econometrics. *The Review of Economic Studies*, 47(1), pp. 239-253.

Brooks, C. (2014). *Introductory Econometrics for Finance* (3rd ed.). New York, NY: Cambridge University Press.

Denis, D., & Osobov, I. (2008). Why do firms pay dividends? International evidence on the determinants of dividend policy. *Journal of Financial Economics,* 89 (1), 62-82.

Fama, E.F., & French, K. (2001). Disappearing dividends: Changing firm characteristics or lower propensity to pay? *Journal of Financial Economics, 60*(1)*,* 3-43.

Farooque, O. A., Zijl T. V., Dunstan, K., & Karim, A. K. M. W. (2007). Corporate governance in Bangladesh: Link between ownership and financial performance. *Corporate Governance: An International Review*, 15(6), 1453-1468.

Farooque, O. A., Zijl, T. V., Dunstan, K., & Karim, A. K. M. W. (2010). Co-deterministic relationship between ownership concentration and corporate performance: Evidence from an emerging economy. *Accounting Research Journal,* 23(2), 172-189.

Grinstein, Y., & Michaely, R. (2005). Institutional holdings and payout policy. *Journal of Finance,* 60(3), 1389-1426.

Greene, W. H. (2003). *Econometric analysis* (5th ed.). Upper Saddle River, NJ: Prentice Hall.

Hashemijoo, M., Ardekani A.M., & Younesi, N. (2012).The impact of dividend policy on share price volatility in the Malaysian stock market. *Journal of Business Studies Quarterly,* 4(1), 111-129.

Harada, K., & Nguyen, P. (2011). Ownership concentration, agency conflict, and dividend policy in Japan. *Managerial Finance*, *37(4)*, 362–379.

Imam, M. O., & Malik, M. (2007). Firm performance and corporate governance through ownership structure: Evidence from Bangladesh stock market. *International Review of Business Research Papers,* 3(4), 88-110.

John, K., & Williams, J. (1985). Dividends, dilution and taxes: A signaling equilibrium. *Journal of Finance*, 40(4), 1053-1070.

Jensen, M.C., & Meckling, W.H. (1976). Theory of the firm: managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3, 305- 360.

Jensen, M.C. (1986). Agency costs of free cash flow, corporate finance and takeovers. *American Economic Review*, 76 (2), 323-329.

Khan, T. (2006). Company dividends and ownership structure: Evidence from UK panel data. *The Economic Journal*, 116(510), 172-189.

La Porta, R., Lopez-deSilanes, F., Shleifer, A., & Vishny, R. (2002). Investor protection and corporate valuation. *Journal of Finance,* 57, 1147-1170.

Le, T.V., & Le, T.H. (2017). Ownership and identities of the largest shareholders and dividend policy: Evidence from Vietnam. *Organizations and Markets in Emerging Economics,* 8(1), 86-104.

Li, Q., & Huang, G. (2004). Influence of institutional ownership on cash dividend policy of China listed companies. The sixth Wuhan international conference on e-business international finance track, China, viewed 10 March, 2020, http://www.docstoc.com/docs/341863/Influence-of-Institutional-on-Cash-Dividend-Policy-of China.

Lewis-Beck, M. S. (1980). *Applied Regression: An Introduction*. Newbury Park, CA:Sage Publications Inc.

Harada, K., & Nguyen, P. (2011). Ownership concentration and dividend policy in Japan. *Managerial Finance Review*, 76(2), pp. 323-379.

Hill, R. C., Griffiths, W. E., & Lim G. C. (2011). *Principles of Econometrics* (4th ed.). River Street, NJ: John Wiley & Sons.

Hofler, R, E. J., & Lee, J. (2004). Dividend policy and institutional ownership: Empirical evidence using a propensity score matching estimator. *Discussion Papers on* Entrepreneurship, *Growth and Public Policy*, No. 2004-27, Group for Entrepreneurship, Growth and Public Policy, 1-32.

Hussainey, K., Oscar MGgbame, C. & Chijoke-Mgbame, A. M. (2011). Dividend policy and share price volatility: UK evidence. *The Journal of Risk Finance*, 12(1), 57–68.

Manos, R. (2002). Dividend policy and agency theory: Evidence on Indian firms. Working Paper No. 41. *Institute for Development Policy and Management*, University of Manchester, 275-300.

Miller, M.H., & K. Rock. (1985). Dividend policy under asymmetric information. *Journal of Finance*, 40(4), 1031-1051

Mintzberg, H. (1984). Who should control the corporation? *California Management Review*, 27 (1), 90-116.

Mueller, D.C. (1972). A life cycle theory of the firm. *Journal of Industrial Economics, 20*(3), 199-219.

Miller, M. H., & Modigliani, F. (1961). Dividend policy, growth, and the valuation of shares. *The Journal of Business*, 34 (4), 411-433.

Obaidat, N.A. (2018). Ownership structure and dividend policy: Emerging market evidence. *International Business Research*, 11(6), 65-72.

Rashid, A. (2010). CEO Duality and firm performance: Evidence from a developing country. *Corporate Ownership and Control*, 8(1), 163–175.

Rashid, A. (2011). Corporate governance in Bangladesh: A quest for the accountability or legitimacy crisis? *Research in Accounting in Emerging Economies*, 11, 1–34.

Rashid, A., De Zoysa, A., Lodh, S., & Rudkin, K. (2010). Board composition and firm performance: Evidence from Bangladesh, *Australasian Accounting Business and Finance Journal*, 4(1), 76-95.

Ross, S. A., & Ezra, S (1977). The determination of financial structure: The incentive- singling approach. *The Bell Journal of Economics*, 8(1). 23-40.

Sakinc, I., & Gungor, S. (2015). The Relationship between ownership structure and dividend: An application in Istanbul stock exchange. *Journal of Economics and Development Studies, 3*(4), 19-30.

Sindhu, M.I., Hashmi, S. H., & Haq, E. U. (2016). Impact of ownership structure on dividend payout in Pakistani non-financial sector: *Cogent Business & Management,* 3, 1-11.

Short, H., Zhang, H., & Keasey, K. (2002). The Link between Dividend Policy and Institutional Ownership. *Journal of Corporate Finance*, 8, 105-22.

Thanatawee, Y. (2014). Ownership structure and dividend policy: Evidence from China, *International Journal of Economics and Finance*, 6(8), 197-204

Wei, K.T.I., Quim, L.K., & Somosundaram, K. (2017). Ownership concentration, dividend payout and firm performance: The case of Malaysia. *Malaysian Journal of Economics Studies,* 54(2), 269-280.

Wooldridge, J. M. (2010). *Econometric Analysis of Cross Section and Panel Data* (2nd ed.). Cambridge, MA: MIT Press

Zeckhauser, R.J., & Pound, J. (1990). Are large shareholders effective monitors? An investigation of share ownership and corporate performance. In: Hubbard, R.G. (Ed.), Asymmetric Information, Corporate Finance and Investment. University of Chicago Press, Chicago, 149–180.

Impact of Job Stressors on Job Satisfaction: A Study on Faculty Members of Private Universities in Bangladesh

Md. Atiqur Rahman
Md. Jahangir Alam
Dr. Murshid Alam

Abstract

This study aimed at identifying the major job stressors and their impact on job satisfaction of the private university faculty members, Bangladesh. This study was based on a field survey which was conducted in fifteen (15) private universities located at Dhaka city of Bangladesh. Cluster Random sampling technique was used to pick up the sample. The questionnaire was sent to 150 respondents, amongst them 137 were received and hence analyzed in this study. Data was analyzed using the SPSS version 16. The study explored 9 stressors out of 16 using the principal component analysis technique. The stressors were broadly categorized into three factors namely: nature of work and working condition related stressors, administration and support related stressors, and pay and security related stressors. The findings suggested that all of three factors (9 stressors) had a significant influence on the job satisfaction of the respondents.

Keywords: Job Stress, Job Satisfaction, Private Universities' Faculty.

1. Introduction

The nation has been increasingly realizing the fact that, public universities alone cannot satisfy the national demand for higher education. Therefore, private universities must exist. They must play a supplementary role to work with public universities for imparting higher education in the country. Despite some problems, private universities in Bangladesh are contributing significantly in meeting the challenges of the 21st century by providing upgraded technology-driven knowledge. It is a recognized fact that teachers are the corner-stone of any knowledge-based society. They create knowledge and unlock the new possibilities of life through carrying out rigorous research and development activities. They wear multiple hats

to perform diversified roles in the society. They are social engineers, role models, leaders, facilitators, tutors, evaluators, disciplinarians, counselors, nutritionists, monitors, commentators and surrogate parents (Musgrove & Taylor, 2012). A good number of faculties in the private universities consider teaching as a stressful and challenging profession. They are surrounded by numerous problems which create a tremendous amount of emotional upheaval and mental pressure. In the era of globalization and intensified competition, teachers are driven to perform beyond their routines. They are expected to learn the different cultures, languages, newer technologies of teaching methods resulting in greater workload, higher demand of enhanced job skill, and longer working hours. Such changes in the teaching environment would undoubtedly step up the occupational stress onto the teachers, which in turn hold responsible for breaking their mental and emotional stability and soundness.

It should be noted that private university faculty members experience much more occupational stress than their counterparts working at a state owned university. Maintaining strictly a definite office hour, undertaking administrative post in some cases, conducting seminars, workshop, national and international programs, monitoring co-curricular as well as many such other activities are to be done by the faculty members of private universities beyond their usual job responsibilities which increase their workload manifold. Although in Bangladesh, private university faculties are stressed out at work and their job satisfaction is greatly disturbed for that, this issue is yet to get the attention it deserves.

However, regardless of the profession and the organizational level, job stress by nature has become an indispensable concern now-a-days. Excessive job stress is the prime cause of various fatal diseases and disorders in physical, psychological, and behavioral aspects (Tang et al; 2001). The cost associated with stress is tremendous (Clarke & Cooper, 2004). Therefore, this issue has to be addressed properly to keep employees (teachers) more enthusiastic and productive to serve their respective customers (students).

2. Review of Literature

Work stress is actually an outcome of imbalance between the job requirements and the individual's capabilities, resources or desires which farther turns into detrimental health and psyche responses. According to Saleh and Keong (2008), when any job environmental factor represents a threat to the incumbent either due to heavy demands or inadequate

supplies to satisfy the necessity, job stress takes place. Bunmi and Bola (2008) said that job stress usually indicates a work circumstance which involves some risk factors causing poor mental or physical health. To Desslor (2005), job stress refers to some disagreeable emotions experienced by the employee's mental strain, disappointment, low spirit, a feeling of fear and uncertainty resulting from the aspect of their work as employees. Actually stress in job appears when an individual is brought face to face with an opportunity, a constraint, or a demand (Robbins and Coulter, 2006). Human service oriented jobs like 'teaching' is always stressful as dealing with people is not an easy task (Tytherleigh, Webb, Cooper, & Ricketts, 2005). A research conducted by Johnson at al. (2005) on 26 different occupations experiencing work related stress found that out of six occupations that were the most stressful, teaching was one of them. As far as the private universities are concerned, the level of stress on faculties is more severe. There are some general stressors for teachers relating to class-level, like preparing lecture sheets, attending classes regularly in time, finishing course materials outlined in the curriculum within pre-fixed time schedule, preparing question papers and submitting them to the authority within deadline, maintaining secrecy and confidentiality in the exam process, taking examinations periodically, performing invigilation duties, evaluating answer scripts, publishing results in time, student counseling, supervising internship and so on.

Private university faculties in Bangladesh are suffering from a lot of problems which create tremendous stress on them. Pearson and moomaw (2005) identified three factors responsible to increase on-the-job stress of the university faculties: lack of professionalism, lack of recognition, and lack of autonomy. Recognizing teaching as a profession is critical considering that other professions such as doctors, engineers, or lawyers deal with health and material objects, but it is teaching that engages in developing both human mind and soul. If teachers are to be recognized as a professional and empowered duly, they must have the liberty to prescribe the best way of applying remedies to their students as doctors/lawyers do for their patients/clients (Pearson & Moomaw, 2005).

It is true that teachers' autonomy is decreasing day by day. Lack of control and a sense of powerlessness in making decisions on curriculum, instruction, and scheduling make teachers frustrated and demoralized (Bacharach at el., 1986; Cedoline, 1982; Yee, 1990). In addition, the job status and recognition in teaching has been decreasing in the society day by day (Lews &Jesus 2001). Unlike litterateur, dramatist, artist, film

maker and many other professionals, the contributions of teachers are poorly recognized. If a litterateur or a dramatist or an actor/actress dies, it becomes the headline of different newspapers and TV channels. Pages after pages are written, documentaries are shown on different TV channels and, homage and gratefulness from all classes of people are paid. But when an academician dies, people show little attention and interest to this regrettable matter except some will-wishers. It is a gloomy picture placing a great threat to the nation. This picture also hurts the teachers' self-esteem and sometimes they start re-thinking about their career choice with depression and disappointment.

Psychological stress is now visible for the academic staff. There are a number of factors creating psychological stress on teachers. For instance, Tytherleigh and associates (2005) showed in their research that, job insecurity is the most significant source of stress for university faculty members. Especially in private universities, lack of job security has become a prime concern. Newspaper report shows that most of the private universities in Bangladesh do not have any 'service rules' of their own. Stiff provisions for employment, insufficient fixation of salaries and other facilities (Marwat et al., 2012), delay in promotion (Kinman, 2001), Lack of retirement benefits, dictating attitude of management (Bhatti at al., 2011), lack of appreciation for the work well done (Winefield et al., 2003) etc are the areas to make the faculty members feel insecured in their job.

In addition, unlike other professionals, teachers are poorly paid. The Guardian newspaper in the UK released a summery that academic staffs are underpaid, that's why they are stressed out, demoralized and less motivated (Khan, Shah, Khan, & Gul, 2012). Inadequate salaries make the teachers unable to maintain a standard livelihood in the society (Perie & Baker; 1997). Experience shows that most of the teachers could not provide their children with higher education due to financial insolvency. The UK-based Association of University Teachers (AUT, 2003) carried out a survey representing almost 16,000 academic staff and found that approximately 72% were dissatisfied with pay system of their respective institutions.

Lack of promotion is another aspect that causes job stress in the workplace (Ahsan at al. 2009). A number of teachers are now pursuing horizontal career and have been experiencing career plateau (Woods, 1989). Career plateau occurs when someone views that there is little or no chance to be promoted to the next higher position. There are some stringent regulations followed by different universities in promoting their faculties. For

instance, without having Ph.D or a foreign degree no faculty would be promoted to the next higher position. However, it is observed that many faculty members of private universities in Bangladesh become stagnant at a certain point being unwilling to go for higher studies and research due to tremendous time pressure, family problems, financial crisis, lack of administrative support, or lack of self-motivation. As the chances of promotion and other financial benefits are insufficient, most of the meritorious faculties show reluctance to develop their career with private university teaching.

Home-work interface is another source of pressure for academicians as they have to spend a considerable amount of time in teaching, counseling, and supervising students (Rahman & Avan, 2016). In addition to the time spent for class related issues, they have to engage in research activities for creating new knowledge and self-development sacrificing their time allotted for family members. In addition, it is a commonplace for the university faculties to work during evenings and weekends. This tight and inconsistent scheduling obviously hampers their family and social life.

Changing culture in the education sector is also responsible to create unhealthy work stress on the educators. Unfavorable management attitude (Tytherleigh at al., 2007); excessive administrative work (Kinman, 2001); pupil misbehavior (Travers & Cooper, 1993); lack of coordination and comfort with colleagues (Guglielmi and Tatrow; 1998); work overload (Alexandros-Stamatios G. A. et al., 2003); student-collecting campaign (Bhatti at el., 2011); demanding and insensitive supervisor (Viljoen and Rothmann; 2009); role conflict (Chen et al., 2011); assigning non specialization courses (Ahmad et al; 2011); role ambiguity (Lens & Jesus; 1999); increased teaching loads and student : teacher ratios (Rahman & Avan; 2016); extended working hours (Townley, 2000); etc are some major factors negatively influencing educational culture in the private universities.

Dealing with obtrusive parents, discourteous students and students with poor intellectual ability make teachers uneasy in teaching (Lens & Jesus, 1999). Coping with underachieving students is always stressful (Klassen and Chiu, 2010). Students come from broken families or single parent families with psychological and emotional problems are a burden for teachers (Vandenberghe & Huberman, 1999). Unlike the old days, teaching students in this persuasive society like Bangladesh where discipline becomes a major concern, is very difficult and challenging.

Teacher's evaluation system in most of the private universities also acts as an additional stressor for them. Many teachers view this system as disgraceful and humiliating when students evaluate them wrongly. It is often true that those teachers who are strict in maintaining the rules and regulations and showing zero tolerance towards misconduct and unfair means are negatively rated by the students. On the other hand, some students give high score to those who are over friendly, easy going, and permissive. To keep students satisfied sometimes teachers may have to go beyond the ethics in the fear that students would negatively rate them and consequently they will lose their jobs. Under such circumstances, teachers find themselves as both powerless and helpless.

It is worth noting that the stressors greatly influence the teachers' job satisfaction (Ahsan et al; 2009). A significant relationship between these two variables has been identified by a number of researches. There is an inverse association of job satisfaction with the job stress (Grunfeld, 2000). One of the important sources of stress at work is the lack of job satisfaction (Fairbrother, and Warn, 2003). One study finds that job satisfaction and job stress are negatively correlated with each other (Hoboubi, 2017).

However, the researchers of different countries conducted a number of researches on job stress which has got a tremendous influence on the employees' overall job satisfaction in the workplace. But in Bangladesh, few studies have been conducted so far on the private university faculty members who are experiencing huge stress at work and thus, their job satisfaction is greatly hampered. This circumstance led the authors to conduct a study to explore the major job stressors and the effect of those stressors on the job satisfaction of the private university faculties in Bangladesh.

3. Objectives of the Study

The objectives of the study are:

- To explore the leading factors (job stressors) that private university faculties are experiencing in their jobs;

- To determine the influence of the factors (job stressors) on job satisfaction of the private university faculties of Bangladesh.

4. Theoretical Framework and Hypothesis

4.1 Theoretical framework of the study

This study assumed employees' job satisfaction in private universities as a dependent variable and the factors of stress in their jobs as independent variables. The factors are illustrated in the following figure (figure 1) hence the study aimed at fitting the following regression model:
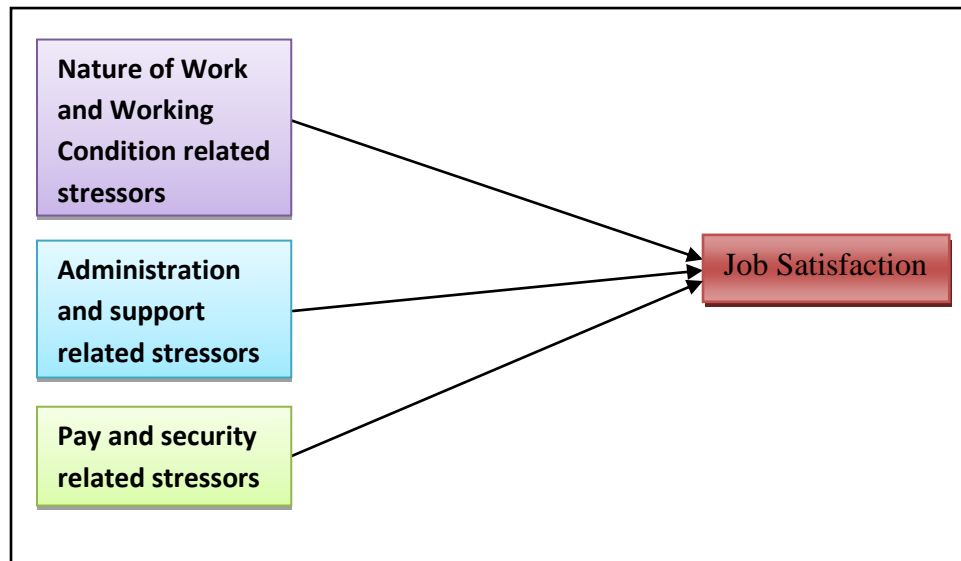
$$Y = a + bX$$

Where,

Y= Job Satisfaction

X = the factors of job stress (it may be X_1 to X_n)

a = constant

b = The coefficient (may be b_1 to b_n)

Figure 1: The outline of the model of the study

4.2 Hypothesis

In order to test the degree of influence of factors of job stress on the job satisfaction of the faculties of private universities, this study drew the following hypotheses:

H1a: There is a significant influence of the nature of work and working conditions related stressors on the job satisfaction of the faculties in private universities;

H2a: There is a significant influence of the administration and support related stressors on the job satisfaction of the faculties in private universities;

H3a: There is a significant influence of the pay and security related stressors on the job satisfaction of the faculties in private universities.

5. Methodology

5.1 Sampling area and sample selection:

This study was based on a field survey which was conducted in fifteen private universities located at Dhaka city of Bangladesh. Since almost all of the private universities are Dhaka based, the study covered the Dhaka city only. Cluster Random sampling technique was used to pick up the sample. The questionnaire was sent to 150 respondents of which 137 were returned and hence analyzed in this study.

5.2 Test sample adequacy to represent the model

Table 1 shows the result of the Kaiser-Meyer-Olkin (KMO) test, widely used to measure the sampling adequacy, should be greater than 0.5 for a satisfactory factor analysis to proceed. The off-diagonal elements should all be very small (close to zero) in a good model. Looking at table 1, the KMO measure is 0.727 which indicates that the sample taken for this study is adequate enough to run the factor analysis. Bartlett's test is another indication of the strength of the relationship among variables. This tests the null hypothesis that the correlation matrix is an identity matrix. An identity matrix is matrix in which all of the diagonal elements are 1 and all off diagonal elements are 0. From the same table, we can see that Bartlett's test of sphericity is significant (the probability is $<.05$). So we reject the null hypothesis. This means, the correlation exists among the independent variables.

Table 1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.727**
Bartlett's Test of Sphericity	Approx. Chi-Square	441.971
	Df	120
	Sig.	**.000**

5.3 Sources of data

Both the primary and the secondary data were used in this study. The secondary data was collected from the existing literature and different published reports in the related field and the primary data was collected through a comprehensive questionnaire survey.

5.4 Questionnaire design

A structured close ended questionnaire was used for collecting primary data. For the closed ended questions five point Likert scale was used, where 1 = Strongly Agree, 2 = Agree, 3 = Neutral (neither agree nor disagree), 4 = Disagree, and 5 = Strongly Disagree. The questionnaire included three parts. The first part covered the demographic profile of the respondents, the second part covered the statements relating to the stressors experiencing private university faculties in their jobs and the third part covered the statements relating to their job satisfaction/dissatisfaction. Job satisfaction of the employees was expressed in the questionnaire with a set of negative questions/statements (see appendix) which would measure the level of job dissatisfaction of the respondents.

5.6 Tools and techniques used:

Exploratory factor analysis technique was used to explore the factors (the stressors of the faculties) and then the Regression analysis was used to determine the influence of the factors (stressors) that frequently cause the faculties' job dissatisfaction in the private universities of Bangladesh.

Statistical Package for Social Science (SPSS version 16) software was used to calculate the above statistics and interpret the results.

5.7 Reliability and validity of data:

The reliability of the questionnaire was assessed by considering Cronbach's alpha. The reliability is said to be satisfactory when

Cronbach's alpha have a value greater than 0.70 (Hair, 2006). The value of the Cronbach's alpha of the questionnaire of this study was 0.866 (table 2) which is higher than the above recommended value (.70). That means the data had sufficient reliability.

Table 2: Reliability Statistics

Cronbach's Alpha	N of Items
.866	28

In order to achieve the highest validity of the questionnaire, a pilot survey was conducted among the 10 respondents before going to the final survey and sufficient corrections and adjustments were made in the questionnaire.

6. Analysis and Discussion

6.1 Extracted factors

Table 3 shows the extracted factors (stressors).Out of 16 variables (stressors) from the questionnaire, three factors were extracted. Table 3 shows that all the extracted factors have the moderate loadings values except the factor of job uncertainty (.441). Since the job uncertainty is advocated as one of the most influential stressors in many literatures, it is extracted nevertheless of its low loading value.

Table 3: Rotated Factor Matrix[a]

	Factors		
Included variables	**1**	**2**	**3**
Job uncertainty			.441
Low pay structure			.591
Undisciplined students	.439		
Much Administrative work			.416
Dealing with weak students	.687		
Work-life imbalance	.639		
Unfavorable work schedule	.564		
Less Control over work schedule			

Included variables	Factors		
	1	2	3
Long working hours	.552		
Imbalanced teacher- students ratio			
Inappropriate evaluation system			
Delayed promotion		.689	
Autocratic administration		.738	
Non-cooperative colleagues			
Role ambiguity			
Insufficient resources and supports		.552	
Extraction Method: Maximum Likelihood. Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 5 iterations.			

6.2 Naming of the extracted factors

Table 4 shows the names of the extracted factors (stressors) from 16 variables included in the questionnaire (see appendix).

Table 4: Name of the extracted factors

Factor name	Loaded variables
Nature of work and Working Condition	1. Dealing with weak students 2. Work-life imbalance 3. Unfavorable work schedule 4. Long working hours
Administration and support	1. Autocratic administration 2. Delayed promotion 3. Insufficient resources and supports
Pay and security	1. Low pay and unspecified pay structure 2. Job uncertainty

6.3 Degree of influence of the independent variables on the dependent variable

The value of the *R* Square is presented in the model summary Table 5 on the basis of which the degree of influence on the dependent variable is determined. The explanation is given below:

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.935[a]	.874	.707	.09877

a. Predictors: (Constant), Pay and security related stressors, Administration and supports related stressors, Nature of work and Working Conditions related stressors.

From Table 5 it is found that the value of R is .935, it indicates that the impact of the independent variables on the dependent variable are very much strong and enough to represent the model. In accordance with the value of the *R* Square, it indicates that the job stressors of the private university faculties have 87.4% influences on their job dissatisfaction.

6.4 Test of hypotheses, nature of influence and collinearity of the variables

Table 6 shows the nature of influence of the independent variables on the dependent variables and the collinearity issues of the independent variables:

Table 6: Coefficients

Factors (variables)	B	Std. Error	T	Sig.	Collinearity Statistics	
					Tolerance	VIF
Constant	1.768	.873	2.026	.025		
Nature of work and Working Conditions related stressors.	.062	.009	6.787	.000	.677	1.477
Administration and support related stressors	.071	.011	6.402	.000	.193	5.186
Pay and security related stressors	.216	.040	5.430	.000	.232	4.308

a. Dependent Variable: level of Job Satisfaction (dissatisfaction)

Table 6 shows the value of the coefficients of the regression model. In the above table, it is seen that the *p* value of all the independent variables is significant (p<.05), that means they have a positive influence on the dependent variable. The *t* (all is > 1.96) values of the independent variables indicate that each of them has a strong influence on the dependent variable. So, all of the hypotheses are accepted. That means, nature of work and working condition related stressors, administration and support related stressors and pay and security related stressors have a positive influence on the job dissatisfaction of the respondents.

It is stated earlier in the methodology part that, the level of job satisfaction was expressed with a set of negative questions/statements, so the positive influence of the independent variables (the job stressors of the respondents) on the level of job satisfaction will mean a decrease in job satisfaction (dependent variable) or an increase in job dissatisfaction of the respondents. Hence, the findings of the study suggest that, the nature of work and working condition related stressors, administration and support related stressors and pay and security related stressors increase the level of job dissatisfaction of the private university faculties in Bangladesh.

7. Practical and Managerial Implications

Findings of this study will help the faculties serving different private universities of Bangladesh to be concerned, aware and careful about the stressors that they experience in their jobs. It will also be useful to the concerned authority of the different universities to understand and improve organizational culture to lessen job stress and thus, help create comfort and sustainability at work and bring job satisfaction in them.

8. Conclusion

The primary objective of this study was to investigate how the major job stressors affect the overall job satisfaction of the faculty members at private universities in Bangladesh. The study explored that faculty members serving at different private universities are working under stressful circumstances which negatively affect their job satisfaction. The study also uncovered that higher the job stress experienced by the faculty members, lower is their satisfaction at work and vice-versa. It is very important to understand the fact that faculty members are one of the most

important pillars on which university structure stands. Therefore, universities should have recognized the needs of their faculty members and also taken proper initiatives to provide the best congenial working environment for them. But there is a huge difference between the expectation and the reality. In most of the cases, teachers serving at different private universities are feeling less enjoyed and less secured. Unlike teachers at public universities, private universities' teachers are usually more overloaded and are working under more stressful circumstances (Marwat, Shah, Khan, & Gul, 2012). The situation is going to be worsening day by day. This trend in teaching at the private universities in Bangladesh negatively affects teachers' job satisfaction and performance at work. If faculty members can be kept satisfied by minimizing the level of stress at work, the whole nation will ultimately be benefited by their intellectual services.

9. Limitations and Future Research Direction

Like other studies, this study is not free from limitations. Our sample consisted of 137 faculties working in fifteen (15) private universities located at Dhaka City of Bangladesh may limit the generalizability of the results. Faculty members of different private universities located outside Dhaka did not participate in this study. The study can be strengthened by increasing the sample size as the data analysis results and findings may differ significantly when the sample size is increased or decreased. As only fifteen (15) Dhaka based private universities do not represent all the private universities in Bangladesh, the inclusion of more universities both inside and outside Dhaka would create more diffused results and findings. Lastly, the questionnaire consisted of only some limited stressors. There may have more stressors influencing job satisfaction which need to be reported in a future study. Moreover, this study did not talk anything about how to minimize the stress and maximize the satisfaction at work among the faculty members.

References

Ahmad, U., Ahmed, Z., Ahmed, I., & Akbar, Z. (2011). Work Stress Experienced by the Teaching Staff of University of the Punjab, Pakistan: Antecedents and Consequences. International Journal of Business and Social Science, 2(8).

Ahsan, N., Abdullah, Z., Fie, D. G., & Alam, S. S. (2009). A study of job stress on job satisfaction among university staff in Malaysia: Empirical study. European journal of social sciences, 8(1), 121-131.

Alexandros-Stamatios G.A., Matilyn J.D., and Cary L.C., 2003. Occupational stress, job satisfaction and health state in male and female junior hospital doctors in Greece. Journal of managerial psychology, 18(6), pp.592-621.

ATN News. (2017, June 02). Transformation of trimester into dual semester. Dhaka.

Bhatti, N., Hashmi, M. A., Raza, S. A., Shaikh, F. M., & Shafiq, K. (2011). Empirical Analysis of Job Stress on Job Satisfaction among University. International Business Research, 4(3), 264.

Chen, M.F., Lin, C.P. and Lien, G.Y., 2011. Modelling job stress as a mediating role in predicting turnover intention. The Service Industries Journal, 31(8), pp.1327-1345.

Clarke, S., & Cooper, C. L. (2004). Managing the risk of workplace stress: Health and safety hazards. Psychology Press.

Fairbrother, K. and Warn, J., 2003. Workplace dimensions, stress and job satisfaction. Journal of managerial psychology, 18(1), pp.8-21.

Grunfeld, E., Whelan, T.J., Zitzelsberger, L., Willan, A.R., Montesanto, B. and Evans, W.K., 2000. Cancer care workers in Ontario: prevalence of burnout, job stress and job satisfaction. Canadian Medical Association Journal, 163(2), pp.166-169.

Guglielmi, R.S. and Tatrow, K., 1998. Occupational stress, burnout, and health in teachers: A methodological and theoretical analysis. Review of educational research, 68(1), pp.61-99.

Hoboubi, N., Choobineh, A., Ghanavati, F.K., Keshavarzi, S. and Hosseini, A.A., 2017. The impact of job stress and job satisfaction on workforce productivity in an Iranian petrochemical industry. Safety and health at work, 8(1), pp.67-71.

Johnson, S., Cooper, C., Cartwright, S., Donald, I., Taylor, P., & Millet, C. (2005). The experience of work-related stress across occupations. Journal of managerial psychology, 20(2), 178-187.

Khan, A., Shah, I. M., Khan, S., & Gul, S. (2012). Teachers' stress, performance & resources. International Review of Social Sciences and Humanities, 2(2), 21-29.

Kinman, G., 2001. Pressure points: A review of research on stressors and strains in UK academics. Educational psychology, 21(4), pp.473-492.

Klassen, R.M. and Chiu, M.M., 2010. Effects on teachers' self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress. Journal of educational Psychology, 102(3), p.741.

Lens, W., & de Jesus, S. N. (1999). 10. A Psychosocial Interpretation of Teacher Stress and Burnout. Understanding and preventing teacher burnout: A sourcebook of international research and practice, 192.

Marwat, A. K., Shah, I. M., Khan, S., & Gul, S. (2012). Teachers' Stress, Performance & Resources: The Moderating Effects of Resources on Stress & Performance. International Review of Social Sciences and Humanities. Vol: 2. No: 2. pp. 21-29

Musgrove, F. and Taylor, P.H., 2012. *Society and the Teacher's Role (RLE Edu N)*. Routledge.

Pearson, L. C., & Moomaw, W. (2005). The relationship between teacher autonomy and stress, work satisfaction, empowerment, and professionalism. Educational research quarterly, 29(1), 37.

Perie, M. and Baker, D.P., 1997. Job Satisfaction among America's Teachers: Effects of Workplace Conditions, Background Characteristics, and Teacher Compensation. Statistical Analysis Report.

Rahman, M., & Avan, Y. R. (2016). Teaching workload and performance: an empirical analysis on selected private universities of Bangladesh. European Journal of Social Sciences Studies.

Ramirez, A.J., Graham, J., Richards, M.A., Gregory, W.M. and Cull, A., 1996. Mental health of hospital consultants: the effects of stress and satisfaction at work. The Lancet, 347(9003), pp.724-728.

Tang, C.S.K., Au, W.T., Schwarzer, R. and Schmitz, G., 2001. Mental health outcomes of job stress among Chinese teachers: Role of stress resource factors and burnout. Journal of Organizational behavior, 22(8), pp.887-901.

Townley, G., 2000. Long hours culture causing economy to suffer. Management Accounting, 78(6), pp.3-5.

Travers, C.J. and Cooper, C.L., 1993. Mental health, job satisfaction and occupational stress among UK teachers. Work & Stress, 7(3), pp.203-219.

Tytherleigh, M. Y., Webb, C., Cooper, C. L., & Ricketts, C. (2005). Occupational stress in UK higher education institutions: A comparative study of all staff categories. Higher Education Research & Development, 24(1), 41-61.

UGC. (2017). University Grants Commission (UGC)Profile. Dhaka: UGC

Vandenberghe, R., & Huberman, A. M. (Eds.). (1999). Understanding and preventing teacher burnout: A sourcebook of international research and practice. Cambridge University Press.

Viljoen, J.P. and Rothmann, S., 2009. Occupational stress, ill health and organisational commitment of employees at a university of technology. SA Journal of Industrial Psychology, 35(1), pp.67-77.

Winefield, A.H., Gillespie, N., Stough, C., Dua, J., Hapuarachchi, J. and Boyd, C., 2003. Occupational stress in Australian university staff: Results from a national survey. International Journal of Stress Management, 10(1), p.51.

Woods, P., 1989. Stress and the teacher role. Teaching and stress, pp.84-97.

Appendix: The Questionnaire

Dear sir/madam,

You are humbly requested to participate in a survey to provide your response with information that will help to identify **the factors determining the job stress of the private universities' faculties of Bangladesh and the impact of those stressors on their job satisfaction.** The survey is for truly academic purpose only. Participation in this survey is voluntary and confidentiality is assured. No individual data will be reported.

Please do not put your name on this questionnaire.

Part I: Respondent's Information

Age: 1. 20-30 2. 30-40   3.40-50   4.50-60   5. 60-70

Job title: 1. Lecturer 2. Assistant Professor 3.Associate Professor 4. Professor

Monthly salary 1.Below 50000 2.50000-60000 3.60000-70000 4. Above 70000

Education: 1. Graduate level 2. Post graduate level (Masters) 3.M Phil 4.Ph D

Experience: 1. 1-3 years 2. 3-6 years3.6-9 years 4.9-12years 5. Over12 years

Marital status: 1. Unmarried   2. Married3. Divorced   4. Widowed

Part 2: Job stressors of the respondents:

Please state your degree of response in the scale of 1 to 5 (where 1 = Strongly Agree, 2 = Agree, 3 = Neutral (neither agree nor disagree), 4 = Disagree, and 5 = Strongly Disagree) regarding the following variables/statements you experience in your organization as your job stressors:

Variables	Statements	1	2	3	4	5
Job uncertainty	I experience a lot of uncertainty in my job.					
Low pay structure	My pay structure is not sufficient.					
Undisciplined students	Students are becoming unruly and disobedient day by day.					

Much Administrative work	I have to perform considerable amount of administrative work.					
Dealing with weak students	I feel bored to teach when the number of students is large in the class who has very little understanding power.					
Work-life imbalance	I am currently facing severe family-work conflict.					
Unfavorable work schedule	Current work schedule is not liking to me.					
Less Control over work schedule	Work schedule is very strict and I have no or little control on it.					
Long working hours	I have to work long hours for academic or administrative purpose.					
Imbalanced teacher- students ratio	Teacher-student ratio is not properly maintained in my institution.					
Inappropriate evaluation system	I remain worried when my students evaluate me wrongly.					
Delayed promotion	I have been holding the same position for a long time even though I have fulfilled all the criteria to be promoted.					
Autocratic administration	Administrative staffs are very rough and tough.					
Non-cooperative colleagues	My colleagues are unfriendly and non-cooperative.					
Role ambiguity	My duties and responsibilities expected to be performed are not clear to me.					
Insufficient resources and supports	Resources and supports are not adequate to perform the assigned task or to meet the deadline.					

Part 3: Job satisfaction of the respondents:

Please state your degree of response in the scale of 1 to 5 (where 1 = Strongly Agree, 2 = Agree, 3 = Neutral (neither agree nor disagree), 4 = Disagree, and 5 = Strongly Disagree) regarding the following statements as your level of job satisfaction.

Statements	1	2	3	4	5
I am not satisfied with my job certainty					
I am not satisfied with the job security					
I am not satisfied with the nature of the job.					
I am not satisfied with the working conditions.					
I am not satisfied with the interpersonal relationship in the organization.					
I am not satisfied with my company policy and its					
I am not satisfied with my job challenges.					
I am not satisfied with my job recognition.					
I am not satisfied with the duties and responsibilities I am assigned.					
I am not satisfied with the achievement opportunities in my job.					
I am not satisfied with the opportunities of growth & development in my job.					
Considering the overall conditions, I am not satisfied with my job.					

Thank you for completing the questionnaire.

Nexus between Economic Growth and Human Development in Bangladesh

Dr. Matiur Rahman
S.M. Abdus Shakur
Y.A.M Rafiqul Haq

Abstract

In this paper an attempt has been made to demonstrate how progress in Human Development (HD) influences Economic growth. For this purpose, changes in GNI has been regressed upon changes in Human Development Index. Economic growth in turn impacts human development. Thus, the two-way causal relationship has been analysed here. Simple Linear Regression as well as Multiple Linear Regression has been adopted using Time Series Data. Findings of both types of regression show interesting policy implications. Results show that along with improvement in Human Development Indicators, economic growth rate speeds up. This in turn calls for more and more investment in Human Capital Formation for expediting attainment of overall development goals. In the similar vein, proper allocation of national income calls for special attention to spend for human development. Our research results show that along with the increase in expenditures on its components, HDI improves substantially. It is evident that keeping pace with HRDI improvement, GNI per capita increases. Thus, different ingredients of Human Development Index (HDI) draw special attention so that cherished national development goals can be achieved.

Keywords: Economic Growth, HDI, GNI, GDP, SLR, MLR, OLS, ILO

1. Introduction

Modern Bangladesh emerged as an independent country in 1971 after winning the great Liberation War against Pakistan. After independence, the new state faced famine, natural disasters, and widespread poverty, as well as political turmoil and military coups. The restoration of democracy in 1991 has been followed by relatively calm and moderate economic progress. Bangladesh economy had to surmount enormous hurdles and obstacles with soaring imports and dwindling exports. As a result of grim

determination and consistent efforts of both public and private sectors, Bangladesh has made substantial progress in various dimensions.

The current economy of Bangladesh is a blistering market economy. It is the 39th largest in the world in nominal terms, and 29th largest by purchasing power parity. It is classified among the Next Eleven emerging market middle income economies and a frontier market. In the first quarter of 2019, Bangladesh was the world's seventh fastest growing economy with a rate of 7.3% real GDP annual growth (Riaz Ali, etal, 2016 and IMF, 2019). The financial sector of Bangladesh is the second largest in the subcontinent. Bangladesh is one of the world's fastest growing economies. In the decades since 2004, Bangladesh averaged a GDP growth of 6.5%, that has been largely driven by its exports of ready made garments, remittances and the domestic agricultural sector. The country has pursued export-oriented industrialisation, with its key export sectors which include textiles, shipbuilding, fish and seafood, jute and leather products. It has also developed self-sufficient industries in pharmaceuticals, steel and food processing. Bangladesh's telecommunication industry has witnessed rapid growth over the years, receiving high investment from foreign companies. Bangladesh also has substantial reserves of natural gas and is Asia's seventh largest gas producer. Offshore exploration activities are increasing in its maritime territory in the Bay of Bengal. It also has large deposits of limestone. Besides, Bangladesh is employing persistent efforts to promote the Digital Bangladesh scheme as a part of its efforts to develop the country's growing information technology sector.

As of 2019, Bangladesh's GDP per capita income is estimated, as per IMF data, at US$5,028 (PPP) and US$1,906 (nominal). Bangladesh is still putting a lot of efforts to achieve SDGs set by UN. Apart from this, Bangladesh Government has set its own goal of attaining status of middle income country by 2030 and status of developed country by 2041. Bangladesh has also destined its Delta Plan for next 100 years. In order to graduate as a middle income country; Bangladesh will have to overcome several challenges like deprivation of facilities enjoyed by Least Developed Countries (LDCs). Bangladesh has to adopt bold steps for meeting such challenges and constraints. Bangladesh has a comparative advantage of Demographic dividend which means over 66% of its economically active population is constituted of youth (15-24 years). Thus, special attention is needed to transform this huge population into skilled labor force so that our great desire for a prosperous country is achieved. The Above discussion prompts one to gather a glimpse over the

interplay of the factors which operates in moving the wheels of development forward. One such attempt has been made in the current small scale research work.

2. Literature Review

In order to gather a deep understanding and insights of the phenomenon, we have put substantial efforts to make pertinent literature review and a snap-shot description of the literature survey is provided herein.

Enric Fernandez and Paolo Mauro conducted a study on the role of human capital in economic growth in 2000 in Spain. This study found that people with higher education accumulate human capital through learning by doing at a faster rate than less educated people. The authors project human capital index of past two decades over the next decade. They found large and increasing impact of human capital formation on the economic growth.

R.J.Barro (2005) conducted a study in the Department of Economics at Harvard University taking financial support from the National Science Foundation. The growth rated has been measured 3 ten-year periods. He has used three-stage least squares method for estimating econometric models for data of 100 countries having different levels of economic development. The author found highly significant impact of education quality on growth with varying degrees across countries.

There is a large body of literature, that has identified that one of the most important factors of economic growth is human capital (Riley, 2012 Lucas, 1988, Mankiw et al., 1992, De la Fuente and Doménech, 2000, 2006) contributing to increased competitive advantage through innovation and diffusion technology (Pistorius, 2004 Siggel, 2000, 2001, Horwitz, 2005).

Elena Pelinescu (2014) in her paper titled, " The impact of human capital on economic growth ", attempted to reveal the role of human capital as a factor of growth using a panel methodology and presented the paper in the 2nd International Conference 'Economic Scientific Research - Theoretical, Empirical and Practical Approaches', ESPERA 2014, 13-14 November 2014, Bucharest, Romania. New theory of economic growth developed in the early 80's comes to correct the shortcoming of the classical theory through emphasizing the importance of education and innovation, (elements of human capital) in a long-term economic growth.

Several studies have highlighted the influence of intangible assets such as research and development, patents, intellectual capital on the market value of companies and also on their development, leading ultimately to economic growth overall national, regional or global, as the new growth theory shows. De la Fuente and Doménech (2000, 2006) studied the relationship between production and human capital, showing a positive and significant statistical correlation (demonstrated by the Temple, 1999). Bassanini and Scarpetta (2001) showed in a series of OECD data for the period 1971 to 1998 that increased duration of schooling by one year leads to an increase in GDP per capita by 6%. Benhabib and Spiegel (1994) have shown that the introduction of human capital as a factor of production by function type Coob -Douglas leads to its insignificant effect on growth of GDP per capita, but if one takes into account the influence of human capital on total factor productivity, the effects are : a) human capital influences the internal rate of innovation as evidenced by Romer (1990); b) human capital influences the rate of diffusion of technology in the spirit demonstrated by Nelson and Phelps (1966). They demonstrate that an increase of the capital stock by 1 % leads to a 0.13% increase in the of growth rate.

Our literature survey has provided us with an impetus and insight about the nexus between human capita and economic growth. Thus, we in order to maintain the length of the paper limit we pass on to the next section.

3. Conceptual Frame Work

For every country development means a goal to create conditions where people can live a long and healthy life and flourish in knowledge. The first UNDP Human Development Report stated that: "The basic objective of development is to create an enabling environment for people to enjoy long, healthy and creative lives" (UNDP, 1990, p. 9), and defined human development as "a process of enlarging people's choices" (p. 10). The Human Resource Development Index (HRDI) is one of the important indicators of economic development. There exists important interrelations between human development (HD) and economic growth (EG). Human development has an important and steering effect on economic growth. Increased incomes impact the increase in the range of choices and capabilities. Economic growth enhances human development in turn. (Adelman & Morris, 1973). The human development model includes the economic, social, legal, psychological, cultural, environmental and political processes.

Government expenditures on health and education bear important links determining the strength of the relationship between economic growth and human development. Two-way chains can generate self-reinforcing cycles of development. Countries catering human development advance into the virtuous cycle of development. Although Economic growth and human development should be jointly promoted, human development should be given priority because it boosts up economic activities through channelising human potentials as well as other endowments.

Role of Government institutions and human development dimensions show a sustainable development path. There is a causal relationship between economic growth and human development. Human Resource Development Index (HRDI) as one of the important indicators of economic development is considered to play an effective role in promoting an economic development index. The human development indices reflect an assessment of achievements in different areas of human development. This Index is a composite index based on three criteria of human development namely, a long and healthy life, access to knowledge and wisdom and good living. Human beings are the virtual wealth of every nation. Human development creates conditions in which its people can live a decent life and supplies productive benefits to the society.

Let us have a close look at the ingredients of HRDI. Life expectancy at birth is a vital part of HRDI and it means the number of years a newborn is expected to live if prevailing patterns of age specific mortality rates stay the same throughout the child's life. GDP/GNI index is also one of the three elements of human development index and it is based on GDP/GNI per capita. A higher level of per capita GDP/GNI enables a person to have a decent living. Education index as one of the three indices of human development index is based on the adult literacy rate and the combined rate for primary, secondary and tertiary education.

In short we can say that HDI is a summary measure for assessing long-term progress in three basic dimensions of human development namely, a long and healthy life, access to knowledge and a decent standard of living. While a long and healthy life is measured by life expectancy, knowledge level is measured by means of years of education among the adult population and knowledge by expected years of schooling for children of school-entry age. Standard of living is usually measured by Gross National Income (GNI) per capita.

Human development has recently occupied the ultimate objective of human activity in place of economic growth. It may be traced to the earlier basic needs approach of the ILO and the World Bank, as well as Sen's concept of capabilities. Human development has lately been defined as widening people's choices which enable them to lead longer, healthier and fuller lives. (Sen A. 1984)

It is evident from foregoing exposition that there exists a strong and self-reversing connection between economic growth (EG) and human development (HD). While EG provides the resources to permit improvements in HD, improvements in the quality of the labor force contribute to EG in turn.

We can view HD as the main focus and it gets advancement through EG as an instrument. Achievement in HD contributes to advancement in EG. Thus, there are two causal chains namely,

Chain 1 : HD to EG

Chain 2 : EG to HD

While Chain 2 refers to allocation of resources from national income to activities forming HD, Chain 1 refers to increase in national income accrued from contributions of HD.

4. Methodology

In our small piece of research, we have adopted following types of Modeling to make a quantitative analysis of the above mentioned scenarios.

Simple Linear Regression (SLR)

CHAIN 1

On the supposition that HD impacts upon per capita GNI, we have formed the following model.

Per capita GNI, $y = \beta_\circ + \beta_1 \, \text{HDI} + u$

CHAIN 2

Now, for investigating how growth in GNI affect HDI, we have constructed the following reverse model.

$\text{HDI} = \beta_\circ + \beta_1 \, y + u$

4.1 Multiple Linear Regression (MLR)

So far we have used HDI as a composite factor. But, it is better to have an understanding of the impacts of individual element of HDI. Thus, we have constructed the following MLR.

GNI per capita, y $= \beta_\circ + \beta_1 X_1 + \beta_2 X_2 + u$

Where X_1 = Life expectancy at birth

X_2 = Mean years of schooling

In the similar vein, we have constructed an MLR relating HDI with per capita expenditure on Education and Health as follows.

HDI = $\beta_\circ + \beta_1 X_3 + \beta_2 X_4 + u$

Where X_3 = Per capita expenditure on Education

X_4 = Per capita expenditure on Health

This model is based on the logic that expenditures on components of HDI impact the formation of HDI. Thus, it is pertinent to investigate how HDI formation behaves along with change in expenditures on its components.

4.2 Issues of Estimation

For obtaining empirical findings about causal chains, we have estimated the constructed models presented before. In order to overcome simultaneity bias, we have used the Instrumental variable technique. We have used lags of original variable. Lagged values are reasonable candidates for instruments because correlation of residuals between time two points is very much negligible. So, problem of autocorrelation is not an anxiety in our case. We have adopted Ordinary Least Square (OLS) method for model estimation. Estimated results are presented in section 5.

5. Data Description

For estimating the constructed model we have used yearly date collected from different secondary sources like BBS, UNDP. Data on every variable is not available on yearly basis. Say for example, data on life expectancy are available on 5-yearly basis. So, every value of all the variables included in the model corresponds to a particular point in time. Thus, data for the period 1990 – 2018 is gathered from 6 data points.

6. Analysis of Model Estimation Results

Interesting results have emerged from model estimation. Regression of per capita GNI on HDI shows that every one percent increase in HDI corresponds to111.42 dollar (Tk 9469) increase in per capita GNI with a s.e. of 10.5. (See Table-1)

Table-1: Results of OLS Regression

a.   Predicators: (Constant), HDI

b.   Dependent Variable: Y (Per capita GNI)

Model		Coefficients B	Std. Error	t	Sig.
1	(Constant)	-3287.579	546.784	-6.013	.001
	HDI	111.419	10.479	10.632	.001

Adjusted R-squared = .941

This result is statistically highly significant with a p-value of 0.0001. It also draws attention that more and more emphasis on HDI will augment attainment of SDGs as well as development plan of the Government. Adjusted R-squared value is .941which shows a high order of goodness of fit of the model. In this case, both HDI & y correspond to the same time point because there is a direct impact. In case of regression of HDI on y, we have regressed value of current period HDI on lagged value of y. It is because, effect of expenditure(y) on human capital formation is realised a little later and this in turn keeps impact on GNI. For such purpose, it is desirable that a higher order lagged values (may be a lag period of 5 years or more) of predictor(s) should be used. But, due to paucity of data points we have regressed current HDI on 5-year lagged values of GNI(y). A lift in per capita GNI causes a good amount of rise in HDI. For every one dollar increase in per capita GNI, HDI increases by .007% with a s.e. of .001. Although the absolute increase is only a small amount, it is highly significant with a P-value of .002. (See Table-2)

Table-2: Results of OLS Regression

a.   Predicators: (Constant), Y (Per capita GNI)

b.   Dependent Variable: HDI

Model		Coefficients B	Std. Error	t	Sig.
1	(Constant)	36.477	3.206	11.377	.000
	Y	.007	.001	5.618	.002

 Adjusted R-squared = .836

An adjusted R-squared value of .836 shows a good fit of the model. This calls for proper allocation of GNI for human capital formation.

Regression of per capita GNI on ingredients of HDI shows that every 1 year increase in life expectancy corresponds to 78 (Tk 6630) dollar increase in per capita GNI and it is 472 (Tk 40120) dollar for an increase in total years schooling. (See Table-3)

Table-3: Results of OLS Regression

a.   Predicators: (Constant), X_2, X_1

b.   Dependent Variable: Y (Per capita GNI)

Model		Coefficients B	Std. Error	t	Sig.
1	(Constant)	-4943.845	7358.426	-.672	.531
	X1	78.236	164.744	.475	.655
	X2	471.831	864.564	.546	.609

 Adjusted R-squared = .832

This shows that skill development plays a higher role in bringing economic growth. These two results bear coherence with the argument mentioned earlier although these are not statistically significant. This shows that although ingredients of HDI keep positive impacts on GNI, their roles need to be made more contributory.

In the similar vein, we have attempted to see how HDI behaves due to the change in ingredients of HDI. Regression of HDI on life expectancy and years of schooling shows that both of these two elements of HDI

positively affect increase in HDI. Here again, education appears to be more important compared to others.

Increase in per capita GNI is supposed to contribute to the improvement of elements of HDI. Thus, we have regressed life (X_1) expectancy on per capita GNI(y). Regression result shows that for every 1 (Tk 85) dollar increase in per capita GNI, life expectancy is augmented by .004 years. Although in amount it is small, it is statistically significant with a P-value of .008. (See Table-4). In line with our argument mentioned above we have used 5-year period lagged value of per capita GNI.

Table-4: Results of OLS Regression

a.   Predicators: (Constant), Y (Per capita GNI)

b.   Dependent Variable: X_1 (Life expectancy at birth)

Model		Coefficients B	Std. Error	t	Sig.
1	(Constant)	59.462	2.356	25.240	.000
	Y	.004	.001	4.288	.008

Adjusted R-squared = .786

In line with our argument mentioned above we have used 5-year period lagged value of per capita GNI. The effect of increase in per capita GNI on the increase in years of schooling is also positive. For one dollar increase in per capita GNI, years of schooling increases by .001 with a P-value of .006 and adjusted R-squared value .803. (See Table-5)

Table-5: Results of OLS Regression

a.   Predicators: (Constant), Y (Per capita GNI)

b.   Dependent Variable: X_2 (Mean years of schooling)

Model		Coefficients B	Std. Error	t	Sig.
1	(Constant)	2.801	.450	6.226	.002
	Y	.001	.000	4.519	.006

Adjusted R-squared = .803

All the results obtained from the regression run bear theoretically expected sign. Theoretically expected results have been reinforced in our study. Key message from the results indicates to strengthen the ties in the cycle of EG to HD and HD to EG.

It is noted that impacts of expenditures on education and health are realised at a later stage. Thus, we have regressed HDI on 5-year lagged values of such expenditures. Results contained in Table-6 reveal that there exists one to one positive correspondence between expenditures on components of HDI and its improvement. Although results are not highly statistically significant, they bear theoretically expected sign and their absolute values also quite remarkable.

For one take increase in per capita expenditure on health care, there is 4.6% increase in HDI and it is 0.7% for one unit increase in per capita education expenses.

Table-6: Results of OLS Regression

a. Predicators: (Constant), X_1= Per capita expenditure on Education

X_2= Per capita expenditure on Health

b.   Dependent Variable: HDI

Model		Coefficients B	Std. Error	t	Sig.
1	(Constant)	46.846	2.418	19.370	.000
	X_1	.007	.021	.330	.758
	X_2	.046	.065	.707	.519

Adjusted R-squared = .647

7. Conclusion and Policy Implications

Two chains discussed in the text taken as a whole, show a significant positive impact of HD on EG as well as a significant positive impact of EG on HD.

It is evidenced from model estimation results that more and more expenditures on elements of HD formation with relative importance will keep significant impact on increasing per capita GNI. It is also clear that

role of education in this respect is relatively more effective compared to other ingredients of HDI. It is because, the education level influences others. An educated person supposedly possess more skill, more alertness and more common senses.

Several policy implications emerge from our study findings such as,

1. More attention is desired for human capital formation particularly for skill development. In order to attain sustainable development goals as well as to face challenges of the 21st century, skill development has no alternative.

2. Equity in income distribution needs to be taken care of. This will supposedly enhance horizons for more skill development through increasing purchasing power for services.

3. Inclusion of gender balance in social expenditure is to be given importance. Such strategy will widen the scopes for HD as well EG through increasing HDI of both male and females, more economic benefits can be derived.

8. Further Research

There is no end to refinement. Our present small scale research work can be extended in several ways. For example, more disaggregation of elements involved in both HRDI as well as per capita GDP/GNI can be more informative. Say for example, gender balance in HRDI can be considered in the analysis. Such analysis can identify relative importance of factors.

Another horizon for further research can be the consideration of the two chains as a system. Hence, for system of equations, 2SLS or other suitable estimation methods can be adopted. Inclusion of data for longer period with phases of development may reveal more information.

Also leakages in the promotion of both HDI and GNI can be analysed so that existing loopholes are eradicated.

References

Adelman, I., & Morris, C. T. (1973). Economic growth and social equity in developing countries. Stanford, CA: Stanford University Press.

Barro, R. (1991). Economic growth in a cross-section of Countries, Quarterly Journal of Economics, vol.106 (May), pp. 407-443.

Barro, R. J., Lee J. W (1993). International comparisons of educational attainment, Journal of Monetary Economics 32, no. 3 (December), pp.363-394

De La Fuente Á, Domenéch A. (2000). A Human capital in growth regressions: how much difference does data quality make? Economic Department Working Paper No262, Paris: OECD, 2000 (ECO / WKP (2000) 35);

Elena Pelinescu / Procedia Economics and Finance 22 (2015) 184 – 190

Enric Fernandez and Paolo Mauro (2000). A study on the role of human capital in economic growth in 2000 in Spain, IMF Working Paper

Horwitz, F. (2005). HR CAN Competitiveness advance. Executive Business Brief, 10, 50-52;

"Largest limestone reserve discovered". The Daily Star. 4 June 2012.

Mankiw N. G; Romer D, Weil D.N(1992). Contribution to the Empirics of Economic Growth, The Quarterly Journal of Economics, Vol. 107, No. 2 (May, 1992), pp. 407-437;

Mincer J(1995). Economic Development, Growth of Human Capital, and the Dynamics of the Wage Structure, 1994-95 Discussion Paper Series No. 744, (September), Columbia University, p.38 .

Mankiw et al, (1992)- Contribution to the economics of Economic growth, The quarterly Journal of Economics, vol 107, No.2 pp 407-037

"Real GDP Grown: Annual Percent Change". imf.org. International Monetary Fund. Retrieved 3 October 2019.

Riley G. et al (2012)- Economic growth- Role of Human and Social capital, A2 macroeconomic growth, Competition and Innovation

Riaz, Ali, Rahman, Mohammad Sajjadur (2016). Routledge Handbook of Contemporary Bangladesh Routledge. P. 165. ISBN 978-1-317-30876-8.

Siggel, E (2001). India's trade policy Reforms and Competitiveness industry in the 1980s. World Economy, pp.159-183;

Sen, A. K. (1984). Rights and capabilities. In A. Sen, Resources, values, and development. Cambridge, MA: Harvard University Press.

UNDP (1990). Human Development Report. New York: Oxford University Press.

World Bank (1995a). Global economic prospects and the developing world. Washington, DC: World Bank.

IEDAMcs: An Isolated Virtual Environment for Dynamic Analysis and Detection of Malware Samples to Secure Computer Systems Based on Cuckoo Sandbox

Ali Azgar
Sohel Rana
Md. Saddam Hossain
M. F. Mridha

Abstract

With the widespread usage of the Internet, security has recently become the most critical problem for online-based computer systems. Malicious softwares also propagate their signature quickly in order to get illicit gratification. Because of the dynamic behavior of malicious software, malware has become a major threat to computer users. As the traditional anti-virus scans the external files in the host working space, there is a chance to damage the local files of the host system. In this paper, a malware detection approach is proposed based on cuckoo sandbox technology to detect and analyze malware samples automatically in an isolated environment where malware samples are allowed to execute as well as keeping the local system safe. The proposed system works especially for detecting and analyzing suspicious files arriving through external USB (Universal Serial Bus) interfacing devices. As soon as USB flash drives are plugged into the local system, automatically all files will be blocked for the local system and transferred into the isolated controlled environment provided by the proposed system that seems to be a real system for the incoming files. The local system will be accessible after finishing the whole scan of incoming files from a USB flash drive in the isolated environment. As a result, the proposed system would use web services to designate the characteristics of unknown samples and specify their risk level with a rating option.

Keywords: Malware, Anti-Virus, Detection and Analysis, Isolated Environment, Cuckoo Sandbox, USB Interface, Sandbox Technology, Secure Desktop, suspicious files.

1. Introduction

In recent years, most of the commercial and non-profitable organization activities (Medical, Banking, Airline, Transport, Education, Digital Marketing, Online news portal, etc.) have become online dependent. So, the usage of the internet has become an essential part of our everyday activities. Using this advantage some adversary persons have created malwares (malicious software) which are used to fulfill their illegal satisfaction. Malware stands for malicious software [1]. It is any kind of software which is used to interrupt computer operations, collect sensitive information, obtain access to private computer systems, or show an unwanted advertising. To protect against malware, several malware detection and analysis techniques are available. Initially malware behaviors are detected compared with known malware's behavior, such as anti-virus scanning that is used to scan files to check whether it contains malware. This technique is known as static analysis but it is not better since it is unable to compare unknown samples. Dynamic analysis is used to analyze known and unknown samples. Sandbox is the dynamic malware tool where files are executed in a controlled and isolated environment. Cuckoo sandbox is the most popular, open source and more user-friendly dynamic malware analysis tool. Many researches are done on malware analysis and detection that are very challenging.

Cuckoo Sandbox is an online tool/software where malware samples can be submitted through online in order to check their instincts and behavior. As it is open source software can be used for research purposes. But the installation and usage of cuckoo sandboxes offline are not so easy tasks. Besides, research on Sandbox needs profound knowledge over malware analysis techniques, hundreds of tools and Linux based expertise. So, research on sandbox including Cuckoo Sandbox is rare. Since Cuckoo Sandbox is a free and open source malware analysis tool/software, it is not implemented in a proactive and user-friendly malware analysis lab yet. In a malware analysis lab, malwares that usually hamper our activities in computers are submitted by the client computers and successfully analyzed by the Server Computer. To implement a malware analysis lab we need some powerful and interactive tools or features that will strengthen the efficiency of Sandbox technology. Moreover, there could be many software tools which can help in malware analysis lab which are capable of Monitoring malware activities in computer during analysis process Extraction of harmful files contained within another file Obtaining macro malware and other specimens (such as phishing attempts or

malware which may be hosted on a link in an email) using various email spam traps etc.

1.1 Motivation

Cyberattacks are perhaps the worst danger to the advanced organization which is brought about by malware. Over the last year, over 60% of small businesses have been victims of a cyber-attack, yet by far most didn't understand that they had been assaulted, agreeing to Nationwide's third yearly review, delivered in 2017. This insurance agency tapped 1,069 organizations with less than 299 workers for the investigation. At first, just 13 percent of participation organizations said they had been victims of a cyber-attack. However, after analyzing a list of cyber-attack types ranging from phishing schemes to Trojan horses to ransomware, that percentage increased to 58 percent. In these New Year's, there have been enormous interests in the research of malware behavior and qualities. Malware Sandbox investigative techniques are recommended as an effective solution to the test given by malware threats [2]. A sandbox is a malware analysis tool that runs a program in a controlled and safe environment. Sandboxing is a mechanism for separating a program by creating restricted execution environments, which may be used to execute untrustworthy applications away from the main environment.

1.2 Contribution

We usually use pen-drives/flash-drives in order to exchange data from one pc to another pc. But internet malware spreads mostly within pendrive. In maximum labs, pen drives are not allowed. So, a system may be developed in a lab where suspicious malware files will be submitted to cuckoo automatically without harming the computer. When any pendrive will be plugged in computers, users will not be aware of submitting files or encountering malware attacks.

2. Literature Review

Malware is an abbreviation for malicious software, which is meant to harm computer systems without the user's knowledge [1]. It is any program that is used to disrupt computer or mobile operations, collect sensitive information, obtain access to private computer systems, or show unwanted advertising. Malicious software, often known as malware, is a software that "deliberately accomplishes the malicious goal of an attacker" [3].

An anti-malware software, on the other hand, is a type of software that is meant to prevent, detect, and remediate harmful code on individual computing devices and IT systems. Malware analysis is the process of discovering the purpose and properties of a particular malware sample, such as a virus, worm, or computer virus [1]. Malware analysis means being able to create efficient detection strategies for harmful programs. Malware analysis tools are broadly divided into two types: static and dynamic (live). Static analysis refers to the process by which most anti-malware software check for malware using a database of known malware definitions (also known as signatures). These Programs scan a file an uncontrolled environment to see whether it matches with the known virus signatures. The anti-malware software identifies a file based on the known definition and flags it as potentially malicious if it matches the known definition. But it does not enable to find out newly developed malware.

A particular malware sample is often executed within a controlled environment and its activities are monitored in order to monitor the harmful behavior, which is known as dynamic malware analysis [1]. Dynamic Malware Analysis overcomes the limitations of static analysis because it is performed during runtime and malware unpacks itself [4]. Sandboxes are dynamic malware analysis tools that are continuously attempting to execute untested code or untrusted programs from unverified third-parties, suppliers, untrustworthy users, and untrustworthy websites. There are several types of sandboxes accessible, such as Norman. Sandbox is a dynamic malware analysis tool that executes samples in a tightly controlled virtual environment that simulates the Windows operating system [5]. This environment is used to fake a number of computers as well as an associated local area network and, to a smaller extent, Internet access. JoeBox sandbox generates a log that provides high-level information about the performed behavior in terms of queuing system, registry, and system operations JoeBox [5] is especially designed to function on real hardware and does not rely on any virtualization or emulation techniques.

Cuckoo sandbox may be a light open source account automating the dynamic analysis of queues [6]. The most widely used sandboxing approach is Cuckoo. It's a free and open source malware analysis system. It is customary for it to execute, evaluate, and collect comprehensive analysis reports that explain what the malware does when executing within [7] an isolated operating system.

Although Sandbox & Anti-Virus is both anti-malware software, there are huge differences between them such **as** Sandbox is used to obtain the behaviors of a file when it runs where Anti-Virus scans a file to see whether it matches with known virus's signatures, A typical sandbox will take a snapshot of processes, connections, threads, registry prior to running sample, run the sample, re-take a snapshot of the processes, threads, etc., and compare the differences where Anti-Virus scans a file and typically checks for "known malware" rely on the signatures try to match the file with the known signatures.

A sandbox is an instrumented environment in which a malware sample is executed and detailed information about the sample's behavior is logged [8]. The sandbox analysis output has shown to be highly valuable in malware analysis, both for studying the execution of a single sample and for identifying behavioral similarities across various samples [9]. There are numerous ways for detecting malware samples, including sandboxing, such as behavior-based malware detection, in which researchers analyze the virus and its behavior during run-time. On signature-based malware detection, static analysis is often used, in which the malware sample is evaluated and unique signatures are extracted [10]. These may then be used to distinguish malicious files from legitimate data, which is an approach widely employed by AV companies.

Malware exploits a variety of ways to bypass sandbox technology. Malware developers designed a slew of methods to evade these measures [11]. Yesterday's techniques aren't entirely successful against today's malware [11]. According to Lakhani (2015), the four basic evasion strategies used by malware are environment-specific techniques, human interaction techniques, VMware-specific techniques, and configuration-specific approaches [12].

3. Implementation

Cuckoo sandbox is used as an analyzing tool that execute sample in an isolated controlled environment called virtual box machine where Cuckoo sandbox will setup as host, then will create virtual environment as guest. Ubuntu operating system is as host system and XP is used as guest system (isolated virtual environment) on virtual machine which will act as real operating system to malware samples. In guest system (sometimes called fake OS system) suspicious files start their execution and show their suspicious characteristics that are monitored by guest system and provide an analytic result about the suspicious files to the host system through

network. Communication between host and guest, network configure them are shown in figure3.1.
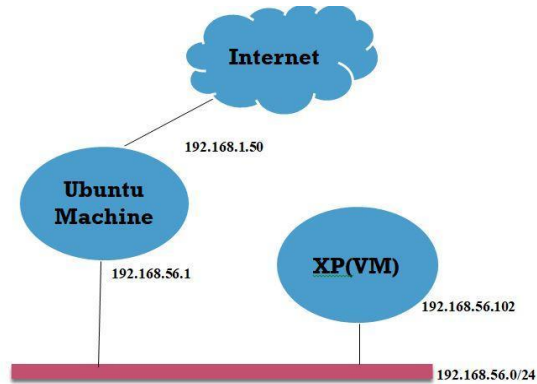

Figure 3.1: VirtualBox Host Only Adapter (vboxnet0)

Our overall implementation is divided into three part: First of all prepare the host system, then prepare isolated environment (guest system) and finally design an approach to protect host system from untrusted input files through USB port.

3.1 Establishing host system

Normal operating system that is running our computer is treated as host operating system where we have installed cuckoo sandbox. For Cuckoo Sandbox minimum hardware requirement is Dual Core processor AMD (Desktop), 4 GB DDR3 RAM, 100GB Hard disk, External graphic card (7600GT) and also requires   Linux/Ubuntu operating system Python 2.7, Sqlalchemy, Bson, Pydeep, Ssdeep, Pymongo, Yara[9]. We have used the following command to install cuckoo.

$ sudo useradd cuckoo

$ usermod -a -G vboxusers cuckoo

$ id cuckoo

$ apt-get install git

$ git clone git://github.com/ cuckoobox/cuckoo.git

After completing install cuckoo we have configured cuckoo according to our requirement.

3.2 Organizing isolated system

Cuckoo Sandbox is formed of centralized management software that manages sample execution and analysis. Here are two parts: one is host and the other is guest. Ubuntu machine used as host and window operating system (XP) is used as guest which is the virtual environment. It is the same as normal operating system. It is connected by network with the host machine. A share directory is used to share data between host and guest and transfer the cuckoo agent from the host to the guest. Malware samples are allowed to run in virtual machine. A snapshot is taken when malware sample is run.

3.3 Design for USB flag drive

Normally when we plugin a pendrive in USB port, all the files containing the pendrive show in computer without checking whether it is safe or not. The files may contain malware samples, so our main challenge is how we can execute the files into cuckoo sandbox before running in our computer. For this we have developed a feature for USB flash drive which recognizes any pendrive, while it is plugged in. After the pendrive is plugged in, all the files are submitted into cuckoo sandbox automatically. But pendrive may contain more large files and some file extensions will not be malware sample. For this we have another program which separates only particular files to submit into cuckoo.
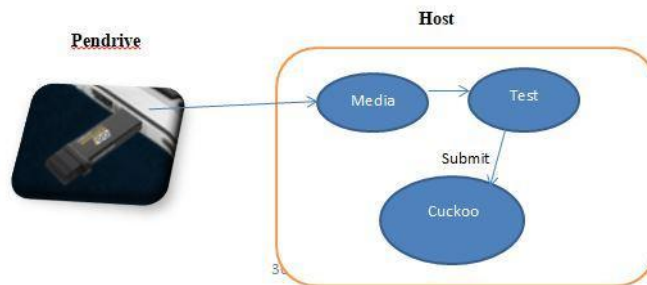
Figure 3.2: Model of using pendrive in usb port

After the completion of isolated environment and host environment setup, Cuckoo sandbox is ready to take malware as input which is run in virtual machine. The execution of a malware sample in a sandbox is heavily dependent on the sample's interaction with other Internet hosts, as well as network traffic generated by a malware sample.

Cuckoo produces different output based on their behavior and characteristics monitored by virtual machine. Cuckoo provides the file

name, file size stored in memory, file type of the executed samples. It also provides IP address, virtual size, size of raw data and which cryptographic is used such as SHA-1, SHA-256 and others. All these outputs are merged to CSV file (common separated values). This CSV file is used for classifying and clustering.
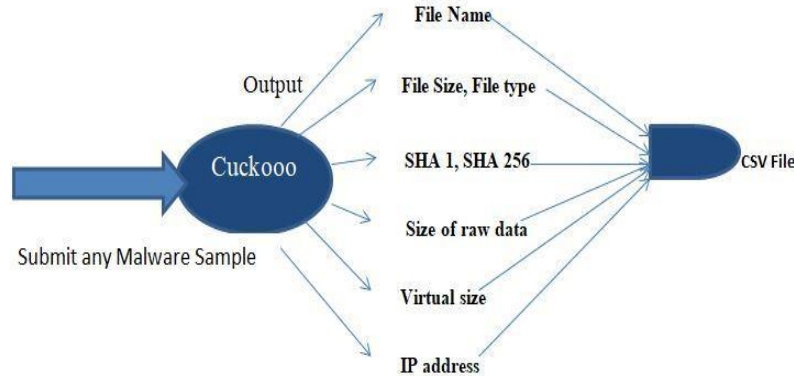

Figure 3.3: Submitting malware sample and merging output

Overall process of running host environment and isolated environment, submitting malware sample, executing in isolated environment and showing result are command based for which individual command requires that are practically difficult. For this reason batch file (contain all requires commands) is used to process overall task. The batch file that is used for system is like as

#!/bin/bash

gnome-terminal -e 'bash -c "sudo VBoxManage startvm winxp --type headless;cd /opt/cuckoo;sudo python cuckoo.py --clean;sudo python cuckoo.py; exec bash"'

sleep 3
cd /opt/cuckoo/utils
sudo python submit.py /media/azgar
cd /opt/cuckoo/web
sudo python manage.py runserver

4. Result and Discussion

The major concentration of our research is analysis and detection of malware samples using cuckoo sandbox. Cuckoo sandbox is a dynamic

malware analysis tool. To prepare environment for analysis and detection we have setup required resources. Cuckoo take malware sample or any file as input analyzes the behavior that they perform in an isolated environment. All outputs are combined to classify and clustering. Then the final result is generated based on classifier and cluster. A web interface is developed by cuckoo developer which is used as local web server for submission of files and viewing results. Result consists of different concerns such as file type, file name, file size, which hashing algorithm is used, snapshot during running, signatures which actually describes the behavior of the malware and finally provides a score for malware risk level based on all analysis. Screenshot about information on execution of a malware sample is shown in figure 4.1
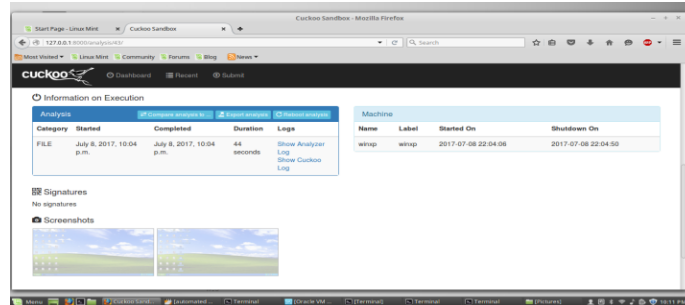
Figure 4.1: information on execution of a malware sample

Overall final result including file type, file name, file size, which hashing algorithm is used, snapshot during running, signatures and a score for malware risk level of a malware sample are shown at port number 8000 in figure4.2.
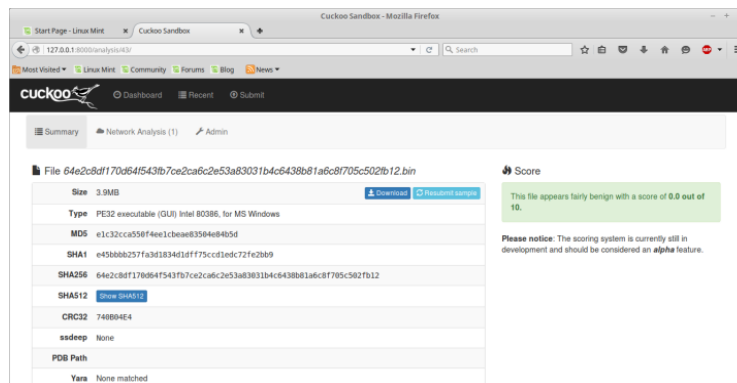

Figure 4.2: Final result on local webpage

Since using process of cuckoo is more complex so our main challenge is how to improve its' usage. This task is challenging, as it is not a single step, there are several ordered steps. Finally, we have generated a batch file which contains all steps of Ubuntu commands in serial. If we run just batch file cuckoo will automatically run. For submission the analyzing files must be stored in a particular directory. This is not a good idea. Again if we copy files from pendrive to this directory and the pendrive contains malware files, as a result, it will attack the computer and spread out in computer before executing into cuckoo. Now our most challenging task is how files are submitted into cuckoo without running in main operating system before analysis. For this we have an excellent idea, when pendrive is plugged in on the host computer, files are automatically submitted into Cuckoo. But our pendrive has a huge memory capacity. If all the files of the pendrive are submitted simultaneously, then Cuckoo will stop working. To evade this problem only some specific suspicious category of files should be submitted to Cuckoo, i.e. exe, bin, c, dll, sh, shortcuts, autorun, zip, pdf, docx etc. and the size of these files are too small compared to audio, video files which are too big and do not carry malware characteristics. An overview of cuckoo analysis and result process is given below.

Finally, we have succeeded to develop a program which recognizes pendrive, while it is plugged in. We developed another program in order to submit specific files from pendrive whose extensions are suspicious. These are our main contributions in this thesis although there are some limitations in file control.
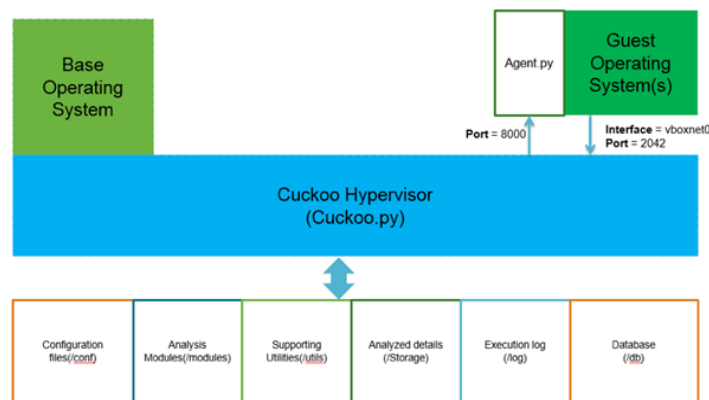

Figure 4.3: An overview of Cuckoo analysis and result processing

5. Conclusion and Future Scope

Security has become most important concern for online based system in recent years. With the increased use of internet, malicious softwares also spread rapidly to obtain their illegal satisfaction. So malware analysis is a vital task to detect and prevent malware files. Dynamic analysis removes the limitations of static analysis as it is perfect for detecting unknown samples. Cuckoo sandbox is a popular free and open source dynamic analysis tool. Our goal was to make cuckoo user friendly to user, create a client server model in local lab in off line. We have fulfilled the usability of cuckoo with developing batch file and programing in USB flash drive like as when a pendrive is plugged in a USB port, files would be automatically submitted into the cuckoo. There is a limitation to this study in that if the pendrive contains large files, all of them will be submitted to the cuckoo, which takes a long time to finish the analysis process, and the control of files is not kept correctly since we did not know about all possible malware file extensions. In future work we will develop the pen drive feature utility so that it will be able to detect all tentative extensions of malware files and development of the Cuckoo sandbox so that it can dynamically change its system clock to convince malware that has been running for a longer amount of time using the extended sleep duration approach, and it will also be capable of identifying malware that can run between framework calls. In case of dynamic malware analysis, malware samples that can alter their behavior or stop executing during analysis can also be detected by the proposed sandbox.

References

[1]   Moser, A., Kruegel, C., and Kirda, E. 2007a. Exploring Multiple Execution Paths for Malware Analysis. In IEEE Symposium on Security and Privacy, Oakland.

[2]   Moore, D., Shannon, C., and Claffy, K. C. 2002. Code- Red: a case study on the spread and victims of an Internet worm. In Interne t Measurement Work shop. 273–284.

[3]   Bhojani, Nirav. (2014). Malware Analysis.53

[4]   Li, Yihong, et al. A Simhash-based integrative features extraction algorithm for malware detection.   Algorithms 11.8 (2018) 124.

[5]   Egele, Manuel, et al. "A survey on automated dynamic malware-analysis techniques and tools." ACM computing surveys (CSUR) 44.2 (2012): 6.

[6]   GUARNIERI C., ET AL.: Cuckoo Sandbox Book, Release 1.2-dev ed., 2014. 5

[7]   Oktavianto, Digit, and Iqbal Muhardianto. Cuckoo malware analysis. Packt Publishing Ltd, 2013.

[8]   Graziano, Mariano, Corrado Leita, and Davide Balzarotti. "Towards network containment in malware analysis systems." Proceedings of the 28th Annual Computer Security Applications Conference. ACM, 2012.

[9]   U. Bayer, P. Milani Comparetti, C. Kruegel, and E. Kirda. Scalable, Behavior-Based Malware Clustering. In 16th Symp. on Network and Distributed System Security (NDSS), 2009.

[10]   Kasama, Takahiro. (2014). A study on malware analysis leveraging sandbox evasive behaviors.

[11]   Keragala, Dilshan. "Detecting malware and sandbox evasion techniques." SANS Institute InfoSec Reading Room 16 (2016).

[12]   Lakhani, Aamir. (2015) Malware Sandbox and breach detection evasion techniques.

Ignorance of Law and Legal Education: A Study in Bangladesh Perspective

Md. Ashif-Ul-Haque
Shabnam Jahan

Abstract

The utmost effort to this work is to pervade the notion that is widely used in the sphere of law and legal studies and leave the blind point which resists the seekers to realize its inherent meaning and exceptions. This study will focus on the exceptions to the maxim that purports ignorance may sometimes have a chance to be an excuse to refute. The entire article would be the answer to a single question: how may it be used in favor of a real ignorance of laws?The paper argues that the normative assumption underneath the maxim "ignorantia juris non excusat' is worthless if the law remains isolated from the people who are the sources of the sovereignty. International view has a remarkable change towards the maxim where as in Bangladesh it is being ignored for the lack of better drawn policy and educational system in favor of law. Though it is impossible to overlook the aforesaid maxim otherwise the original criminal might slip through the loophole of laws and most importantly the lack of knowledge of law doesn't make any illegal act justifiable or ethical. But it should also be considered that offense prohibited by statute but not inherently evil or wrong is always unethical or immoral. Moreover, those are merely prohibited because the laws made them prohibited and in that situation this rhetoric maxim should be overwhelmingly extravagant. Thus in order to circulate the new laws and make them realize the subject of those laws a proper legal education is needed.

Keyword: *Ignorance, Legal Education, Excuse, Contradiction, Legal Right*

1. Introduction

Law applies to all the subjects who belong to any particular state and no one is beyond the purview of law in any way. Likewise, it is apparent that ignorance of law cannot be shown as an excuse to be exempted from any liability of committing any wrong or crime. For a concerned citizen, both professional and general, as well as for the development of the human

beings, the knowledge of law is very indispensable. Everywhere and every time we are worried to ensure the "Rule of Law". We think strongly that if we could establish the rule of law in our society, then we could establish our rights perfectly. Everywhere it ought to be the rule of law – law as a body of norms regulating human and institutional behaviour and their interrelationships. The rule of law would depend on many factors, like individuals and institutions (Law Commission 2006). In this respect the government should also take some effective steps to spread the knowledge of law among the citizens. A few years ago the Education Commission of Bangladesh (2003) headed by Professor Moniruzzaman Miah, suggested the necessity to form a separate legal education commission in our country (National Education Commission 2003). In developing countries like Bangladesh legal education is one of the core branches of knowledge which has a huge potential power as well as necessity for every phase of our national development. Laws introduce us to the obligatory rules followed by a society and acquaint us with what we should not do in that particular society or state or country under the same or different laws. As time went by it has become inevitable to amend laws and this modification fits the law with the modern time. Moreover, making new laws to meet the new requirements of the society is indispensable. So new rules are being made and new laws are emerging day by day but the laws should be consummately applied to the concerned; otherwise, it might be a viable excuse for the ignorant of those laws in case of violation. Because all laws do not follow a moral standard; laws made centuries ago are not the same like the present laws. Ancient laws were generally made following religious views, but at present the case is not the same.

As we know, "ignorance of law is no excuse" and it is drummed into all law students from their first day to the last and also to other students. It is now like a culture all over the world. This maxim is so popular that anyone might not be confused to apply it everywhere but now it is time to take care of it with a vigilant hand.

2. Methodology

This study is a qualitative research and analytical approach has been adopted to explain the importance of the study. Essentially secondary data has been used in this study. The views of different scholars are used for understanding the maxim well. Moreover, in this study our ideological explanation is applied to elaborate a text from the present perspective.

3. Overview and Understanding the Maxim of Ignorance of Law

Ignorance of law does not mean lawlessness; it means the want of knowledge of those laws which are obligatory for a person to know but s/he does not. Before further elaboration regarding the maxim in question, let me put a brief understanding of some scholars about the maxim.

According to Oliver Wendell Holmes,

The next doctrine leads to still clearer conclusions. Ignorance of the law is no excuse for breaking it. This substantive principle is sometimes put in the form of a rule of evidence, that everyone is presumed to know the law. It has accordingly been defended by Austin and others, on the ground of difficulty of proof. (Lerner, 2010)

Besides this, a prominent lawyer and legal historian Blackstone (1765-1769) observed:

Often a mistake in point of law which every person of discretion not only may, but is bound and presumed to know, is in criminal cases no sort of defence. Ignorantia juris, quod quisqueteneturescire, neminemexcusat is as well the maxim of our own law as it was of the Roman. (Blackstone, 1765-1769).

From the above statements now we can say that this notion is based on the Latin words "*Ignorantiajuris non excusat*" or ""*Ignorantia legis neminem excusat*" which means the ignorance of law excuses not or the ignorance of law excuses no one from the liability what he has done by violating that law.

It was also stated by Aristotle and he mentioned *Nemo Censetur Ignorare Legem* which connotes nobody is thought to be ignorant of the law and *ignorantia iuris nocet* which connotes not knowing the law is harmful.

According to John Selden (as cited in Yochum, 1999), "Ignorance of the law excuses no man; not that all men know the law, but because it's an excuse every man will plead, and no man can tell how to refute him."[1]

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[1]   John Selden (1584-1654), Associate Professor of Law, Duquesne University School of Law. Georgetown Law Center, **J.D. 1977.**

Yochum, Mark D. (1999). The Death of a Maxim: Ignorance of Law is no Excuse (Killed by Money, Guns and a Little Sex).*Journal of Civil Rights and Economic Development*, Volume 13, Issue 3,Article 7, p 635Retrieved from

http://scholarship.law.stjohns.edu/cgi/viewcontent.cgi?article=1306&context=jcred

In criminal cases it is easily perceivable why it cannot be a viable excuse and no one simply can evade the punishment by being ignorant the concerned law. It is because criminal law was grounded only on morality. We all are supposed to know and identify good or bad. We all know very well what is good and what is bad, if we are not insane. We all know how to commit a sin. On religious perspective, we should be able to identify what can be harmful for people, or even hurt others' right to do or not to do something. Likewise, one cannot give an excuse for killing people. That cannot be a result of one's ignorance. In law it is called "wrong in their essence" or "*malum in se*". The idea of inherent wrongs is so deeply ingrained in society that one would be detected if one commits wrongs. For example, one cannot simply say, "I forgot that having sex with a girl without her consent is a crime". If the crime is evil in nature, we know it is a crime because our knowledge of crime is inherent in our humanity. We cannot avoid our liability for theft, robbery, homicide or taking narcotics with an excuse that we are not aware that it is a crime.

So, the maxim in discussion was remarkably prepared to support the vast side of criminal laws containing the crimes of evil nature. But that notion also applies in various ways i.e. if someone opens a medical center/service in a state or area of a country, s/he must know the laws related to medical service/center of this particular area or state and one cannot refuse the liability of breaching the statute claiming that one is not aware of the content of the statute. It follows the notion "*malum prohibitum*" i.e. wrongs by prohibition. The court will presume that the concerned person is aware of it and will give a judgment on it. It is because before doing something one should know what s/he can do. It is a kind of inspiration to get the knowledge as well as to tell someone "don't stay in darkness" on purpose. A citizen cannot purposefully avoid learning laws and then take advantage of his/her ignorance as a defense. Conscious avoidance may lead one to criminal breach of laws and getting the required punishment.

4. Inconsistency between Maxims and the Reality

A widely known doctrine which captured the maxim "ignorance is not an excuse" is "*scienter*" or criminal intent. A criminal intention is necessary to prove the crime committed by a person nowadays. For example, someone puts a heavy stone at the zenith of a hill to make a particular person stumble on it and his intention is simply to hurt that person but not to kill him and as a result that person falls off the hill and dies. In this case he might be excused from the punishment for the death if he can prove

that he "knowingly" did that only to hurt that person, not to kill him. However, this doctrine may be contradicted by others with the argument that the person cannot evade his liability for death with an excuse of his ignorance of the consequences. In criminal justice system, a person is to be liable for the act s/he conducts and also for whatever consequences follow.

In support of the doctrine, Justice Robert Jackson wrote:

The contention that an injury can amount to a crime only when inflicted by intention is no provincial or transient notion. It is as universal and persistent in mature systems of law as belief in freedom of the human will and a consequent ability and duty of the normal individual to choose between good and evil. A relation between some mental element and punishment for a harmful act is almost as instinctive as the child's familiar exculpatory "But I didn't mean to," and has afforded the rational basis for a tardy and unfinished substitution of deterrence and reformation in place of retaliation and vengeance as the motivation for public prosecution. Unqualified acceptance of this doctrine by English common law was indicated by Blackstone's sweeping statement that to constitute any crime there must first be a "vicious will." (Morissette v. United States, 1952)

So in modern days now the doctrine of "*scienter"* ends in contradiction with the maxim that does not allow ignorance as an excuse. Now court has to prove that the accused "knowingly" conducted the crime with the vicious intention that is harmful for others which refers to the violation of the concerned statute. That means he knows that he violated the law and the consequences were mostly known to him irrespective of whether it was different from the original plan or not.

There are a lot of crimes that are deemed crimes because the statute says so. That is "*malum prohibitum"* offenses i.e. wrongs by prohibition. In that case the principle "ignorance of law is no excuse" doesn't exactly suit. For example, as per the provisions of Penal code 1860, fabricating false evidence is a punishable offence with intent to procure conviction of capital offence if an innocent person is thereby convicted and executed. Even the persons who gave the false evidence may be punished with imprisonment of either description for a term which may be extended to seven years and shall also be liable to fine (Penal Code 1860, s193). Moreover the punishment may be extended up to death penalty on the basis of the consequence of such false evidence. In this spite no one can say that S/he was ignorant about the law of giving false evidence before

the court (Penal Code 1860, s194). In case of marrying a girl of 16 years of age is a punishable offence in Bangladesh, but there are many countries like Spain, Andorra, Estonia, etc. in the world where marrying a 16 year old girl is not a crime. So, it should be proved that the crime was conducted knowingly. It needs to be heard before being punished for this act which is listed as a crime by the state.

In Mississippi, America, girls are allowed to marry at the age of 21 but in New York it is 18, in Nebraska it is 19 years. Even in special circumstances girls are allowed to marry at the younger age like 14, 15, 16 and even 12 in some states. So in case of any underage marriage, the ignorance might be a valid excuse for anyone.

5. Enactment of new Act and Published in proper way

Different people act and react differently because they think differently. In many developed countries courts are using psychiatric to realize the motive of committing any crime so they judge the person before they judge his/her act. If a person thinks that resisting an illegal arrest by the public servant in good faith having authority to do so is his right of private defense because he is getting arrested wrongfully but being ignorant that unless there are any apprehension of being grievously hurt or dead or even if it is so but he has a reasonable time and opportunity to have recourse to the protection of the public authorities, he has no such right according to section 99 of the Penal Code 1860 of Bangladesh. But in that state of mind and in that situation that person reacted becauses/he thought s/he was right and s/he was just exercising his or her right of private defence. Now, it is a matter of confusion whether the ignorance of the said person about law is an excuse or not.

So the principle of ignorance of law should be maintainable if the law is properly promulgated and all the concerned are informed through dissemination via online or print where it will be implemented.

There are plenty of contemporary national and international laws that vouch for the ignorant for their real ignorance of law. These are either direct or indirect avoidance of the maxim of 'ignorance cannot be an excuse'.

5.1 In the Context of Lunacy and Adolescence

In law it is said that lunatic people and adolescents are not capable of committing a crime. The basis of this principle is grounded on the

understanding of rules and regulations or laws of the society. Their lack of knowledge of good or bad or lack of morality excuses them from being liable to the act which violates the prevailing laws. So, their ignorance of laws are their biggest excuses for their crime as they are unaware of the laws.

If a person under the influence of madness or lunacy or an adolescence, attempts to kill another person, then the person is guilty of no offence because his lunacy or madness or for being adolescent is a viable excuse for his committed crime.

Unsoundness of mind might be a result of lunacy, intoxication or drunkenness or being adolescent, which makes them unfit for committing any crime and they cannot identify what breaks the norm of nature because at this stage their state of mind doesn't allow them to remember the consequences of the act and the act which violates the law and most importantly they are not aware that they are violating the law. So, ultimately these make them ignorant of the law. According to the prevailing laws of Bangladesh, they are excused from the liability for their ignorance. It is also the same in other countries of the world.

Another example of ignorance being a viable excuse is section 108 of the Penal Code, 1860 of Bangladesh where it provides that if any person instigates a lunatic or a person under the age of 7 or a drunk person or any other person with unsoundness of mind who doesn't have such potential to have knowledge of law to set fire to a dwelling house and if it is done, he is guilty of abetting and liable to the punishment for that offence but on the other hand, the person who he has abetted committed no crime because of his ignorance and he was not aware of the crime and the consequences.

5.2 Laws Relating to Taxation

As we know, in fiscal laws there are two important things regarding tax: One is tax evasion and the other is avoidance of tax. Willful tax evasion is illegal but the court has to be definite in terms of defining 'willfulness'. So, if the accused evades tax without having proper knowledge of Tax Law, then the procedure becomes more complicated. The ridiculousness of a claim of ignorance and the wisdom of juries are frequently seen as sufficient protection against false claims of confusion or delusion.[2] Nonetheless, claims of ignorance may create a hook for juries to acquit where there is confusion about complex areas of the law, dealing with

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[2]   Glanville Williams, The Criminal Law, The General Part 289 (2d ed. 1961)

taxes or money laundering, where ignorance of the law may be an excuse. (Yochum, 1999)

In case of tax to find out the guilty and certainty whether it is a tax evasion or tax avoidance the court should have the reasonable cause to believe that there was a 'willfulness' in evading the tax. Here the word "willfully" has a meaning of understanding the subject matter of conducting the tax crime. It might be for the vagueness of the law which guides to tax crime. So, a criminal statute must give fair notice to a person of ordinary intelligence, or else it is void for vagueness.[3]Indeed, a number of decisions have held that ignorance or mistake is a defense where the defendant reasonably believed his conduct was neither immoral nor illegal.[4]

5.3 Banking Laws

Like the tax law the laws relating to bank as well as negotiable instruments are also in a way rigid to the maxim of 'ignorance is not excuse'. E.g. in a case of cheque dishonor the intention of the drawer of the cheque plays a vital role to make him guilty if he can prove that he was completely unaware of the balance of his account during drawing the cheque to the plaintiff then he might avoid the liability.

Here the doctrine of *scienter* comes so strong that the court generally cannot overlook. The court has to believe there was no intention of the drawer of the cheque.

6. Ignorance is a question in case of new issues

With the advent of new issues on earth the necessity of new rules for regulating such issues come forth in daylight. There was a time when we didn't have mobile phones, internet or social media, etc. So, in order to take all those platforms under control new laws are essential. So with the proclamation of new laws it is necessary to ensure that the law reaches the targeted sector of people. There is no education or course on earth that teaches people how to use social media and no one is ever taught that as part of a society what they should do and should not do on those platforms. As a result, the use of social media is now more or less a matter of whimsicality.

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[3]   (*United States v. Harris*, 1953); (*Papachristou v. City of Jacksonville*, 1972); (*Smith v. Goguen*,1974)

[4]   (*Liparota v. United States*, 1985); (*United States v. Simpson*, 1977); (*United   States v. Lizarraga-Lizarraga*, 1976); (*Lambert v. California*, 1957).

From the very beginning many developed countries have adopted new as well as strong cyber laws to regulate the use of it whereas Bangladesh has recently enacted Digital Security Act, 2018; but most of the third world countries are struggling to get one. As a result, we often come across the terms like cybercrime, cyber bullying, abuse on the internet, fraud, digital threatening, un-ethical hacking for illegal monetary benefits, etc. and these all are enormously unregulated in Bangladesh due to lack of proper implementation and ignorance. But if any citizen of Bangladesh commits any severe crime like cyber bullying which leads to social unrest, he or she might be brought before the court but the court or the government has to prove that his criticism falls into the definition of cyber bullying and whether it was constructive or provocative and most importantly what his intention was behind it.

The ignorance of the concerned law would be a considerable issue for the judge to decide whether his ignorance should be reckoned or not.

To realize the world view on this maxim some international cases can be discussed.

According to Lord Westbury in, the word "Jus" in the maxim ignorantia juris baud excusat is used in the sense of "general law, the law of the country," not in the sense of "a private right." The true meaning of that maxim is that parties cannot excuse themselves from liability from all civil or criminal consequences of their acts by alleging ignorance of the law, but there is no presumption that parties must be taken to know all the legal consequences of their acts, and especially where difficult questions of law, or of the practice of the court are involved.[5]

Lord Westbury observed in a case which is reproduced below:

it is true that the law will not permit the excuse of ignorance of law to be pleaded for the purpose of exempting persons from damages for breach of contract or for crimes committed by them but on other occasions and for other purposes it is evident that the fact that such ignorance existed will sometimes be recognized so as to affect a judicial decision[6]

So they are all based on the notion that the law is definite and knowable. The common law presumed that every person knew the law. This common law rule has been applied by the Court in numerous cases construing

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[5]   *Cooper* v. *Phibbs*, L. R. 2 H. L. 170
[6]   *Spread* v. *Morgan* 11 HL 588(602)

criminal statutes. (*United States v. International Minerals & Chemical Corp*, 1971)

Whether it is clear from the above case study that the ignorant of law cannot defend himself for his ignorance but it is also accepted that he might be considered for the clarity of beyond a reasonable doubt. As a renowned scholar Scrutton L.J said, "it is impossible to know all the statutory law and not very possible to know all the common law".

Nothing can ask for the abolishment of this great principle. It is certain that when the crime is evil in nature and morality in question, this maxim will have a stronghold in the fact that the criminal cannot refute his crime for his ignorance if the crime is grounded on morality which is inherently wrong. It is also widely accepted that no one is able to know all the laws of a country but it is the duty of the judiciary for the sake of reserving stature of laws to disallow any person of seeking protection for his ignorance of law. A person's ignorance doesn't make his action ethical. Instead of bringing the criminal before the court for justice it would be a farce to somehow search the question as to whether the criminal has ever been exposed to some form of laws or not.

However, sometimes we see that some activities are merely crimes, because the authority listed it as a crime in different laws. In the present context we can find so many newly enacted laws which are not based on inherent moral values. Some are merely made by the government to get control over citizens and sometimes those are being used as a weapon for striking the turbulent or disobedient groups of citizens or being used as a shield to protect the political group in power such as Section 57 of Information and Communication Technology Act 2006 was enacted where a person can be sued for his constructive criticism. Acknowledging that section 57 has been misrepresented, the government has proposed to replace the law with a new Digital Security Act. Moreover, some sections of recently enacted Digital Security Act, 2018 are considered by many as obstructions to freedom of expression in Bangladesh like ICT Act and to some extent so harmful for the common people. The Digital Security Act, 2018 will be used to deal with defamation, instigation against any persons or organization and so on through publishing any material in a website or digital platform. But most of us are ignorant. We are regularly doing some activities using online platform by the name of freedom of expression which is very harmful and defamatory to some people. And when any issue arises we show our ignorance about laws.

A person may be fined for parking his car on roadside where there was no 'NO Parking' sign visible. It is not morally unethical but barely a rule. So, it is not always irrelevant whether the accused is familiar with the law or not to justify any act beyond reasonable doubt. So, it is now the demand of time neither emotional nor non-pragmatic to seek flexibility of the maxim that commands that ignorance cannot be a viable excuse.

The government has a very crucial role to play to make its subjects law abiding. In every country a well planned legal education system is a necessity for establishing a peaceful society. In order to attain higher number of law abiding people a country, people should be offered the best chance to have an easy access to the primary laws, that means each and every person of a country should have a minimum knowledge of law which might guide them to avoid illegal acts. Before imposing the laws on people the government must create a level playing field for the people because ultimately they are going to get the punishment.

7. The Necessity of Introducing Basic Legal Education

The necessity of legal education for the people of a country is like fuel of any engine. General people's idea towards law and their knowledge about legal profession differ from person to person. The knowledge of ordinary people about law is not enough. They always believe that law is a professional course and it is mainly needed for the professionals to do advocacy, judgeship; otherwise, someone may enter into another legal profession like legal advisor or may do any job not relating to any legal profession. Basically, if we want to make a better world, if we are committed to our society or if we get investiture to do our duty according to our custom, law, rules or obligations, then firstly we need to introduce various laws to the general people as well as to give emphasis on the necessity of legal education. There are some certain customs, laws, rules, regulations and basic knowledge which are very much needed for a person, even if s/he doesn't belong to a group which is related to legal field. What would you do if you are denied by someone in case of enforcing your legal right? In this question I am sure your answer would be "Yes, I have a right to do that but someone is infringing my right". Here we should know what our rights are and how we should enforce them. As a concerned citizen, we should know these kinds of rights and

obligations through basic knowledge of legal education. Not only that we should also know the fundamental rights of a citizen of Bangladesh. Moreover, the necessity of legal education for the people of their country is like the fuel of any engine.

Education helps a person to develop himself or herself and also plays a significant role in promoting social justice in a country. But, can we say that education is totally proportional to the crime and legal affairs? No, it is not. Former Education Minister Nurul Islam Nahid has said Bangladesh now enjoys a literacy rate of 70 percent. Nahid revealed the statistics in the Parliament in an answer to a query from ruling Awami League MP AFM Bahauddin Nasim. (Staff Correspondent, 2015). On the other hand, the rate of crime is slightly the same as that of education. So, why is this so? It may be due to the lack of proper knowledge regarding legal activities or legal affairs. Our education system is improving day by day; our people are getting educated in various ways. Nevertheless, the legal knowledge of the people of our country is not so adequate regarding other ways. Though people realize the necessity, they do not know it in detail which they should in detail. People are violating laws and also committing crimes. Some of them are doing unintentionally and some are doing willingly. We can decrease the rate of unwilling violations and crimes at the minimal level. Sometimes it is difficult for the general people to take the right decision or go through the right way in respect of their self-issues regarding legal proceedings. Basically, how much a person is capable of establishing his or her legal right totally depends on his or her basic legal knowledge. If he is ignorant, that is if he or she has any ignorance of law then he or she must be the sufferer. Any person accused of an offence at criminal court, or against whom proceedings are instituted under this code in any such court, may of right be defended by a pleader (Code of Criminal procedure 1898, s340). If no one is familiar with this above statement, then it is his or her absolute ignorance and he or she will suffer after any criminal case in field against them. Our Code of Criminal procedure also states about detention:

No police officer shall detain in custody a person arrested without warrant for a longer period than under all the circumstances of the case is reasonable, and such period shall not, in the absence of a special order of a Magistrate under section 167, exceed twenty-four hours exclusive of the

time necessary for the journey from the place of arrest to the Magistrate's Court. (Code of Criminal procedure 1898, s61)

If someone is infringed in any way by a police officer or any law enforcement agency, then what will be the next step of the victim? So as a citizen we should know what we should do, what our right is, and how we can enforce our legal right. If we are not aware of our legal rights or not interested to take legal education, ultimately it will make our life miserable in the legal field. This will act as a great barrier to become good and obedient citizens. Regarding that we need Government support. Besides, we should come forward to create awareness among the general people regarding the necessity of legal education. At present many organizations, foundations, NGOs and even individuals are providing legal information essential for daily life to the common people and try to create awareness among the general people by their own capacity. Like other compulsory subjects in Primary, Secondary or Higher Secondary levels, we can also include the basic concepts or primary education of Legal or Law Aspects.

8. Recommendations

First of all to make legal education accessible to the common people and make them conscious of their legal rights, the Government should introduce elementary law courses in different level of education in our country. For reducing the number of people ignorant of law and for flourishing legal education in Bangladesh we should consider many things and it is required to give emphasis on legal education curriculum; that is curriculum relating to law discipline ought to be designed in accordance with the objectives and demands of the society. The urgency of the government's policy for basic legal education for the mass people as well as for Law discipline is needed earnestly. For removing ambiguity and making people law abiding, legal education should be provided in simple and plain language. Moreover, basic Legal education should be introduced in primary, secondary and higher secondary level as a part of general legal awareness, and as a stage of prequalification for higher studies in law. Besides, the Ministry of Education should provide necessary instructions and set rules to include basic legal knowledge, such as fundamentals of the law in SSC and HSC curriculum. For the circulation of the knowledge of

law among the students other than law discipline as well as among the general people, basic legal education should be introduced in honors level for the students of different disciplines who are not the students of law discipline. And most importantly, the government should take effective steps in association and collaboration with the UGC, Ministry of Education, and different education board to introduce Law discipline in all the public and national universities. For the betterment of legal education, it is highly required to reduce the gap between the legal education at the college level and the university level by including more subjects in college curriculum, extending its duration and by following the same syllabus for all the legal institutions who are providing legal education. Besides, more short courses and awareness training programs should be offered to the general people. The most key part for solving this present crisis on legal education sector needs to establish a National Council of Legal Education for overall control, observation, monitoring and supervision of legal education in Bangladesh. The Council will work out its functions in collaboration with Bangladesh Bar Council and the University Grants Commission.

9. Conclusion

Ignorance of law can never be an excuse but it is difficult for a general citizen to know even the basic laws of the country. Legal education in our country has failed to satisfy the common object of studying law and imparting the basic knowledge of law of the state. The general people think that legal education is only for those who want to become advocates and to some extent to become judges and they do not belong to solvent families in most cases. But in case of legal education in the western world, the traditions and practices are different with few exceptions. In this write-up we have tried to show the main causes behind the ignorance of law and importance of legal education. We have also tried to show why and where ignorance of law is excused and where it is not, irrespective of profession or academic discipline. The citizens of a country are by default law abiding and they are obligated to the state and society. That is why everyone should know the basic laws of the state. In order to ensure the rule of law and peace in the country it is our duty to know minimal basic law of the state and do our work accordingly. Otherwise, in the near future lawlessness will become a disease and it will never be recoverable.

Works Cited

Blackstone William (1765-1769). Commentaries on the Laws of England. Oxford, England: Clarendon Press, (Book 4, ch.2, 27).

Law Commission, People's Republic of Bangladesh (2006). Final Report on Review of Legal Education in Bangladesh, Dhaka, p-3.

Liparota v. United States, 417 U.S. 419 (1985); United States v. Simpson, 561 F.2d 53 (7th Cir. 1977); United States v. Lizarraga-Lizarraga, 541 F.2d 826 (9th Cir. 1976); Lambert v. California, 355 U.S. 225 (1957).

Lerner Max (2010).The Mind and Faith of Justice Holmes: His Speeches, Essays, Letters, and .judicial opinions. New Brunswick, United State of America: Transaction, p61.

Morissette v. United States, 342 U.S. 246, 250–51 (1952).

National Education Commission 2003, Report, Ministry of Education, People's Republic of Bangladesh, Dhaka,2004, p-108.

Staff Correspondent (2015 June 16). Bangladesh's literacy rate rises to 70 percent, education minister says.bdnews24.com. Retrieved from

   https://bdnews24.com/bangladesh/2015/06/16/bangladeshs-literacy-rate-rises-to-70-percent-education-minister-says

The Code of Criminal procedure, Bangladesh Statutes s340 (1898)

The Code of Criminal procedure, Bangladesh Statutes s61 (1898)

The Penal Code, Bangladesh Statutes s193 (1860)

The Penal Code, Bangladesh Statutes s194 (1860)

United States v. Harris, 347 U.S. 612,617 (1953); Papachristou v. City of Jacksonville, 405 U.S. 156 (1972); Smith v. Goguen, 415 U.S. 566 (1974).

United States v. International Minerals & Chemical Corp., 402 US 558 (1971).

Yochum, Mark D. (1999). The Death of a Maxim: Ignorance of Law is no Excuse (Killed by Money, Guns and a Little Sex).*Journal of Civil Rights and Economic Development*, Volume 13, Issue 3,Article 7, p 635-674 Retrieved from

   http://docplayer.net/50050538-The-death-of-a-maxim-ignorance-of-law-is-no-excuse-killed-by-money-guns-and-a-little-sex.html

About Contributors

Hasan Ahmed is Assistant Professor, Department of Management at Feni University. He completed BBA in Management and MBA in Human Resource Management from Jagannath University. His research interests are different aspects of HRM, International HRM, Contemporary HRM and Management fields. He has been teaching at Feni University since May, 2015.

Md. Jahangir Alam is Assistant Professor, Department of Management at Jatiya Kobi Kazi Nazrul Islam University. He completed both BBA and MBA in Management Studies from the University of Rajshahi. At present, he is a PhD research fellow at Jagannath University. He attended several national and international conferences and published 21 research articles in different national and international journals. His research interests are Employee Turnover Intention, Organizational Citizenship Behavior, Stress Management and Women Empowerment.

Dr. Murshid Alam is Associate Professor, Department of Management at Islamic University, Kushtia. He completed both BBA and MBA in Management from the University of Rajshahi. He also obtained PhD from Islamic University, Kushtia. Dr. Alam attended several national and international conferences. His research interests are Environmental Behavior Management, Conflict Management, Stress Management and HRM.

Ali Azgar is Lecturer, Department of CSE at BUBT. He completed B.Sc. in CSE from Rajshahi University of Engineering and Technology. His research interests are Cryptography, Network Security, Machine Learning, Data Mining. He has been teaching at BUBT since June, 2018.

Kazal Kumar Das is Lecturer, Department. of English at BUBT. He completed B.A. (Hons.) in English and M.A in English (Literature) from the University of Rajshahi. His research interests include Poetry, Drama, Fiction, Philosophy, and South Asian Literature.

Md. Ashif-Ul-Haque is Assistant Professor, Department of Law and Justice at BUBT. He completed LL.B. (Hons.) and LL.M. from BUBT. He has also been serving as Rover Scout Leader at Bangladesh Scouts Dhaka District Rover. He is devoted to legal research and his field of research interest includes Legal Education, Personal Law, Criminal Law and Human Rights. He has been teaching at BUBT since June, 2014.

Y.A.M. Rafiqul Haq is Associate Professor, School of Business at Presidency University. He completed B.Com (Hons.) from the Department of Management, University of Dhaka and MBA (Major in Finance) from IBA of the same University. His research interests are Analyzing Stock Market and Role of Real Estate Business in Economic Development. He has been teaching at Presidency University since June, 2006. He was also the Chairman, School of Business at Presidency University.

Md. Saddam Hossain is Lecturer, Department of CSE at BUBT. He completed B.Sc. in CSE from Jahangirnagar University. His research interests are Computer Networks, Network Security, Machine Learning, and Software Engineering. He has been teaching at BUBT since June, 2019.

Md. Zakir Hosain is Assistant Professor, Department of Finance at BUBT. He is a PhD research fellow at Bangladesh University of Professionals. His research interests include a wide range of areas of finance including Dividend Policy, Stock Price Volatility, Foreign Exchange Market and Capital Structure. He has published a number of articles in local and international journals.

Md. Nahid Islam is currently teaching at Premier Nursing College, Rajshahi. He completed B.A. (Hons.) and M.A. from the Department of English, University of Rajshahi. His research interests are in the field of Feminism, Psychoanalysis, Deconstruction, Postcolonialism, etc. He has been teaching since January 2020.

Dr. K. M. Zahidul Islam is teaching at the Institute of Business Administration, Jahangirnagar University. He obtained PhD from the Department of Economics and Management of the University of Helsinki, Finland, in 2012. He has published more than 50 scientific papers in reputed international and national journals in the field of Finance and Economics. His research interests include Efficiency and Productivity Analysis, Microfinance, Macro Econometrics, International Trade, and Money and Capital Markets.

Shabnam Jahan is Lecturer, Department of Law and Justice at BUBT. She completed LL.B. (Hons.) and LL.M. from BUBT. Her research interests are in Civil Law, Criminal Law, Humanitarian Law and Commercial Law. She has been teaching at BUBT since June, 2014.

Dr. M. F. Mridha is Associate Professor, Department of CSE at BUBT. He obtained Ph.D. in AI/ML from Jahangirnagar University in 2017. His research experience, within both academia and industry, results in over 120 journals and conference publications. His research articles were published in reputed Journals of Scientific Reports–Nature, Knowledge-Based Systems, Artificial Intelligence Review, IEEE Access, Sensors, Applied Sciences, etc. His research interests include Artificial Intelligence (AI), Machine Learning, Deep Learning, and Natural Language Processing (NLP)

Md. Atiqur Rahman is Assistant Professor, Department of Management at BUBT. He completed BBA in Management Studies and MBA in Human Resource Management from the University of Dhaka. His research interests are Stress Management, Women Career Challenges and Progression, and E-HRM. He has been teaching at BUBT since October, 2016.

Dr Matiur Rahman completed BSc. (Hons.) and MSc. in Statistics from the University of Dhaka and his second Master degree in Agricultural Economics from the Australian National University. He obtained Ph.D. in Econometrics from Monash University Australia. Dr. Rahman is a retired Professor of the Department of Statistics, University of Dhaka and he has got teaching experiences in different universities of Australia and Bangladesh. He has over 75 research papers published in national and international journals. His principal interests are Applied Research in Statistics, Econometrics and Industrial Quality Control.

Sohel Rana is Lecturer, Department of CSE at BUBT. He completed B.Sc. in CSE from DUET and M.Sc. in ICT from BUET. His research interests include Cryptography, Network Security, and Machine Learning. He has been teaching at BUBT from June, 2018.

S. M. Abdus Shakur is Deputy Director, Student Counseling and Placement Department at the Institute of Chartered Accountants of Bangladesh (ICAB). He completed BBA and MBA in Accounting & Information Systems from the University of Dhaka. His research interests are Analysis of Business and Economic Development as well as Role of Capital Markets. He taught at Presidency University from September, 2009 to December, 2020.

Jakiya Sultana is Lecturer, Department of English at BUBT. She completed B.A (Hons.) and M.A in English Literature from the University of Dhaka. Her research interests are character studies in Literary Texts, Comparative Literature of East and West and Shakespeare Studies. She has been teaching at BUBT since February, 2015.

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