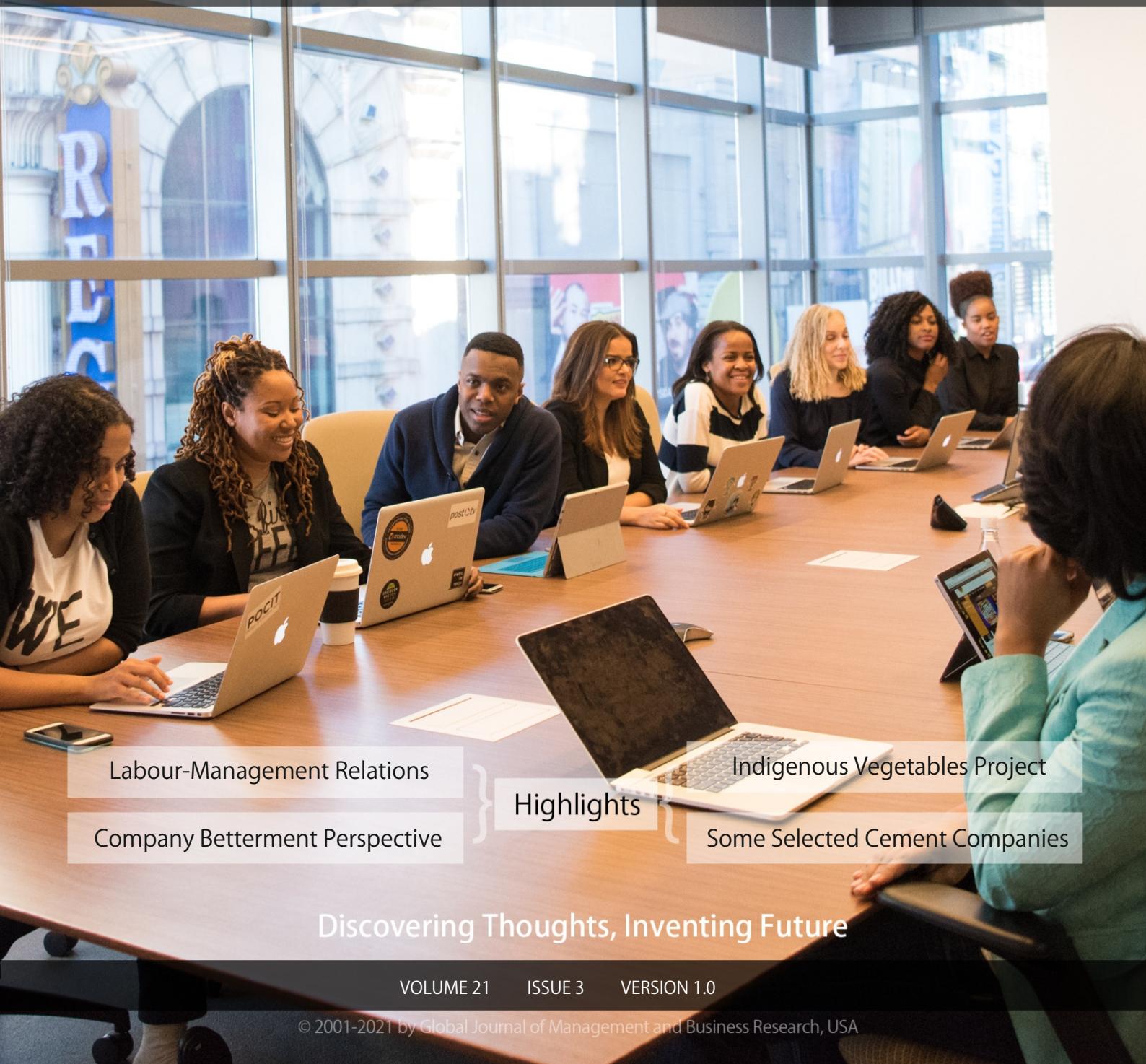


GLOBAL JOURNAL

OF MANAGEMENT AND BUSINESS RESEARCH: A

Administration and Management



Discovering Thoughts, Inventing Future

VOLUME 21 ISSUE 3 VERSION 1.0

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GLOBAL JOURNAL OF MANAGEMENT AND BUSINESS RESEARCH: A
ADMINISTRATION AND MANAGEMENT

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ADMINISTRATION AND MANAGEMENT**

VOLUME 21 ISSUE 3 (VER. 1.0)

OPEN ASSOCIATION OF RESEARCH SOCIETY

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GLOBAL JOURNAL OF MANAGEMENT AND BUSINESS RESEARCH: A
ADMINISTRATION AND MANAGEMENT

Volume 21 Issue 3 Version 1.0 Year 2021

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals

Online ISSN: 2249-4588 & Print ISSN: 0975-5853

Climat Organisationnel et Ses Effets Sur la Performance Des Elèves Des Ecoles Pilotes Secondaires de la RDC Par L'approche Mixte et Triangulation

By Corneille Luboya Tshiunza

Université Pédagogique Nationale

Résumé- Les écoles visent la qualité de l'éducation. Elles sont composés des plusieurs composantes qui influencent négativement ou positivement la qualité de l'enseignement-apprentissage. Les composantes de l'environnement interne d'une école constitué son «climat organisationnel». Celui-ci peut être isolé afin d'étudier son effet sur les performances scolaires. Cette étude s'est fixée pour objectif de tester les effets du climat organisationnel des écoles secondaires pilotes de la RDC par l'approche mixte et la triangulation. Après les enquêtes et les analyses des données collectées, les résultats triangulés de trois sources des données respectivement des élèves (1.200), des enseignants (400) et du personnel de direction (120) ont montré quantitativement et qualitativement que sept sur huit composantes du climat organisationnel des 20 écoles ont des effets sur la performance scolaire.

Mots clés: *climat organisationnel, climat scolaire, performance scolaire, ecole secondaire pilote.*

GJMBR-A Classification: *JEL Code: M19*



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Mots-clés: *climat organisationnel, climat scolaire, performance scolaire, ecole secondaire pilote.*

I. INTRODUCTION

Pour satisfaire leur besoin éducatif national, chaque pays crée l'industrie de fabrication des hommes qualifiés et compétents par l'institutionnalisation du système éducatif et ses unités. Celles-ci mettent l'accent non seulement sur la quantité mais aussi sur la qualité de l'éducation. Les écoles ou les établissements scolaires comme unités de production de cette industrie se fixent comme objectifs la production de la main d'œuvre compétente et qualifiée. En éducation, cette production est acquise par la performance scolaire des élèves durant le processus d'enseignement - apprentissage. Levoc - able «performance scolaire» renvoie aux résultats obtenus dans des épreuves auxquelles sont soumis les apprenants.

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En RDC, les performances scolaires des élèves des écoles secondaires sont évaluées par les examens internes (scolaires) et externes (nationaux). Les taux de réussite aux examens se sont situés dans une fourchette moyenne de 18 à 61 pour cent après 1976. Auparavant, ils étaient beaucoup plus élevés. Par exemple, les taux de réussite ont plongé à 18 pour cent en 1978, à 30 pour cent en 1982 et 1983 et à 46 pour cent et 38 pour cent en 1992 et 1993 respectivement. Ils ont stagné entre 50 à 54 pour cent de 1997 à 2003 puis 61 pour cent en 2009. En effet, les scores moyens globaux à l'examen et celui des établissements étaient en déclin entre 2011 et 2014. Estimations de World Bank (2014) sur la base des résultats de l'Examen d'État, obtenus auprès du MEPSP, 2011 et 2014, font état de 54.3 pour cent en 2011, 54.3 pour cent en 2012, 44.1 pour cent en 2013. En 2014, il y a eu un taux de réussite global de 55 pour cent et le taux de réussite était de 61 pour cent en moyen. De la répartition des taux réussite des élèves aux examens d'Etat par province, Bas Congo vient en première position avec 70 pour cent, suivi de Katanga, Sud-Kivu et Kasai-Oriental 66 pour cent, Kinshasa 62 pour cent, Province oriental et Maniema avec 59 pour cent, Nord-Kivu 58 pour cent, Bandundu avec 57 pour cent, Kasai-Occidental 56 pour cent puis avec Equateur 49 pour cent. Il convient de noter qu'il n'y a pas de différences significatives entre les taux de réussite par provinces (RDC-Annuaires Statistiques de l'EPSP, 2012 et 2014). Ces taux sont surtout différents d'un établissement à un autre. Les écoles secondaires pilotes sont classées par les sévices d'inspection nationale parmi les rares écoles performances de la RDC. Elles se distinguent des autres écoles par leurs performances remarquables.

Effet, même si des écoles secondaires nationales présentent de nombreuses similitudes au niveau de leurs structures formelles et de leurs programmes de formation, chacune d'elles possède un environnement interne qui lui est propre. C'est cet environnement qui crée une ambiance de travail et l'oriente dans le choix d'une approche pour atteindre les objectifs et résoudre les problèmes (Corriveau 1990, Picquenot 1997, Brunet 2001). Cet environnement

interne appelé aussi climat organisationnel, influence par conséquent les performances scolaires car les processus internes des écoles produisent un effet sur leur efficacité. De plus, Rutter et al. (1979) ont constaté que les comportements des élèves à l'école, leur assiduité scolaire et leur réussite académique sont influencés par l'école secondaire fréquentée (Brault, 2004). D'aucuns (Norton, 1984; Brunet, 2004) souhaitent de ce fait, la prise en compte du climat scolaire dans la recherche des causes de l'efficacité interne des établissements car selon lui, par son fonctionnement, l'établissement contribue ou non à la qualité de l'éducation. D'autant plus que la performance scolaire représente le résultat d'une interaction complexe entre l'élève, les contenus des savoirs, le personnel enseignant et le milieu d'enseignement-apprentissage. Il semble qu'un bon climat scolaire crée une disposition favorable aux apprentissages scolaires.

Il est à préciser que les recherches et les réflexions sur le climat organisationnel dans le domaine scolaire ou le secteur éducatif ont commencé en 1908. Vers les années 1950, le climat organisationnel au niveau de l'école fait l'objet d'étude systématique avec une forte accélération dans le monde anglo-saxon et francophone. Les travaux de plusieurs auteurs (Coleman et al., 1966; Likert, 1974; James et Jones, 1974; Moos, 1979; Norton, 1984; Hoy et Miskel, 1996; Jánosz, Georges et Parent, 1998; Brunet, 2001; Brault, 2004; Cocoradă et al., 2008; Debarbieux et al., 2012; Sauneron, 2013; Luboya, 2018) ont montré la quintessence du climat organisationnel en général et le climat scolaire en particulier. Ces travaux ont recouru aux trois mesures du climat organisationnel (James et Jones, 1974) notamment la mesure multiple des attributs organisationnels, la mesure perceptive des attributs individuels et la mesure perceptive des attributs organisationnels.

Plusieurs études (Kapita, 2004; Lupasa, 2017-2018; Bakoto, 2019) de la RDC se sont aussi intéressés aux différents aspects du climat organisationnel. Toutes ces études mettent en exergue l'impact du climat organisationnel sur la performance ou le rendement soit des enseignants, soit des élèves. Elles se sont orientées sur les aspects de relation entre le climat organisationnel et la performance. Certaines études ont apprécié le climat organisationnel soit selon la mesure multiple des attributs organisationnels, soit selon la mesure perceptive des attributs organisationnels, soit encore selon la mesure multiple des attributs organisationnels. La présente étude utilise la mesure perspective des attributs organisationnels. Sur ce, la préoccupation de cette étude consiste à cerner le climat organisationnel des écoles secondaires pilotes de la RDC et son impact sur le rendement des élèves. L'étude répond les questions suivantes:

1. Quels sont les types des climats organisationnels qui sont vécus dans les écoles secondaires pilotes de la RDC ?
2. Il y-t-il une relation entre le climat organisationnel des écoles secondaires pilotes de la RDC et la performance scolaire des élèves?
3. Comment les différents types de climat organisationnel de ces écoles impactent-ils sur la performance des élèves ?

A travers ces questions de recherche, l'objectif général de l'étude est de tester les effets du climat organisationnel des écoles secondaires pilotes de la RDC sur la performance scolaire des élèves. Pour y arriver, trois objectifs spécifiques doivent être atteints:

- Identifier les types du climat les plus déterminants de la performance scolaire des élèves;
- Tester la relation entre chaque type du climat organisationnel et la performance scolaire des élèves
- Expliquer qualitativement les effets des différents types du climat organisationnel sur la performance scolaire des élèves.

II. CADRE CONCEPTUEL ET THÉORIQUE

Deux points sont examinés:

a) Opérationnalisation des concepts clés

Trois concepts sont définis: (i) climat organisationnel, (ii) performance scolaire et (iii) école pilote.

i. Climat organisationnel

Le mot «climat organisationnel» est rendu populaire dans le monde du travail occidental vers 1900. Il est utilisé pour désigner l'*«atmosphère organisationnelle»* (Gluck, 1989) ou l'*«environnement interne de l'organisation»* (Kidinda, 2016).

De nombreux auteurs se sont intéressés à l'étude du climat. Ils ont mentionné que les organisations possèdent, tout comme l'humain, une personnalité unique, nommée communément climat organisationnel (Moos, 1979; Anderson, 1982; Norton, 1984; Brunet, 2001). L'établissement d'enseignement, en tant qu'organisation sociale, n'échappe pas à ce fait. Il apparaît donc que les organisations, tout comme les écoles, se distinguent les unes des autres par cette «atmosphère» particulière. Certains auteurs vont même jusqu'à affirmer que les divers départements à l'intérieur d'une même organisation peuvent avoir leur propre climat. Dans ce contexte, le climat global serait constitué de la somme de tous les microclimats de l'école. Cependant, d'autres chercheurs contredisent ce fait, en affirmant que les climats des parties plus petites à l'école ou à l'organisation sont indépendants de celle-ci (Von Saldern, 1992; Creemers & Reezigt, in Frieberg 1999).

Le climat organisationnel englobe tous les comportements organisationnels liés à la considération

de personnel, à l'ambiance du travail, aux relations interindividuelles et professionnelles, à la gestion participative et à l'esprit d'initiatives constructives. Le climat organisationnel désigne un domaine de recherche plutôt qu'un objet spécifique d'analyse ou un ensemble particulier de dimension (Scheidern, 1975).

L'utilisation du terme «climat organisationnel» fait consensus dans la littérature, bien que d'autres expressions lui soient parfois plus préférées, tels l'ambiance, l'atmosphère, la personnalité, l'éthos, les sentiments envers une organisation ou encore l'environnement interne. Moos et al, cités par Brault (2004, p.21) expliquent que le mot «climat organisationnel» est plus souvent employé, puisqu'il évoque une réalité moins vaste et générale que celle «d'environnement interne de l'organisation ». A cet effet, Moos et al mentionnent que le climat n'est qu'un des éléments possibles de l'environnement interne, ou même titre que les composantes physiques et organisationnelles. Kidinda (2016, p. 25) pense que « *le climat peut être compris comme le cadre de référence interne d'une organisation, le niveau qui permet de déterminer les critères d'orientation de la détermination et de la clarification des valeurs tant individuelles qu'institutionnelles* ».

Plusieurs auteurs soutiennent que l'utilisation du concept de climat organisationnel dans le cadre scolaire donne l'expression du «climat scolaire». Celui est plus précis car cette expression établit la distinction entre les organisations scolaires et les organisations purement économiques. Sur ce, «*e climat organisationnel est un regroupement de caractéristiques internes qui distinguent les organisations les unes des autres et qui influencent le comportement de ses membres. Plus spécifiquement, le climat scolaire est une qualité relativement durable de l'école entière qui est vécue par les participants, qui décrit leur perception collective d'un comportement et qui affecte leurs attitudes et leurs comportements dans l'école* » (Hoy & Miskel, 1996, p. 705).

Pour Kapita (2004) le climat organisationnel est entendu comme l'atmosphère interne régnant au sein d'une école ainsi que les différentes perceptions qu'ont les acteurs impliqués dans l'action éducative de leurs rôles en relation avec les autres et des rôles tenus par les autres dans l'école. Il résulte ainsi d'un certain nombre des facteurs (normes, valeurs, luttes internes et externes, communication, autorités) qui sont reflétées dans l'environnement de l'organisation et à partir de la garantir une ambiance propice du travail favorisant un meilleur rendement ou performance scolaire. Le climat scolaire inclue la perception de l'environnement interne par les acteurs de l'établissement scolaire est pondérée par le degré de reconnaissance sociale et de compétence, d'autonomie et de motivation, d'engagement et de satisfaction personnels.

En définitive, le climat organisationnel renvoie à la qualité et au style de vie de l'école. Il reflète les normes, les buts, les valeurs, relations interpersonnelles, les pratiques d'enseignement, d'apprentissage, de management et la structure organisationnelle inclus dans la vie de l'école (Luboya, 2018).

ii. Performance scolaire

La performance scolaire est « *la mise en œuvre d'une aptitude et le résultat de cette action permet de déduire les possibilités d'un sujet dans un domaine particulier* » (Sillamy, 1983, p. 506). L'étude considère la performance scolaire de l'élève comme l'achèvement. L'étude scientifique de la réalisation englobe les données provenant d'expériences avec des listes de mots ainsi que de l'acquisition de domaines complexes, comme la programmation informatique, les mathématiques, ou la façon dont les gens résolvent les problèmes de physique. Au niveau expérimental, la réalisation est appelée acquisition, apprentissage ou représentation des connaissances, parfois en fonction de biais théoriques. La compétence d'une personne par rapport à un domaine de connaissance. Ce que nous pouvons observer à l'extérieur, c'est la performance.

La performance scolaire est la résultante des scores ou notes (cotes) obtenus par les élèves durant le processus d'enseignement-apprentissage. C'est la réussite scolaire. Celle-ci est alors le résultat d'un processus de formation, d'une interaction établie entre les membres du personnel de l'école et les élèves. Au cours de la scolarité, le degré d'efficience de l'élève résulte de la mobilisation de ses ressources face aux contraintes d'une tâche scolaire. Cette mobilisation dépend de ce fait des aptitudes psychologiques, des habiletés individuelles mais aussi d'apprentissage de l'enfant (Corriveau cité par Brunet 2001).

iii. Ecole pilote

L'école pilote ou expérimentale est un établissement d'enseignement préscolaire, primaire ou secondaire d'application ou d'expérimentation qui est souvent attaché à une autre école et sert de champs des activités de recherche scientifique dans le domaine pédagogique (expérimentation des nouveaux programmes, des outils, techniques, méthodes et technologie de l'enseignement-apprentissage et diverses autres expérimentation pédagogique et didactique). En RDC par exemple, une école d'application bénéficie des infrastructures adéquates, des matériels didactique appropriés et adéquats, d'un personnel enseignant et administratif qualifié, compétent et expérimenté. L'arrêté DEPS/CCE/001 /0062/84 du 18/09/1984 portant fonctionnement des écoles pilotes expérimentales, de la Réforme de l'enseignement Primaire et Secondaire, fixe les effectifs maxima et minima d'élèves par classe d'une école pilote de la manière suivante: (i) 15 à 20 élèves pour l'école artisanale; (ii) 35 à 40 élèves pour l'école



professionnelle; (iii) 40 à 45 élèves pour l'école secondaire cycle long et (iv) 45 à 50 élèves pour l'école primaire.)

Luboya (2019) affirment que les écoles pilotes sont officiellement acceptées comme d'excellentes écoles. Ils sont également appelés «écoles expérimentales ou d'application». Ce sont toutes des écoles publiques et reçoivent irrégulièrement des financements publics. En général, les écoles pilotes sont classées parmi les meilleures écoles. Ce sont des normes nationales en ce qui concerne leur constance de la compétitivité du rendement scolaire aux examens internes et nationaux. Ils ont une meilleure qualité d'enseignement et les meilleurs environnements organisationnels. Ils respectent les lois et les politiques nationales en matière d'éducation et mettent en œuvre des réformes de l'éducation. Ces écoles sont souvent utilisées par les services techniques du Ministère de l'éducation dans l'expérimentation des innovations pédagogiques et des réformes de l'éducation. Conformément aux résultats des écoles pilotes (aux examens scolaires et nationaux et à l'inspection de la gestion des écoles), Luboya (2016) classe : (i) les écoles pilotes qui ont obtenu des résultats élevés ou excellents (de 100 à 81 %); (ii) Écoles pilotes qui ont obtenu un rendement ordinaire, normal, satisfaisant ou acceptable (de 80 à 70 %) iii) les écoles pilotes qui ont obtenu de faibles performances (inférieures à 69 %). L'étude s'est imitée dans les meilleures écoles secondaires pilotes.

b) Cadre théorique

Deux points sont développés: approches et modèle du climat organisationnel.

i. Approches de mesure du climat organisationnel

Plusieurs auteurs (James et Jones, 1974; Janosz, et Parent, 1998; Brunet 2001) ont identifié trois approches qui ont caractérisé la mesure ou les perspectives d'évaluation du climat organisationnel notamment:

La mesure multiple des attributs organisationnels: consiste à évaluer, de façon objective, l'environnement de l'organisation, c'est-à-dire, sa taille, sa structure, l'établissement des objectifs, l'environnement physique, le style de leadership et autres et de mettre ces éléments en relation avec des mesures de productivité ou d'absentéisme, entre autres. Sous ce type de conceptualisation, le climat organisationnel est défini comme étant «*un ensemble de caractéristiques qui décrivent une organisation et qui la distinguent des autres, qui influencent le comportement des individus dans l'organisation*» (James et Jones, 1974, p.45).

La mesure perceptive des attributs individuels: définit le climat organisationnel surtout en fonction de caractéristiques individuelles telles que les valeurs, les

besoins, les attitudes ou la satisfaction de l'employé face à son organisation. Il s'agit de voir comment l'individu perçoit son environnement de travail et non pas comment les autres le décrivent (James et Jones, 1974). Dans ce sens, Brunet (1983) précise qu'il ne s'agit plus d'une mesure du climat organisationnel mais plutôt simplement d'une mesure de la satisfaction des individus face à leur organisation telle que définit par Schneider en 1975 comme étant une évolution de l'organisation fondée sur une interaction entre l'environnement de travail et les valeurs et les valeurs des besoins particuliers des individus.

La mesure perceptive des attributs organisationnels: évalue le climat organisationnel en fonction des perceptions qu'entretiennent les individus à propos de leur environnement de travail (James et Jones, 1974). Les acteurs de ce courant adoptent la définition du climat organisationnel selon laquelle le climat est la qualité, relativement stable dans le temps, de l'environnement interne d'une organisation: (i) qui résulte du comportement et des politiques des membres de l'organisation, spécifiquement des cadres supérieurs; (ii) qui est perçu par les membres de l'organisation; (iii) qui sert de base pour interpréter la situation et (iv) qui oriente les activités. Cette approche concilie les facteurs organisationnels et les caractéristiques personnelles des individus. Elle définit le climat étant la moyenne des perceptions individuelles qu'ont les employés de leur environnement quotidien (Deer, 1980). Elle respecte la théorie de Lewin (1951, cité par Brunet, 1983) suivante: $C = f(P \times E)$. Cela veut dire que le comportement (C) de l'individu est fonction de l'interaction de l'influence de sa propre personnalité (P =aptitudes, caractères et tempérament) et de l'environnement (E) qui l'entoure. Ainsi, les variables organisationnelles interagissent avec la personnalité des individus pour produire les perceptions des attributs organisationnels.

ii. Modèle du climat organisationnel

Plusieurs auteurs ont proposé de modèles du climat organisationnel à l'école. Moos (1979), parlant du climat social mesuré auprès des élèves et des enseignants, utilise le «Classroom Environment Scale (CES)» pour définir les types de climat axés sur: (i) le domaine relationnel: engagement, affiliation et support de l'enseignant; (ii) le domaine de la croissance personnelle: orientation vers les tâches et compétition et (iii) le domaine de la maintenance et du changement: ordre et organisation, clarté des règles, autorité des enseignants, innovation. Jánosz, Georges et Parent (1998), définissant le climat scolaire comme l'ensemble des valeurs, des attitudes et des sentiments dominants dans l'établissement scolaire, décrit cinq dimensions: (i) le climat relationnel, (ii) le climat éducatif, (iii) le climat de sécurité, (iv) le climat de justice et (v) le climat d'appartenance. Il faut préciser que la typologie de

Jánosz, Georges et Parent (1998) a des légères ressemblances à celle de Moos (1979) et a été enrichie par plusieurs auteurs. L'étude utilise le modèle à huit composantes du climat organisationnel d'une école, notamment, le climat relationnel, éducatif ou d'apprentissage, de discipline, de collaboration, de justice, de discipline, d'appartenance et structurel.

a. Climat relationnel et de collaboration

Le climat relationnel vise à récolter les perceptions des individus sur trois types de relations, soit les relations entre élèves et les enseignants, les relations entre élèves eux-mêmes et les relations entre enseignants eux-mêmes. Les indicateurs abordent les thèmes du support, du respect et de la chaleur des contacts. Il ressort assez nettement que le climat relationnel est en relation avec le rendement scolaire des élèves (Luboya, 2018).

En effet, les performances scolaires élevées sont en lien avec les relations positives entre les enseignants, caractérisés par une appréciation et un respect mutuel et par la coopération et le travail d'équipe. Les relations entre les enseignants et les membres de la direction influencent aussi les performances scolaires, notamment lorsque les enseignants perçoivent le directeur comme un allié, puisque celui-ci est amical, ouvert, respectueux, supportant et engage dans l'atteinte de hauts niveaux de performance de la part des enseignants, de plus, une prise de décision partagée avec les enseignants, une gestion de type participatif et un bon leadership de la part du directeur sont associés à des résultats scolaires plus élevées. De manière générale, la confiance et le respect mutuel de tous les acteurs de l'école, une bonne communication est un climat social positif favorisent la réussite des élèves et constituent des caractéristiques des écoles, dite « efficaces ».

Selon Cocoradă et al. (2008), le climat relationnel est un composant très important de l'établissement à partir duquel la réussite scolaire peut être anticipée. Dans l'enquête de Coleman (1966), l'analyse de données a fait ressortir que les différences de réussite scolaire renvoient davantage aux variables familiales qu'aux variables intra-scolaires (le programme, la compétence des enseignants, les dotations, etc.). Alors que dans une étude plus récente menée par Rutter (qui a suivi l'étude de Coleman pour la Grande-Bretagne), les résultats ont été différents. Cette étude met en exergue le rôle de plusieurs variables scolaires dans la réussite des élèves telles que la relation entre les enseignants et les élèves, la manière dont les activités sont organisées dans l'établissement et la coopération existant entre les individus. (Cocoradă et al., 2008) Selon Jánosz, Georges et Parent (1998), le climat relationnel « traduit la chaleur, le respect, et le plaisir dans les relations interpersonnelles» et « ait spécifiquement référence à l'atmosphère qui règne

dans les rapports entre les individus » en construisant la dimension « socioaffective » des relations humaines dans l'établissement (Jánosz, Georges et Parent, 1998). De plus, les relations interpersonnelles (entre les élèves, entre les enseignants et les élèves, entre les enseignants et la direction, entre l'établissement et la communauté) soutiennent la réussite scolaire selon Brunet (2001). Ces résultats ont été confirmés par plusieurs chercheurs tels que Gottfredson (1985) et Moos (1979) qui ont indiqué que les établissements qui affichent un haut niveau de réussite dans l'apprentissage des élèves et un faible niveau dans l'indiscipline se distinguent par un climat de bonnes relations entre les différents acteurs dans l'établissement (Jánosz, Georges et Parent, 1998). Pour avoir un bon climat relationnel, le développement des activités sportives et culturelles au sein des établissements apparaît également important. Ces activités permettent d'utiliser le temps libre des élèves pour renforcer la collaboration entre eux (voire entre les élèves et les enseignants et entre les enseignants eux-mêmes). Ces activités incitent ainsi le développement des personnalités des élèves et leur créativité (Sauneron, 2013). Des études menées dans ce contexte montrent que les élèves habitués à travailler en groupe ont tendance à se sentir mieux à l'école et à avoir une confiance plus élevée non seulement envers les autres élèves, mais aussi envers les enseignants et l'école. Les méthodes d'enseignement qui dépendent de plus en plus des projets collectifs (les méthodes horizontales) sont utiles pour un climat relationnel positif. Ces méthodes favorisent les échanges et la coopération entre les élèves à l'inverse des méthodes verticales qui prennent de moins en compte la collaboration entre les élèves.

b. Climat éducatif

Le climat éducatif sert à déterminer la valeur de la mission éducative de l'école, notamment en collectant les perceptions sur la qualité de la formation et des apprentissages ou les opportunités d'apprendre que les écoles offrent aux apprenants (Luboya, 2018). Les performances des élèves et l'efficacité scolaire sont associées positivement avec le fait que tous les membres de l'école accordent une importance élevée à l'aspect académique, en mettant l'accent sur la réussite scolaire (Norton, 1984 ; Hoy et al, 1998). Dans les écoles performantes, les enseignants et les membres de la direction sont sérieux, appliquent une discipline stricte, définissent clairement et concrètement les objectifs et l'atmosphère y est ordonné.

c. Climat de sécurité

Le climat de sécurité détermine si les individus se sentent en sûreté et en confiance à l'intérieur et dans les limites de l'école. Le climat de sécurité renvoie à l'organisation et à la tranquillité de l'établissement. Il construit avec ses exigences les conditions les plus



nécessaires pour pouvoir se concentrer sur les activités scolaires. Ce genre de climat peut être défini par (i) le sentiment de sécurité et de confiance des personnes, et (ii) leur perception des risques de victimisation (Jánosz, Georges et Parent, 1998). Ainsi cette forme de climat a été définie comme la perception des élèves de la sécurité et de la confiance des autres à l'intérieur de l'établissement (Brault, 2004). En outre, elle a été définie comme le sentiment d'être agressé de façons différentes : verbale, psychologique ou physique au sein de l'établissement (Jánosz, Georges et Parent, 1998). Une étude menée par ces derniers (pour comprendre le lien entre la perception du climat scolaire et l'épuisement professionnel chez les enseignants) a fait ressortir que: « ..., les liens étroits qui existent entre la violence des élèves et le climat de sécurité permettent de penser que le climat de sécurité pourra aussi être relié au sentiment d'épuisement ». Pour Debarbieux et al., (2012), ce genre de climat renvoie à la sécurité de l'environnement physique, qui peut être garantie par la préparation d'un plan de crise et qui renvoie à des règles claires. C'est également la sécurité émotionnelle, la tolérance à la différence et enfin la capacité de résoudre des conflits. Les écoles exemplaires se démarquent par leur environnement sécurisant et plaisant pour les élèves et que l'attention particulière au bien-être des élèves favorisent les bons résultats scolaires (Norton, 1984; Luboya, 2018).

d. Climat de justice et de discipline

Le climat de justice renvoie aux attitudes et aux comportements des adultes envers les élèves. Cela permet d'évaluer si les jeunes perçoivent de la constance et de la cohérence dans la façon dont ils sont traités. Les élèves, notamment au secondaire, sont très sensibles à ce genre de climat qui leur indique que les comportements et l'évaluation que font les enseignants et la direction à leur égard seront en fonction d'une estimation et d'une reconnaissance juste et dans le respect des droits de chaque élève (Jánosz, Georges et Parent, 1998). Ces auteurs montrent que la capacité du personnel à créer un climat de justice dans l'établissement renforce l'autorité sur le plan éducatif et disciplinaire et facilite en même temps l'encadrement des élèves. Donc, le climat de justice peut être ressenti à travers les évaluations scolaires équitables, à travers l'application équitable des règles et à travers le fait que le mérite ou la punition ne reviennent pas à l'élève lui-même, mais à son comportement (Jánosz, Georges et Parent, 1998). La clarté dans l'application du règlement est la base sur laquelle dépend le sentiment de justice sociale. Ce sentiment pourrait être fortement animé par la dimension d'évaluation, ses modalités et son organisation dans le milieu scolaire (en clarifiant les objectifs, en évitant de mettre les élèves en surcharge, etc.). Donc, la qualité des règles définit «le vivre ensemble», alors que la perception d'une faiblesse dans

l'application du règlement scolaire est un des éléments principaux de la violence dans les établissements d'enseignement (Debarbieux, 2015). Les écoles efficaces se caractérisent par un traitement juste et égalitaire de tous les élèves. Il s'agit d'un système de discipline scolaire qui met l'accent sur le renforcement positif avec feedback, récompenses et compliments pour souligner les bons comportements des élèves (Norton, 1984). Cependant, il est essentiel que l'application de ces pratiques et de ces règles soit cohérente et consistante pour qu'elles aient un impact positif sur les élèves. Car la discipline scolaire assure à la fois l'ordre, la propriété, la justice et la sérénité susceptibles de favoriser le travail scolaire.

e. Climat d'appartenance

Le climat d'appartenance montre jusqu'à quel point les élèves et les enseignants sont fiers et engagés dans leur milieu (Brault, 2004). Le sentiment d'appartenance a même été défini par Janosz et al (1998) comme un médiateur important de l'effet du climat scolaire sur le sentiment d'épuisement chez les acteurs scolaires à l'école.

Ce genre de climat est le fruit, selon Janosz et al. (1998), des autres genres de climats notamment éducatif, relationnel, climat de sécurité et climat de justice. La personne construit ce sentiment d'appartenance quand elle sent que son milieu favorise la communication entre les individus; que ce milieu est garant de sa protection et reconnaît ses droits et quand les sanctions dans ce milieu sont équitables. Le sentiment d'appartenance auprès des individus garantit leur respect de leur établissement et facilite l'adoption des règles relatives à la vie scolaire. Cette forme de climat, note Luboya (2018) peut être qualifiée par plusieurs indicateurs: (i) le sentiment de joie et de satisfaction à fréquenter l'établissement scolaire; (ii) l'importance que donnent les individus à l'établissement comme un milieu de vie; (ii) l'adhésion aux valeurs de l'établissement.

Luboya, (2018) estime que le climat d'appartenance établit le lien entre tous les climats précédents, puisqu'il vise à indiquer jusqu'à quel point les individus sont fiers et engagés dans leur milieu. Cette manière de mesurer le climat est différente des précédentes, puisqu'elle fait clairement la distinction entre le climat scolaire, les pratiques éducatives et les problèmes de l'école. Ainsi, seuls les sentiments, les valeurs et attitudes envers le milieu sont inclus dans la mesure du climat. De plus, elle met l'accent spécifiquement sur l'organisation scolaire, elle intègre des types de climat propres à l'école et elle utilise la perception de tous les acteurs de l'école. Bien que chacune de ces typologies fasse ressortir diverses dimensions du climat, il est possible de leur trouver des points communs. En effet, trois dimensions sont partagées par toutes les typologies, il s'agit du

leadership du directeur, de la relation entre les membres de l'école et de l'accent est mis sur l'académique (Luboya, 2018).

f. Climat structurel

Les établissements sont régis par deux types des structures: organique et fonctionnelle. Le type est constitué des organes (service pédagogique, d'orientation scolaire, de discipline, secrétariat de direction, préfecture, et autre) qui contribuent l'atteinte des objectifs éducatifs. Le deuxième type est dit fonctionnel car il est constitué des lois, de la réglementation et de la norme sociale qui déterminent les valeurs et le sens dispensés par l'école, ainsi que son organisation et son fonctionnement, à considérer que le respect de ces principes est consubstantiel du

climat idéal. Sur ce registre, le climat scolaire est majoritairement construit et s'étalonne sur le champ des interdictions, des punitions et des sanctions positives et négatives. Les deux types de structures produisent les conditions de travail, la pédagogie, administration et gestion, vie scolaire, partenariats. Ce climat mesure de l'état des relations entre les différents membres de cette communauté entre eux et avec les partenaires, autorités hiérarchiques et locales dans les structures formelles et la perception, la valeur donnée par les acteurs et usagers au fonctionnement et dysfonctionnement de ces structures par rapport à la performance scolaire.

Les huit composantes du climat scolaire peuvent être opérationnalisées comme suit:

Tableaux 2.1: Classification des composantes du climat scolaire

Climat relationnel et de collaboration (Brunet & Corriveau, 1993; Bressoux, 1994; Brunet, 2001 ; Hoy et al., 1998).	Les performances scolaires élevées des élèves sont en lien avec les relations positives entre les enseignants, caractérisées par une appréciation et un respect mutuel et par la coopération et le travail d'équipe. Les bonnes relations entre les acteurs scolaires créent un climat amical, ouvert, respectueux, de collaboration et de collaboration. Ces caractéristiques poussent les acteurs scolaires de s'engager dans l'atteinte de hauts niveaux de performance dans leur école	Entre 0,15 et 2,6% (Brault, 2004, pp.67-68)
Climat éducatif (Hoy et al., 1998).	Les performances des élèves et l'efficacité scolaire sont associées positivement avec le fait que tous les membres de l'école accordent une importance élevée à l'aspect académique, en mettant l'accent sur la réussite scolaire.	Entre 0,15 et 2,6% (Brault, 2004)
Climat de justice (Norton, 1984, Jánosz, Georges et Parent, 1998).	Un traitement juste et égalitaire de tous les élèves axé sur le renforcement positif avec feedback, récompenses et compliments pour souligner les bons comportements des élèves a un impact positif sur les élèves.	Entre 0,12 à 2% (Brault, 2004, pp.67-68)
Climat d'appartenance (Jánosz, Georges et Parent, 1998; Brunet, 2001)	Un sentiment d'appartenance élevé à une école est associé à d'excellents résultats scolaires. Les écoles où les taux de réussite sont élevés se démarquent par le fait que les enseignants sont très engagés envers leur travail, envers les élèves et que leur moral est positif. Plus les élèves ont des responsabilités et une participation active, plus meilleure est leur performance scolaire.	-
Climat structurel (Teddlie & Reynolds 2000; Hoy et al., 1998,)	Les écoles ont des structures organiques (départementalisation) et fonctionnelles (lois ou règlements intérieurs). Ces structures qui déterminent l'organisation et les conditions de travail dans les établissements scolaires sont des variables déterminantes dans la construction de leur climat. Elles sont pilotées par les leaders scolaires afin d'assurer les apprentissages des élèves.	Entre 2 à 12 % (Luboya, 2018, p.17)
Climat de sécurité et de disciple (Squires et al., 1983 ; Norton, 1984).	L'attention particulière au bien-être des élèves favorisent les bons résultats scolaires. Les écoles qui sont des lieux ordonnés et qui sont sécuritaires pour les élèves et le personnel ont de meilleurs résultats scolaires	

Source : Luboya, (2018, p.227)

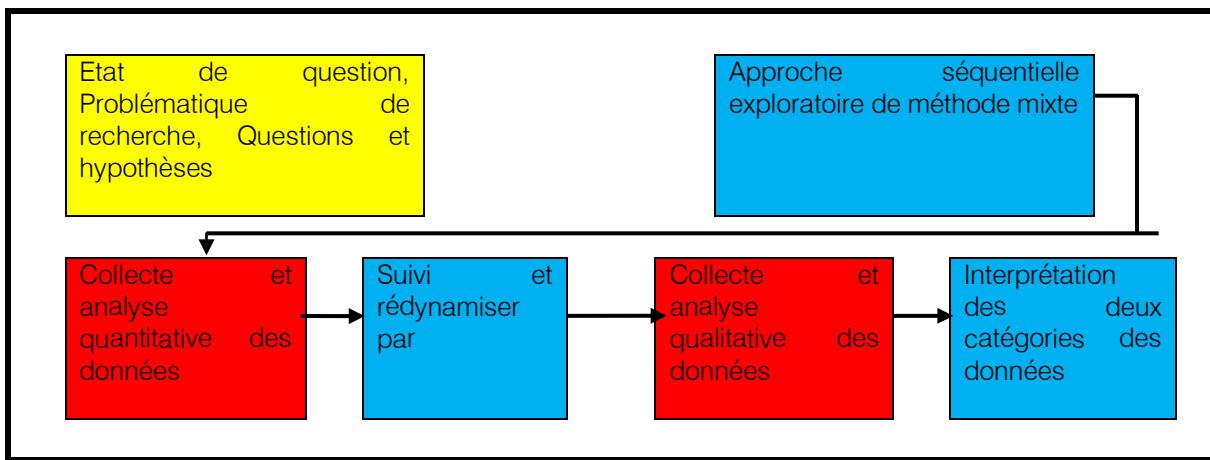
III. MÉTHODOLOGIE

a) Research design

Très souvent, le climat scolaire est mesuré à partir d'un questionnaire sur l'environnement socioéducatif adressé soit aux élèves, soit aux enseignants et soit encore à la direction. Cette étude s'adresse à plusieurs acteurs scolaires à la fois

(enseignant, apprenant et personnel de direction) et collecte les données quantitatives et qualitatives. Sur ce, l'approche mixte et de la triangulation semblent être le design le mieux adapté. Cette triangulation est essentiellement le point d'articulation des composantes qui fournissent de nouvelles connaissances en ce qui concerne le climat scolaire. Il s'agit de l'utilisation d'une combinaison des approches qualitative et quantitative.





Source: Luboya et al, 2017b

Figure 3.1: Approche d'explication exploratoire et séquentielle de méthode mixte

Cette étude a utilisé l'approche séquentielle exploratoire de la méthode mixte (figure 3.1) pour recueillir des données quantitatives et qualitatives, les analyser séparément et les interpréter afin de valider notre modèle théorique. Toutefois, la composante quantitative est en primaire lieu. La composante qualitative est utilisée en second lieu. Les deux résultats sont comparés dans le but de voir s'ils se confirment ou se rejettent les uns les autres (Hesse-Biber et Nagy, 2010; Creswell, 2012 et 2014). Il s'agit d'une stratégie de comparaison des données obtenues à l'aide de deux approches distinctes. Quatre types de triangulation sont utilisés dans l'étude: (i) la triangulation théorique consiste en l'utilisation de plus d'une position théorique dans l'interprétation des données; (ii) la triangulation des données est constituée d'une collecte de données provenant de quatre différentes sources. Nous utilisons également la triangulation de la convergence entre les approches qualitatives et quantitatives. Il s'agit de l'approche mixte dans le volet d'explications séquentielles de l'objet de l'étude (Jick, 1979; Hesse-Biber and Nagy, 2010; Luboya et al, 2017b). (iii) La triangulation des enquêteurs par l'utilisation de plusieurs observateurs au lieu d'un seul observateur sous la forme de collecte des données sur terrain (Denzin, et Lincoln, 2011; Patton, 2002). Et (iv) la triangulation des méthodes et technique par l'utilisation de plus d'une méthode de recherche ou technique de collecte de données. L'enquête et la méthode quasi-expérimentale ont été employées. Le questionnaire, l'interview semi-structurée, l'analyse documentaire, l'analyse du contenu et l'analyse statistique ont été utilisés comme instruments de collecte, de gestion et d'analyse des données (Mucchielli, 1993; Ngongo, 1999; Thietart et al, 2003; Field, 2013).

b) Participants

L'étude a sélectionné 20 sur 64 écoles secondaires pilotes, soit 31,25%. Ces écoles sont

reparties dans les trois provinces administratives: Kinshasa, Bandundu et Kongo Central. L'étude a examiné entre 2 et 3% de la marge d'erreur. Ainsi, à partir de 2831 individus de la population, la calculatrice donne un échantillon représentatif ou aléatoire simple d'une taille estimée de 1380. L'étude a retenu pour chaque école, trois sources des données: six membres de comité de gestion de ces écoles ($\times 20 = 120$); vingt enseignants ($\times 20 = 400$) et soixante élèves finalistes ($\times 60 = 1200$). Cet échantillon représentatif. À ce niveau, l'étude tient compte du principe de la confiance de 95 % et du risque d'erreur de 5 % d'un échantillon aléatoire stratifié.

c) Instruments of data collection and measurement of variables

La mesure du climat et de la performance scolaire se fait par l'exploitation des variables. Les variables indépendantes sont les composantes des questionnaires sur le climat scolaire (figure 3.2). À partir de ces variables sélectionnées, nous avons adapté les deux modèles de questionnaires (Questionnaire sur l'environnement scolaire, SEQ et Enquête sur l'engagement des élèves au secondaire). La validité des échelles a été testée (tableau 3.1).

Tableau 3.1: Test de Cronbach et d'analyse de composante des composantes du questionnaire

Actors	Facteurs	Items	composante	KMO	Validité	Bartlett
Direction scolaire	Climat scolaire	18	6	.600	.666	.000
Enseignant	Climat scolaire	27	8	.749	.827	.000
Eleve	Climatscolaire	30	9	.805	.728	.000

Le questionnaire se réfère sur deux échelles: l'échelle Likert avec cinq points (Totalement d'accord, partiellement d'accord, neutre, partiellement désaccord, totalement désaccord). Le questionnaire utilisé dans cette étude est composé d'une liste de propositions (déclarations, énoncés ou questions) sous la forme condensée d'un dossier ou fiche à remplir et d'un ordre logique de succession. Ici, nous illustrious,l'extrait de certains éléments sur le climat éducatif ou d'apprentissage:

Quand j'ai des difficultés matérielles et d'apprentissage, je l'expose à mes professeurs.

Dans ma classe, chaque élève a la possibilité de manipuler l'équipement d'apprentissage pendant les sessions de leçon ou d'expériences.

Dans ma classe, les élèves sont attentifs au cours, posent des questions et répondent aux questions.

Les variables dépendantes sélectionnées sont les scores obtenus par les 20 écoles secondaires pilotes lors de l'examen national de 2016. Les variables contrôlées sont estimées en fonction des caractéristiques des acteurs scolaires et scolaires: niveaux d'éducation, taille, régime de gestion. Les variables étaient contrôlées par la fiabilité de l'instrument de données recueillies (figure) et les procédures d'échantillonnage (mêmes caractéristiques des écoles).

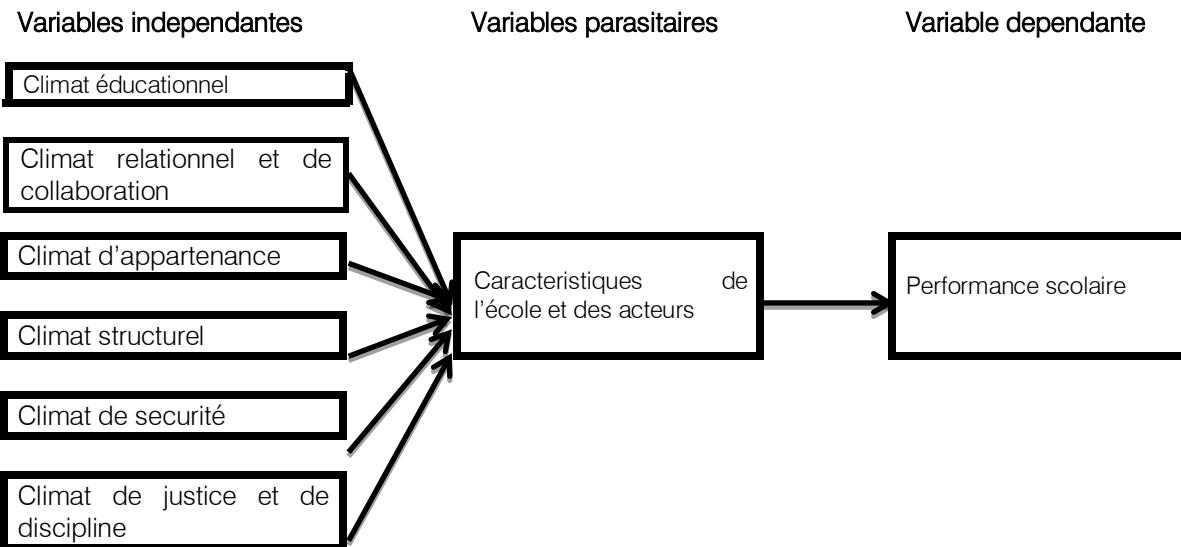


Figure 3. 2: Relation entre les composantes du climat organiationnel et la performance scolaire

d) Gestion et analyse des données

Deux types des données ont été collectés et analysés. Les données quantitatives collectées ont été gérées et traitées à l'aide du logiciel IBM SPSS (Version 22). La méthode de l'indice composite a généré un score global de réussite associé aux pratiques de climat scolaire (Velez, Johnson & Cowen, 1989; Vitaro et Gagnon, 2000). L'étude a procédé aux calculs d'alpha du Cronbach, de corrélation et de la régression logistique ordinale. Comme l'analyse de corrélation est utilisée pour déterminer la taille et l'effet de la direction de l'association entre les variables, le coefficient de corrélation est interprété ainsi: «<0,1 = faible, <0,3 =

modeste, <0,5 = modéré, <0,8 = fort et $\geq 0,8$ = très fort» (Cohen et al., 2007, p. 521). Ainsi, dans le model de régression: (i) nous introduisons d'abord la variable dépendante que l'étude explique; (iii) les variables explicatives (indépendantes) qui caractérisent un modèle; (iv) ensuite, nous appliquons les variables liées à chaque modèle. Seule la variable corrigée a été introduit dans le modèle de régression. L'étude considère l'alpha (α) = 0.05 ($p < .05$ or 5%).

Les données qualitatives collectées ont aussi analysées. L'étude a procédé au dépouillement des contenus des notes prises lors des séances des interviews semi-structurées. Le dépouillement s'est fait



selon les thèmes exploités (les climats relationnel, éducatif, de sécurité, de justice et d'appartenance). Cette opération a été facilitée par l'analyse de contenu qui est une technique d'analyse des communications d'une manière systématique objective et quantitative pour mesurer les discours. Cette technique a permis de dépouiller et traiter les contenus des discours des interviewés et analyser leurs arguments ou leurs justifications ou encore leurs commentaires aux cinq thèmes proposés. Trois étapes de l'analyse de contenu ont été respectées: (i) l'enregistrement des discours ou données qualitatives, (ii) le relevé thématique ou la catégorisation et (iii) la simple

a) Résultats quantitatifs

Tableau 4.1: Corrélations entre climat des écoles et résultats des élèves

	Pupil		Teacher		Management staff	
Variables (*)	Corrélation 95% CI [LL, UL]	Sig. (α)	Corrélation 95% CI [LL, UL]	Sig. (α)	Corrélation 95% CI [LL, UL]	Sig. (α)
Relational Climate	.133** [.065, .195]	.000	.579** [.406, .847]	.000	.460** [.250, .965]	.000
Collaboration climate	.153** [.068, .195]	.001	.589** [.452, .887]	.000	.465** [.198, .965]	.002
Educational Climate	.146** [.077, .209]	.000	.554** [.477, .628]	.000	.608** [.352, 1,000]	.000
Discipline Climate	.149** [.079, .212]	.000	.260** [.070, .450]	.004	.389** [.252, .779]	.001
Structural Climate	.186** [.079, .211]	.002	.557** [.389, .831]	.000	.673** [.446, .894]	.000
Safety Climate	-.064ns [-.208, .064]	.098	.423** [.241, .597]	.004	.566** [.3380, .872]	.000
Climate of belonging	-.029ns [-.096, .036]	.388	-.134ns [.246, .008]	.145	.125ns [.067, .441]	.175
Climate of justice	.083* [.013, .151]	.013	.686** [.597, .780]	.000	.338** [.160, .495]	.000

CI = confidence interval; LL = lower limit, UL = upper limit; α = Seul de signification: $p \leq .01^{**}$ et $p \leq .05^*$, ns = not significant ($p > .05$).

Premièrement, les fournissent les données triangulées des corrélations sur le climat des écoles. Les résultats triangulés (tableau 4.1) de corrélations ont montré les types des climats scolaires et leurs effets sur les résultats des élèves.

Les résultats triangulés de trois sources des données respectivement des élèves (1.200), des enseignants (400) et de personnel de direction (120) ont montré des effets positifs et significatifs de sept composantes du climat organisationnel des écoles sur la performance scolaire des élèves, par exemple pour

quantification en proportion (Ngongo, 1999 ; Luboya, 2018). Le chercheur a enregistré les données de cinq thèmes (climats relationnel, éducatif, de sécurité, de justice et d'appartenance). Ensuite, il les a catégorisées selon les idées, les unités et les contextes, et enfin, il a prélevé leurs fréquences afin de les quantifier en pourcentages grâce à la simple analyse statistique.

IV. RÉSULTATS

Suivant le mode de présentation adoptée et décrit à la méthodologie, les résultats quantitatifs seront précédés des résultats qualitatifs selon l'approche séquentielle pour faciliter la lisibilité des résultats.

la seule source des élèves ont montré statistiquement les effectifs positifs et significatifs du climat relationnel ($r=.133$, $p=.000$); du climat éducatif ($r=.146$, $p=.000$); du climat de discipline ($r=.149$, $p=.000$); du climat de justice ($r=.083$, $p=.013$), du climat de collaboration ou coopération ($r=.153$, $p=.001$) et du climat structurel ($r=.186$, $p=.002$) sur la performance scolaire. Par ailleurs, pour les trois sources des données, le climat d'appartenance n'a aucune relation avec la performance scolaire (tableau 4.1).

Tableau 4.2: Régression Logistique du climat et des caractéristiques des écoles

Prédicteur	B	S.E	Wald	p-value	Odds Ratio
Climat relationnel					
Elève	.515	.211	5.958**	.015	1.673
Enseignant	3.888	.459	71.596**	.000	48.811
Personnel de direction	1.013	.361	7.863**	.005	2.754
Climat de coopération					
Elève	.615	.291	8.958**	.015	1.471

Enseignant Personnel de direction	3.718 1.313	.479 .461	76.196** 7.863**	.002 .005	46.111 3.114
Climat éducatif Elève Enseignant Personnel de direction	.815 4.224 1.546	.200 .481 .562	16.658** 76.973** 7.576**	.008 .002 .006	2.258 68.334 4.692
Climat de discipline Elève Enseignant Personnel de direction	.717 2.895 1.232	.215 .431 .541	11.083** 45.203** 5.193*	.001 .000 .023	2.048 18.078 3.430
Climat structurel Elève Enseignant Personnel de direction	.789 2.145 2.129	.215 .431 .639	9.063** 25.103** 11.109**	.007 .010 .001	2.008 16.058 8.405
Climat de sécurité Elève Enseignant Personnel de direction	1.172 6.223 2.366	.353 .729 .657	11.028** 72.884** 12.979**	.001 .006 .020	3.227 504.363 10.660
Climat de justice Elève Enseignant Personnel de direction	.154 -.173 3.243	.422 .156 .766	.133ns 1.221ns 17.932**	.715 269 .000	1.167 .842 25.618
Modèle élève (76% de cas) $R^2 = 16.248$ (-2 Log Likelihood) .402 (Cox & Snell) .542 (Nagelkerke). Model $\chi^2(6) = 61.772$, $p < .0005$					
Modèle Enseignant (90% de cas) $R^2 = 8.061$ (-2 Log Likelihood) .45 (Cox & Snell) .63 (Nagelkerke). Model $\chi^2(6) = 70.969$, $p < .0005$.					
Modèle Personnel de direction (86% de cas) $R^2 = 140.86$ (-2 Log Likelihood) .290 (Cox & Snell).522 (Nagelkerke).Model $\chi^2(6) = 211.123$, $p < .0005$.					
$\alpha = \text{Seul de signification: } p \leq .01^{**} \text{ et } p \leq .05^*, ns = \text{not significant } (p > .05)$.					

Les analyses de régression ont esquissé trois modèles explicatifs de la performance scolaire des élèves. Autrement expliqué, trois sources des données triangulées ont produit trois modèles. Ces modèles prédisent la performance scolaire des élèves en utilisant les sept composantes du climat scolaire.

Le modèle basé sur les données des élèves (1.200) prédit la performance scolaire à partir des sept (7) composantes du climat scolaire (tableau 4.2). Ce modèle de régression est statistiquement significatif, $\chi^2(6)= 61.772$, $p < .0005$. Le modèle explique entre 40,2% (Cox & Snell R^2) et 54,2 % (Nagelkerke R^2) de variation de la performance scolaire et classifie correctement 76% des cas.

Le modèle basé sur les données des enseignants (400) prédit la performance scolaire à partir des sept (7) composantes du climat scolaire (tableau 4.2). Ce modèle est statistiquement significatif, $\chi^2(6)= 70.969$, $p < .0005$. Il explique entre 45 % (Cox & Snell R^2) et 63 % (Nagelkerke R^2) de variation de la performance scolaire des élèves et classifie correctement 90% des cas.

Le modèle basé sur les données de personnel de direction (120) prédit la performance scolaire à partir des sept (7) composantes du climat scolaire (tableau 4.2). Ce modèle est statistiquement significatif, $\chi^2(17) = 211.123$, $p < .0005$. Il explique entre 29 % (Cox & Snell R^2) et 52,2 % (Nagelkerke R^2) de variation de la

performance scolaire des élèves et classifie correctement 86% des cas.

b) Résultats qualitatifs

Les résultats quantitatifs ont montré que les sept composantes du climat scolaire de ces écoles non seulement ont des relations statistiquement significatives avec la performance scolaire mais aussi prédisent la performance scolaire. La question la plus pertinente est celle de savoir comment les composantes du climat scolaire influencent-elles la performance des élèves. Sur ce, l'analyse des contenus des interviews a permis de regrouper les explications qualitatives des différentes composantes du climat scolaire en quatre points:



c) A propos du climat structurel

Le climat structurel a été abordé dans les interviews par rapport à l'implication de structure organique et fonctionnelle sur la performance scolaire. Il s'agit du pilotage de la structure formelle de l'école à travers le leadership et supervision pédagogique. L'importance du leadership et de la supervision pédagogique a été reconnue par les acteurs interviewés. Trois modes de leadership pédagogique peuvent être ressortis de contenus des interviews: direct, indirect et intermédiaire.

Le Leadership et la supervision pédagogique directe sont exercés par les chefs d'établissements et leurs collaborateurs directs dans le domaine de la pédagogie (directeur des études et conseillers pédagogiques) sur les chefs des unités pédagogiques, les enseignants et les élèves durant les visites effectives et éclairées d'inspection interne des classes, de contrôle des documents pédagogiques des enseignants et des élèves. Ce leadership explique entre 28 et 58 % de variations de la performance académique des élèves. Sur ce, quelques déclarations ont été enregistrées. La plupart des chefs d'établissement s'accordent à cette déclaration: « [...] J'ai souvent fait des tours des classes pour savoir ce qui se passe là-bas [...] lors de mes visites, je vérifie plus la méthodologie utilisée par mes enseignants, l'état d'avancement et d'achèvement des programmes [...] » (82% de Chef d'Etablissement ou CE). Les autres ont ajouté similairement « Après mes visites de classes, je convoque les réunions pédagogiques [...] cela m'aide à formuler des remarques collectives». (25% de CE). L'exploitation des rapports des résolutions des réunions pédagogiques et leur application sont importants comme l'ont reconnus quelques chefs d'établissements: « les reports des visites de classes sont discutés dans des réunions pédagogiques [...] nous visons l'efficacité des enseignants et la réussite des élèves ». CE: 1, 2, 3 et 4. Certains collaborateurs directs de chefs d'établissement ont insisté sur le suivi des activités pédagogiques: « [...] parmi mes tâches, j'assure le suivi d'achèvement des programmes de formation par les enseignants [...] durant mes visites des classes, je contrôle et signe les documents des élèves [...] cela m'aide à contrôler l'état d'avancement des prévisions des matières des enseignants [...] et l'application(s) des élèves» Directeur des Etudes ou DE : 3, 13, 14 et 17. Certaines conseillers pédagogiques parlent de la délégation du pouvoir dans le leadership pédagogique direct ; «le préfet me délègue la tâche d'aller visiter les enseignants [...] il (préfet) a beaucoup des tâches à faire [...] je l'assiste à certaines tâches [...] je signe et contrôle les documents des enseignants chaque matin avant qu'ils (enseignants) (commencent à enseigner) débutent avec les enseignements dans leurs classes respectives [...] je signe ou paraphe leurs documents pédagogiques [...] »

j'y formule parfois des remarques» Conseiller Pédagogique ou CP : 5, 6, 8, 9, 10, 15, 16 et 18.

Le « leadership et la supervision pédagogique intermédiaire » est exercé par les chefs des unités pédagogiques sur leurs collègues. Mais, ce mode est plus pratiqué dans un climat mutuel ou amical. Le climat de collaboration explique entre 28.7% et 51.7% de variations des résultats des élèves. Ce constat fut dégagé par un échantillon de trois interviews : « Dans mon école, je suis le chef de mon unité pédagogique [...], je réunis mes collègues régulièrement [...] » Elève ou E: 6, 10 et 18. Deux autres enseignants ont ajouté « Notre unité pédagogique est dirigé par notre doyen des professeurs de français du collège...lui a beaucoup d'expérience » Personnel enseignant ou PE : 2 et 18. Quelques enseignants ont confirmé l'usage de leadership intermédiaire : «Oui, j'ai été nommé par le préfet des études [...] il (préfet) m'avait demandé d'encadrer les autres dans ma discipline vu mon expérience et ma qualification [...] je lui fais rapport chaque mois [...] » (50% des enseignants).Pour un enseignant, chef d'unité pédagogique : « dans nos réunions, il y a l'entraide entre profs, les anciens aident les nouveaux [...] pour cela il n'y a pas des problèmes » PE : 5, 7, 12 et 14.

Par ailleurs, le leadership pédagogique indirect est exercé par les enseignants sur leurs élèves au moment de la conduite des leçons en classes et explique entre 52.3 et 94.2% de variations des résultats des élèves. Trois types de pratiques sont exécutés dans ce leadership : Les pratiques pédagogiques, d'instructions et de soutiens privésont été expliqués par 87% des enseignants interviewés: « trois choses sont importantes pendant la leçon [...] réviser la leçon passée [...], présenter, expliquer ou démontrer la leçon du jour [...] oui, avec les matériels d'enseignement [...], donner les tâches et guider les enfants...je donne aussi les devoirs à domicile[...]». Un enseignant explique la disponibilité à l'accompagnement des élèves pour la résolution de leurs difficultés d'apprentissage: «les élèves viennent nous exposer leurs difficultés même dehors après les cours [...] c'est notre devoir de les aider» PE : 13. Quelques représentants des élèves apprécient positivement les enseignements de leurs enseignants : «J'aime mes enseignants, ils sont trop intelligents, ils sont cool...ils expliquent bien les cours [...] ils veulent notre réussite, mais ils donnent trop des devoirs à domicile [...]» « [...] Le prof de mathématique est trop sévère dans la correction des devoirs [...] je ne sais pas pourquoi ? » (62% de PE ont émis les opinions similaires) soutenu cette option).Ainsi, pour ces élèves, leurs enseignants compétents sont sévères et dévoués et expliquent bien les cours (82%). Ils font faire beaucoup d'exercices d'application pendant les cours et donnent des exercices après le cours ou du travail à domicile (91,2%). Ces pratiques motivent et obligent les

élèves à travailler et à réussir dans chaque leçon, branche ou discipline, (par conséquence) dans l'ensemble des cours et à l'examen scolaire et national.

d) Concernant le climat éducatif

Concernant les aspects du climat éducatif, trois pôles de relations font une synergie de l'efficacité. Les élèves sont disposés à apprendre (les enseignants sont disposés à les aider à apprendre et les parents sont impliqués dans l'accompagnement scolaire de leurs enfants).

Les enseignants apprécient positivement l'implication, l'attachement et l'application de leurs élèves aux activités scolaires. Sur ce, quelques enseignants ont similairement déclaré ce qui suit: «*j'ai enseigné dans plusieurs écoles avant d'être recruté ici [...] j'ai constaté qu'ici les élèves sont éveillés et très actifs aux leçons [...] ils sont curieux d'apprendre et posent trop des questions pour comprendre la matière enseignée [...] cela me motive à enseigner*» (73% de PE). Quelques directeurs des études déclarent: «*Les professeurs sont très proches des (leurs) élèves et ils n'hésitent pas à les aider à affronter et à surmonter leurs difficultés [...] certains enseignants sollicitent l'animation des séances d'encadrement supplémentaire collectif [...] traitant de notions ou de chapitres non maîtrisés [...] assurant les cours devant être enseignés mais qui ne l'étaient pas pour se conformer au programme de formation*» (81% de DE). Dans certaines de ces écoles, les cours de rattrapages ou d'encadrement collectif sont organisés aux heures d'après-midis; les enseignants comme les élèves se décident de rester à l'école pour les séances de rattrapages des cours non assurés. Les élèves attestent ce qui suit: «*nos professeurs sont souvent disponibles et prêts à nous aider à résoudre nos difficultés d'apprentissage scolaires*» (72% de E). Les enseignants sont favorables à recevoir les élèves pendant les heures de pause ou de la récréation et certaines d'entre eux se sont exprimés sur leur disponibilité à fournir le soutien pédagogique privé à l'heure de la pause à l'école: «*nos professeurs de mathématiques nous sensibilisent à solliciter leur aide pendant la récréation [...] ils (professeurs) disent que si nous avons des difficultés, nous pouvons aller les voir à la pause*» et «*mon professeur de mathématique m'a proposé de m'encadrer à domicile [...] j'ai rapporté le désir de ce professeur à mes parents [...] cela constitue une aide salutaire pour moi*» PE: 10, 11 et 15. Certains représentants des élèves expliquent ce qu'ils font pour réussir aux examens : «*mes amis et moi, nous voulons à tout prix obtenir nos diplômes cette année scolaire [...] rien ne va nous empêcher d'atteindre ce but [...] nous étudions et respectons les consignes de nos professeurs [...] nous ne voulons pas être en retard avec les programmes des différents cours, nous demandons (sollicitons) des cours d'encadrement et de rattrapage [...] nous évitons de fuir les cours et ne*

ménageons aucun effort pour être toujours présents à l'école[...] les professeurs disent de ne rien négliger d'autant que les questions d'évaluation couvrent tous les programmes[...] nous étudions sérieusement (de manière assidue) et travaillons en groupes E: 4, 9, 10, 13, 17 et 20. Ces déclarations révèlent que la volonté d'apprendre chez les élèves est manifeste par leur assiduité, leur attachement, leur auto-détermination et leur sens, gout et disposition mentale à apprendre et les enseignants se disposent psychologiquement à les accompagner vers la réussite scolaire.

Outre l'encadrement et soutien pédagogique des enseignants, il ressort de l'analyse de contenu de cette thématique deux types d'encadrement ou coaching pédagogique notamment: le coaching de chef d'établissement et le coaching de conseiller d'orientation.

Le coaching de chef d'établissement et ses adjoints est une des stratégies utilisées par ces écoles pour influencer directement la performance scolaire des élèves. Plusieurs acteurs en l'occurrence les élèves, les parents et les enseignants applaudissent l'implication de direction scolaire dans la réussite des élèves aux examens de l'école et d'Etat. Les élèves finalistes ont déclaré similairement que: «*le Préfet entre souvent brusquement dans la salle de classe pendant le déroulement d'une leçon [...] il vérifie nos notes et y restent jusqu'à la sortie du professeur [...] il (préfet) est compliqué [...] tantôt sévère, tantôt trop gentille, [...] il donne des conseils [...] il nous dit il faut réussir pour honorer les parents[...] vrai, même les CP et DC [...] mais le DD lui est trop dur*» P:2, 4, 10, 11, 12, 18 et 20. Le coaching des chefs d'établissements est aussi reconnu par certains enseignants: «*ce que j'admire chez l'abbé Préfet, c'est son implication dans la réussite de nos finalistes du secondaire. Il (préfet) ne reste pas assis dans son bureau comme certains le font.* » T: 13. L'analyse de contenu des interviews des élèves et enseignants dégage un résumé des pratiques de coaching de management staff. Sur ce, les préfets des études de ces écoles (88, 6%): «*convoquent les réunions ordinaires et extraordinaires avec les élèves afin de leur donner des directives à suivre et des stratégies à adopter pour garantir la réussite aux examens d'Eta; insistent sur l'autodétermination et l'assiduité des élèves aux études ainsi que sur l'importance de l'assistance et de la participation aux leçons en classe; motivent, informent et sensibilisent régulièrement ses élèves sur la nécessité de l'organisation, les critères et les causes de réussite et d'échecs aux examens d'Etat; communiquent à leurs élèves les instructions officielles sur les examens hors sessions (dissertation et jury pratique) et sessions ordinaires. Ils assurent le suivi des états d'avancement des programmes des matières de chaque cours et parlent des difficultés d'apprentissages relatives à chaque cours* ». Les directeurs des études et



les conseillers pédagogiques (72%): «organisent des réunions avec les élèves et expliquent l'intérêt de chaque matière contenue dans les programmes des différents cours sur la réussite aux examens d'Etat; font le suivi d'avancement des programmes et établissent des horaires des leçons de rattrapage; expliquent et entraînent les élèves au remplissage correcte des grilles des réponses électroniques des items des examens d'Etat; sensibilisent et montrent aux élèves l'impact des scores des examens de l'école sur la réussite aux examens d'Etat ; organisent et surveillent les études personnelles des élèves ».

Le coaching de conseiller d'orientation joue aussi un rôle déterminant dans la gestion et la réussite des élèves. Quelques membres du comité de parents ont déclaré: «*l'une des raisons de la réussite des élèves aux examens d'Etat durant ces années est relative [...] au fait qu'ils (nos enfants) sont suivis de manière régulière par leurs éducateurs à l'école [...] cette école possède un système de suivi rigoureux des élèves [...] je félicite les membres des services pédagogiques et les enseignants pour leur efficacité.*» (87% de CP). Les élèves reconnaissent que le service d'orientation et guidance joue un rôle important. Quelques représentants des élèves ont déclaré: «[...] j'avais des difficultés en mathématique, le Conseiller d'orientation m'a proposé d'opter pour la section littéraire [...] maintenant je me retrouve et j'en suis satisfait [...] le Conseiller d'orientation m'a toujours suivi depuis (mes troisièmes années) trois ans que je suis dans cette école [...] parfois il invitait mes parents et mes professeurs dans son bureau pour quelques échanges sur moi» (72%). Les services d'orientation et guidance fonctionnant au sein de ces écoles sont efficaces dans le suivi et accompagnement des élèves à la réussite.

e) *A propose des climats de sécurité, de juste et de discipline à l'école*

Dans l'analyse des contenus des interviews, les acteurs font mention de l'implication du personnel de la direction de la discipline dans leurs écoles afin d'assurer le climat de l'ordre, de sécurité, de justice, de paix, de discipline. Deux modes opératoires des disciplines sont employées à savoir la discipline préventive et la discipline répressive.

La base de la discipline préventive est la distribution des copies de règlement d'ordre intérieur de l'école à tous les élèves. A ce sujet, les agents de la discipline (82%) ont déclaré: « [...] dans chaque cahier de communication entre l'école et la famille de nos élèves, l'école y a annexé le règlement d'ordre d'intérieur des élèves ». Certaines agents de la discipline précisent similairement sur la prise de connaissance de ces règles: «*je le fais lire article par article, au début de la classe [...] quand les élèves s'alignent devant le drapeau du pays*» Directeur de Discipline (DD): 9 et 13.

«*je fais toujours signer aux parents (sur) le règlement scolaire se trouvant dans le journal de classe de leurs enfants [...] je leur demande d'en prendre connaissance [...] je leur rappelle lors de convocation en cas de non-respect de règlement par leurs enfants*» DD: 3. 90 % des élèves interviewés ont affirmé l'efficacité de cette pratique et déclare avoir la connaissance du règlement de l'école: «*Je connais le règlement de mon école, [...] oui, je l'ai dans mon journal de classe, je crois que nous tous (élèves) dans cette école, nous connaissons le règlement [...] mais nous oublions parfois à appliquer le contenu [...]*».

La discipline répressive est celle qui est exercée par le personnel de discipline. Les chefs d'établissement ainsi que les agents de la discipline des écoles ont relevé ce qui suit: «*La direction de la discipline et ses agents s'occupent des problèmes de la discipline. Ils sont plus aptes et adaptés à ces problèmes*» (85% de Chef d'Etablissement, CE). Quelques chefs d'établissement ont ajouté «*mon école est appréciée par les parents d'élèves grâce à sa rigueur [...] nous sommes sévères vis-à-vis de (à) l'indiscipline [...] nous appliquons la tolérance zéro face aux mauvaises conduites des élèves*» (opinions similaires à celles de 65% de CE). Dans ce sens, 82, 5% des directeurs de discipline déclarent similairement: «*nos agents de surveillance vont jusqu'au-delà de nos murs de l'école [...] ils aident les élèves à traverser les grandes routes au début et à la fin des cours*». Quelques représentants des élèves ont déclaré: «*Notre école exagère un peu. Ils (les agents de discipline) contrôlent même nos coiffures et habillements [...] même les communiqués transmis aux parents [...] je n'ai pas de choix, mes parents aiment seulement cette école*» (68% des Elèves, E). Un président de comité des parents s'est exprimé en ces termes: «*j'aime que mes enfants fréquentent cette école. Ici, la discipline est de rigueur. Les enfants ne peuvent pas faire tout ce qu'ils veulent ou désirent [...] mes enfants reçoivent une bonne éducation ici*» (déclarations similaires à celles de 52% de Conseiller Pédagogique, CP). Dans ces écoles, quelques enseignants révèlent que: «*les cas d'indiscipline notoire et grave sont moins fréquents dans le chef des élèves [...] les violences sont découragées par des punitions sévères [...] les élèves ont peur de se livrer à la bagarre*» PE: 3, 2, 9 et 12. Certains enseignants motivent la sévérité dans la discipline et disent: «*chaque année, les finalistes sont envoyés de l'école même à la veille des examens d'état*», PE: 14, 15 et 20. Dans ce cas, les directeurs de discipline de ces écoles «*insistent sur la régularité, la ponctualité et fait la ronde de l'école et des classes afin d'y assurer l'ordre, le calme et discipline (à l'école et en classe); ils font régulièrement le prélèvement des présences des élèves avant, pendant et après la récréation ou la pause; ils surveillent l'usage de la langue d'enseignement et le non application du*

règlement scolaire en classe et à l'école; ils convoquent les parents d'élèves négligents, absentéistes ou irréguliers aux cours et non assidus aux enseignements et rappellent les parents le contenu du règlement scolaire attaché dans les journaux de classe; ils établissent et communiquent les horaires de surveillance des élèves pendant les heures d'études ou d'examens de l'école» (89%).

f) *A propos des climats relationnel et des collaboration ou de coopération*

Il ressort de contenu des interviews, plusieurs types de relations et de collaboration au sein des écoles cibles. Il s'agit de relation et coopération entre le management staff, entre le management staff et les enseignants, entre le management staff et les élèves, entre les enseignants eux-mêmes, entre les enseignants et les élèves et entre les élèves. Les pratiques de ces collaborations expliquent la variation de la performance des élèves. C'est qui revient à dire que la bonne relation et collaboration est même le socle des activités de l'école et rien ne se fait à l'école sans qu'il passe par les liens de collaboration. Pour enseigner, donner les ordres ou directives, il faut collaborer avec les autres acteurs de l'école.

Au premier niveau, il y a la collaboration et la communication entre le management staff suivi de la collaboration entre management staff et les enseignants. Quelques membres de comité de gestion des écoles ont avancé des explications similaires: « *il est difficile de faire ce gros travail de l'administration seul [...] chaque collaborateur apporte sa contribution à la réussite de notre mission [...] avec la taille de notre école, il faut associer les autres collaborateurs à la gestion [...] nous travaillons en collaboration même sur nos tâches quotidiennes [...] » CE: 2, 4, 8 et 9. Deux collaborateurs de chefs d'établissement estiment similairement: « [...] bien que les petits conflits du leadership peut surgir ça et là [...] nous sommes obligés de nous surpasser et de faire mieux pour la réussite de nos élèves [...] c'est ce que les parents attendent de nous» DE: 12 et 13. Quelques chefs d'établissement ont déclaré: « *mais c'est par la collaboration que je donne des directives [...] j'organise, je dirige les autres, j'influence leur travail [...] la collaboration me permet de contrôler, de donner des avis et conseils aux collaborateurs, aux enseignants et autres [...] » (20% des CE). Quelques préfets des études ont ajouté « *l'union fait la force [...] nos résultats aux examens d'Etat ne sont rien d'autres que le fruit de l'unité entre nous (comité de gestion) et complicité dans le travail [...] nous constituons une équipe des gagnants [...]» CE : 12, 14, 16, 17 et 18. Il faut aussi souligner que les membres de comité de gestion tiennent des réunions mensuelles d'évaluation du fonctionnement de l'école et leur véritable travail en équipe se matérialise par ces réunions. Les résolutions de ces réunions sont***

communiquées aux autres employés de l'école. Pour communiquer, ces membres de comité de gestion de l'école recourent à plusieurs canaux: « *notes circulaires et exigent aux enseignants de les contresigner après avoir pris connaissance de leur contenu [...] certainement ça marche, j'utilise les valves de l'école comme voie de communication [...] elles (valves) sont justes à côté des salles de travail des professeurs [...] moi, je convoque souvent des réunions pour communiquer certains messages [...] je recours au service des portiers de l'école pour qu'ils informent chaque enseignant qui arrive à l'école de mon désir de m'adresser à eux [...] j'annexe le communiqué au registre de présences du personnel enseignant pour qu'il soit lu par tous » CE :4, 6, 7, 19 et 20.*

Ces synthèses de déclarations montrent qu'il existe des relations de collaboration chez le management staff entre eux et le management staff et les autres employés de l'école. Les déclarations similaires des enseignants ajoutent ce qui suit à propos de la disponibilité et de l'écoute des problèmes des employés par le management staff: « [...] l'Abbé Préfet apporte de l'aide à beaucoup des gens (employés) [...] il (préfet) est toujours à l'écoute de nos problèmes et doléances, je l'apprécie beaucoup [...] le Préfet et le DE arrivent souvent parmi les premiers à l'école [...] ils nous saluent dès notre arrivée à l'école, ils savent nous comprendre et lire nos problèmes dans les visages [...] nous approchons nos chefs en cas de problème qui nous assaillent [...] ils (chefs) nous reçoivent sans qu'ils ne tergiversent » PE :3, 4, 6, 14, 15, 16 et 17.

Au deuxième niveau, il y a la collaboration et la communication entre les enseignants eux-mêmes puis entre les enseignants et les élèves. La collaboration entre enseignants se constate dans le cadre de leurs travaux en équipe organisés au sein des unités pédagogiques. Ces unités pédagogiques bénéficient de l'appui des chefs d'établissements et de leurs collaborateurs en l'occurrence les directeurs des études et les conseillers pédagogiques et les enseignants. Les chefs d'établissements et de leurs collaborateurs nomment les enseignants ayant la plus haute qualification et ancienneté comme présidents des unités pédagogiques ainsi qu'un secrétaire. Les unités pédagogiques sont constituées par les enseignants de la même discipline. A ce sujet, quelques enseignants ont déclaré similairement ce qui suit: « *je suis satisfait de participer dans mon équipe de travail [...] il y règne un l'esprit d'équipe et chaque enseignant témoigne d'une ouverture de l'esprit (entre nous enseignants), [...] je crois que c'est ce qui fait le succès de notre école.[...] Mes collègues sont prêts à collaborer et à apporter des solutions (à nos) aux problèmes pédagogiques rencontrés pendant les prestations en classe» (78% des PE). Lorsqu'un qu'un enseignant est seul dans sa spécialité, il rejoint l'unité de recherche qui se rapproche*



de sa discipline: « je suis professeur des cours de la formation psychopédagogique, je suis seul dans cette école [...] le préfet m'a placé ou affecté dans l'unité pédagogique proche de ma spécialité [...] chez les collègues des langues [...] je crois que j'aurai des ennuis, mais je (veux me débrouiller) pourrais bien m'adapter [...]» (déclarations similaires à celles de 49% des enseignants). Les enseignants donnent des explications similaires sur les moments de l'organisation de leurs réunions: «nous nous regroupons une fois par mois pour les échanges au sein des unités de recherche [...] nos réflexions sont axées sur les difficultés auxquelles nous sommes confrontés [...]des solutions appropriées à ces difficultés sont aussi trouvées [...] nos rencontres se réalisent souvent après les cours pour ne pas perturber les enseignements [...]certains professeurs souhaitent que les réunions des unités de recherche se déroulent pendant la pause ou la récréation pour ne pas rester l'école encore longtemps». PE: 12, 14, 15, 16, 19. Pour illustrer le travail d'un secrétaire d'une unité pédagogique, quelques enseignants déclarent: « [...] je suis le secrétaire de notre équipe [...] je rédige le procès-verbal de nos réunions [...] je le fais valider par les collègues, membres de l'équipe et le transmets à la hiérarchie (préfet, directeur des études, conseiller pédagogique) pour information». Pour les enseignants, les thèmes abordés dans les unités de recherche concernent sont entre autres: « les démarches méthodologiques des leçons [...], la tenue des documents pédagogiques notamment les fiches de préparation des leçons [...], l'état d'avancement des plannings des leçons en rapport avec le calendrier scolaire et les programmes de formation [...] le partage des expériences personnelles relativ à l'enseignement des leçons complexes et aux difficultés se rapportant à la didactique et à l'apprentissage (de l'enseignement et d'apprentissage des élèves) [...]les échanges dans des réunions se réalisent dans un contexte de fraternité, les forts viennent en appui aux faibles [...] cet esprit d'équipe fait que nous assurons des enseignements de qualité aux élèves[...] »PE : 1, 2, 3, 10, 11, 12, 16 et 20. Ce travail d'équipe permet la résolution des lacunes individuelles, améliore et harmonise les relations interpersonnelles et rapprochent les enseignants les uns des autres (communicationnelles interpersonnelles). Ce sont les élèves qui en tirent véritablement profit car la collaboration et de renforcement des capacités pédagogiques des enseignants sont facteurs déterminants de la performance des élèves.

Le sens de collaboration entre enseignants influe positivement sur les élèves qui se sentent appartenir à une grande famille. Le fait pour que les enseignants organisent les élèves en groupe de travail, donnent des devoirs, appuient et encadrent mieux les devoirs des élèves, les élèves. Ils créent ainsi des liens

affectifs et amicaux entre eux et cela améliore leur performance scolaire. Certains élèves déclarent ce qui suit : «lorsqu'il arrive qu'un élève perd son frère ou sa sœur ou encore un de ses parents, l'école organise une collecte des fonds d'assistance sociale, classe par classe [...] souvent ce sont des chefs de classes qui se rendent au lieu de deuil pour assister l'élève éprouvé [...] ils y vont accompagner des enseignants et de chefs d'écoles (personnel de direction) [...] » E: 9, 10 13 et 15. La déclaration des élèves démontre l'usage de l'éducation au secourisme et à la complicité: « le DD (directeur de discipline) et les professeurs nous disent si quelqu'un du dehors menace un enfant du collège sur la rue, nous devons lui assurer protection [...] et solliciter l'intervention des adultes passant ou de la police ». Et « Moi, lorsque je suis malade ou absent en classe, mes amis m'expliquent les leçons que j'ai ratée [...] soit ils (amis et amies) me donnent leurs notes pour que je copie soit ils copient pour moi » (76% de E).

V. DISCUSSION

La performance scolaire des écoles et des élèves sont expliqués par les sept composantes du climat scolaire notamment le climat éducatif, relationnel, de coopération ou de collaboration, de justice, de sécurité, de discipline et structurel. Ces résultats sont expliqués qualitativement par les pratiques liées à chacune de ces composantes du climat organisationnel des écoles. Autrement, plus les climats structurel, éducatif, relationnel, de discipline, de sécurité, de justice et de collaboration sont favorables aux apprentissages, plus les résultats des élèves sont meilleurs. Les résultats similaires des effets de ces climats scolaires ont été rapportés dans plusieurs études (Teddlie & Reynolds, 2000; Scheerens, 2000; Brault, 2004 ; Basque, 2014).

Les résultats de l'étude ont montré, outre, que sur les huit composantes du climat scolaire, une seule (climat d'appartenance) n'a pas de relation avec la performance. Les résultats de plusieurs études (Jánosz, Georges et Parent, 1998; Brunet, 2001) ont affirmé cette relation. Cette différence peut s'expliquer par la différence du point de vue échantillonnage. Tous les élèves sont en année terminal et souhaite finir leur étude et quitter leurs écoles. Le contexte socio-économique de vie des enseignants est facteur explicatif de leur mobilité.

L'étude a montré que les effets des composantes du climat scolaire sont affirmé significativement et qualitatives par les différents acteurs scolaires (enseignants, apprenants et personnel de direction). Ces effets sont différents selon la taille de leur coefficient de détermination et ils peuvent être classés proportionnellement.

Les résultats peuvent être classés en groupe des composantes du climat scolaire par rapport à leur apport sur la performance scolaire. En effet, par

définition, le climat est la résultante de la combinaison des plusieurs éléments. Le climat scolaire est un produit de synergie des trois plusieurs composantes qui peuvent influencer positivement ou négativement la performance scolaire. Il s'agit des composantes fondamentales du climat scolaire (l'encadrement pédagogique direct des enseignants, du chef d'établissement et du conseiller pédagogique et l'encadrement pédagogique indirect du chef d'établissement sur le personnel enseignant), les composantes de soutien du climat scolaire (leadership et supervisons pédagogique de la structure organique et fonctionnelle par les acteurs scolaires et relation et

collaboration ou coopération entre les acteurs scolaires) et les composantes contextuelles du climat scolaire (atmosphère d'ordre, de sécurité, de discipline préventive et sanctionnait et de justice). A cet effet, les écoles doivent baser leur intervention ponctuelle sur ces composantes afin d'améliorer la performance scolaire. S'il faut considérer l'urgence et la nécessité, les décideurs peuvent être guidés par deux formes d'intervention: pyramidale et circulaire. La première forme (figure 5.1) montre la nécessité de prioriser et hiérarchiser les composantes du climat scolaire selon leur signification qualitative et quantitative sur la performance des élèves et des écoles.

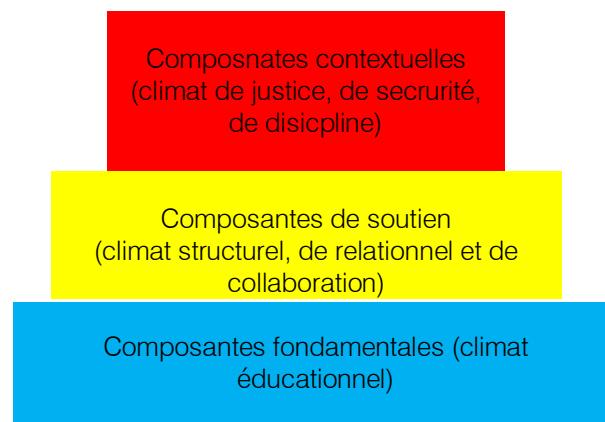


Figure 5.1: Forme pyramidale des composantes du climat scolaire

La deuxième forme (figure 5.2) est celle dite circulaire ou étoilée. Il s'agit de la considération des

composantes du climat scolaire sans aucune priorité mais dans l'optique de relativité et de complémentarité.

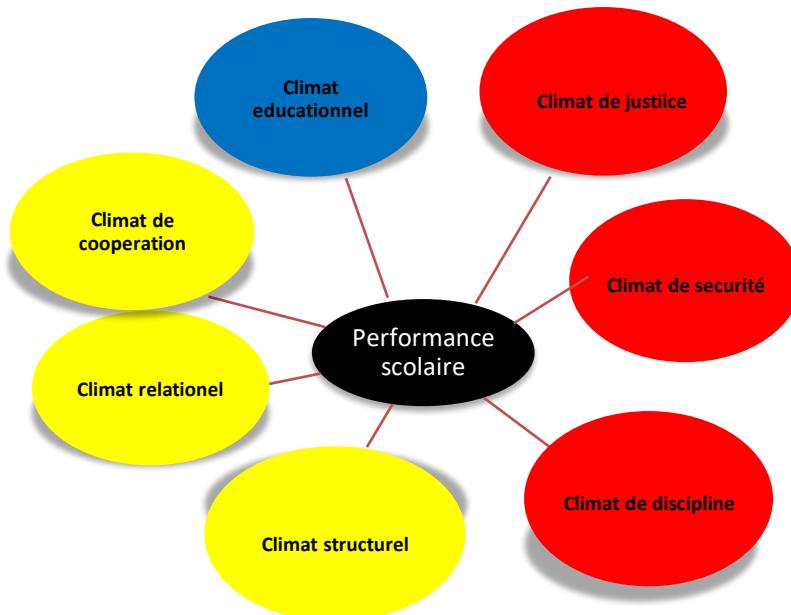


Figure 5.2: Forme circulaire des composantes du climat scolaire

VI. CONCLUSION

Cette étude est partie du constat selon lequel, le climat organisationnel est facteur explicatif de la performance scolaire du personnel. L'étude a testé les effets du climat organisationnel des écoles secondaires pilotes de la RDC. Les résultats ont confirmé quantitativement et qualitativement que sept sur huit composantes du climat organisationnel ont des effets sur la performance scolaire par la triangulation des sources des données (enseignants, management staff et élèves). Ces résultats ont mis en exergue trois groupes du climat scolaire notamment les composantes fondamentaux, les composantes de soutien et les composantes contextuelles.

Par ailleurs, ces résultats sont tributaires à son échantillon et ses caractéristiques. Ils doivent être considérés dans la perspective de relativité et de complémentarité car le climat scolaire est un produit des plusieurs composantes en synergie. Celles-ci agissent ensemble pour produire la bonne ou la mauvaise performance scolaire.

Néanmoins, les résultats de cette étude plaident pour une intervention des acteurs scolaires, les décideurs et les opérateurs sur le climat scolaire. L'étude propose ce qui suit:

- Les opérateurs éducatifs et décideurs doivent s'invertir sur le climat scolaire afin d'assurer la qualité de l'enseignement-apprentissage;
- Les acteurs scolaires doivent mettre l'accent sur les trois composantes du climat scolaire;
- Les écoles doivent s'investir dans l'amélioration du climat scolaire en utilisant la forme pyramidale dans le contexte des ressources limitées et besoins illimités. Contrairement, les écoles doivent intervenir sur toutes les composantes à la fois en recourant à la forme étoilée ou circulaire des composantes du climat scolaire.

En définitive, l'étude n'a pas abordé tous les aspects du climat organisationnel, mais reste toutefois une contribution susceptible d'orienter les futures études qui voudront bien l'approfondir dans les échantillons plus larges des différents cycles de l'enseignement, dans la perspective longitudinale et transversale.

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GLOBAL JOURNAL OF MANAGEMENT AND BUSINESS RESEARCH: A ADMINISTRATION AND MANAGEMENT

Volume 21 Issue 3 Version 1.0 Year 2021

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals

Online ISSN: 2249-4588 & Print ISSN: 0975-5853

Perception of Women on Commercialisation of the Nigeria-Canada Indigenous Vegetables Project in Southwestern Nigeria

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Abstract- The paper investigated the perception of women toward the commercialisation of the NICANVEG indigenous vegetables project. A survey research design was used for the study. Samples of 390 women (300 for quantitative and 90 for qualitative) were used for the study. The samples were selected from three out of the four states in Southwestern Nigeria where the project took place between 2011 and 2014. Two adapted instruments titled “Questionnaire on NICANVEG Project and Commercialisation (QNPC)” and “Interview on NICANVEG Project and Commercialisation” (INPC) were used to collect data. Data collected were analysed using percentages, relative significant index, chi-square and software package (Atlas ti) statistical analyses. The results showed that 182 (60.7%) of the women expressed a positive perception towards the commercialisation of the product.

Keywords: perception, women, commercialisation and NICANVEG.

GJMBR-A Classification: JEL Code: M10



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Perception of Women on Commercialisation of the Nigeria-Canada Indigenous Vegetables Project in Southwestern Nigeria

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Abstract- The paper investigated the perception of women toward the commercialisation of the NICANVEG indigenous vegetables project. A survey research design was used for the study. Samples of 390 women (300 for quantitative and 90 for qualitative) were used for the study. The samples were selected from three out of the four states in Southwestern Nigeria where the project took place between 2011 and 2014. Two adapted instruments titled "Questionnaire on NICANVEG Project and Commercialisation (QNPC)" and "Interview on NICANVEG Project and Commercialisation" (INPC) were used to collect data. Data collected were analysed using percentages, relative significant index, chi-square and software package (Atlas ti) statistical analyses. The results showed that 182 (60.7%) of the women expressed a positive perception towards the commercialisation of the product. It was showed that the extent of involvement of women in the commercialisation indicated that 78.0% of the women participated in full-scale commercialisation of NICANVEG indigenous vegetables. Again, the result showed the major challenges facing commercialisation of the vegetables were expensive farm equipment ($\bar{X} = 3.57$, RSI = 0.719), untimely fund ($\bar{X} = 3.53$ RSI = 0.711) and poor market prices of vegetables ($\bar{X} = 3.32$, RSI = 0.666). Above all, the result showed a significant relationship between levels of participation in the training on NICANVENG indigenous vegetables project and the extent of commercialization of the product ($\chi^2 = 111.865$, $p < 0.05$).

Keywords: perception, women, commercialisation and NICANVEG.

I. INTRODUCTION

The economic role of women in every family is very important. They contribute numerous ideas and a great deal of energy and capital resources to their communities and families through their involvement in businesses. The monies made by women are largely spent to take care of household needs. Regardless of this, women's economic empowerment, especially in rural areas, is facing many challenges. In spite of many initiatives and projects initiated by both the government and non-governmental agencies, the actual situation is far from desirable. In his reaction, Acha (2014) showed

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that no significant improvement has been seen in the improvement in the economic power of women. Also, the World Development Report (2012) on Gender Equality opined that 86.2 percent of women earn less than their husbands, with cash gaps being more pronounced in the North East and North Central areas of the country. This has made many rural women remain dependent and lack means to achieve economic independence in the families and communities at large.

Globally, women were believed to contribute remarkably to the rural economy and agricultural activities in many developing countries (FAO, 2010a). According to the reports of FAO (2010b) the agricultural share of economically active women was 65.0% in Sub-Saharan Africa in 2010, while in Nigeria the agricultural share of economically active women was reported to be 26.8% in 2010. Also, World Bank (2007) believed that women are the majority of smallholder farmers, but fail to realise their full potential in agriculture contributed to low growth and food insecurity. For instance, Anon (2006) indicated that women are responsible for carrying out 70% of agricultural labour, 50% of animal husbandry related activities and 60% of food processing activities

In Nigeria, agriculture was the most important sector of the economy from the standpoint of rural employment, sufficiency in food and fibre, and export earning prior to the discovery of oil. The agricultural sector was still the leading sector in Nigeria's ailing economy. It provided direct employment to about 75% of the population (National Bureau of Statistics {NBS}, 2007). Unlike what used to be in the 70s and 80s when agriculture contributed about two-third of the country's Gross Domestic Product (GDP) presently, agriculture contribution to Nigeria's GDP is about 37.2% (CBN, 2006).

Nigerian-Canada Vegetable Project (NICANVEG) was a research project jointly partnered by some researchers from Obafemi Awolowo University and Osun State University, both in Nigeria, and University of Manitoba and Cape Breton University from Canada. The NICANVEG project was funded by the International Development Research Centre (IDRC) and the Government of Canada, provided through Foreign Affairs, Trade and Development Canada (DFATD) and the project was initially staged for three years, between



2011 and 2014 in four administrative states in Southwestern Nigeria (Osun, Oyo, Ekiti and Ondo) with 22 registered cooperative societies comprising 1,200 farmers (600 males and 600 females) which were given some financial aids and inputs in order to show interest in the cultivation of indigenous vegetables (IDRC, 2014). Some of the vegetables identified for the project included: *Telfairia occidentalis* (*Ugwu*), *Solanum macrocarpon* (*Igbagba*), *Amaranthus viridis* (*Tete atetedaye*) (IDRC, 2014).

Today, the importance of African indigenous leaf vegetables and fruits to human nutrition, medicine and nature in Southwest, Nigeria is expected to be realised through the intervention of NICANVEG project. Since its inception, the project has created awareness on the usefulness of ten under-utilised indigenous vegetables (UIVs), namely African eggplant (*Solanum macrocarpon*), African nightshade (*Solanum nigrum*), Woorowo (*Solanecio biafrae*), Amaranth (*Amaranthus viridis*), Fluted pumpkin (*Telfairia occidentalis*), Scarlet eggplant (*Solanum scabrum*), Field pumpkin (*cucurbita pepo*), Fire wood (*Crassocephalum crepidoides*), Bitter leaf (*Vernonia amygdalina*) and Snake Tomato (*Trichosanthes cucumerina*) commonly consumed in Southwest, Nigeria. With the introduction of NICANVEG, it is possible to have redirected the attention of the rural farmers to the production, marketing, consumption and nutritional awareness of under-utilised indigenous vegetables.

With the introduction of NICANVEG project, it was expected that the women through their participation in the project would have a great opportunity to embrace the new technologies that could enhance their movement from subsistence farming to more market-oriented system cultivation of indigenous vegetables known as commercialisation. Therefore, commercialisation in agriculture, according to Sokoni (2007), could be defined as a process involving the transformation from production for household subsistence to production for market purposes. To Immink and Alarcon (2009), commercialisation is the proportion of agricultural production that is brought to the market for sale. Also, Olwande, Smale, Mathenge and Mithöfer (2015) saw commercialisation in agriculture as the steady departure from the domestic production for auto-consumption to mass production with the aim of selling in the market. Through this system., the women would have their revenue generated being boosted and their standard of living being improved. However, it was not certain the extent to which women who participated in the NICANVEG project have adopted it and shifted from household production of the vegetables to commercial purposes.

In the meantime, the extent of commercialisation of indigenous vegetables among Sub-Saharan Africa countries especially in Nigeria was

seen as a crucial role in poverty alleviation. Edeoghon (2016) explained that commercialisation of indigenous vegetables were being given less attention in Nigeria. Based on this, in the past, researches had been carried out on the extent of commercialisation of indigenous vegetables in Nigeria. For example, Okezie, Nwosu and Okezie (2008) assessed the commercialisation of agriculture in Abia State, Nigeria. The study identified three concepts under which household subsistence or commercial orientation could be quantified. The first concept, agricultural subsistence orientation measured the extent to which farm households consumed out of their aggregate agricultural produce while the second and third, look more broadly at subsistence orientation at the income generation side and consumption side. They concluded that agriculture was not subsistence-oriented in terms of value of agricultural produce that is for market. Households that were most subsistence oriented earned less in terms of off-farm income compared to those that were least-subsistence oriented.

Furthermore, Shiundu and Oniang'o (2007) study established that the market share of African indigenous leafy vegetables (ALVs) in comparison with other vegetable species have been on the upward trend, in the urban markets and increased consumption in rural areas too. However, issues of quality control, reliability and pricing remained critical to the future success of ALVs farming. Women have been closely associated with cultivation and selling of ALVs; however, studies have shown that whenever a crop began to appreciate in the market and started fetching higher income, men tended to push their way into the trade. In a similar vein, a study conducted by Nizamuddin, Mohd, and Anisur (2009) revealed that vegetables were remunerative crops and that farmers, particularly men, tended to turn towards its production as it was known to generate quick income for sustenance.

Also, Ele, Omini and Adinya (2013) determined the extent of commercialisation of vegetables in Cross River State, Nigeria. The study identified the variation in the level of commercialisation among households in the three agricultural zones and identified the micro-level factors determining the level of commercialisation. Findings showed that the degree of commercialisation in the study area was moderately high (about 60.40%). On the average, households sold about 56.10%, 66.60% and 58.50% of their total production (in grain equivalent terms) for the Southern, Central and Northern zones respectively.

Meanwhile, In Nigeria and in other developing countries, farmers who practice at the subsistence level find it difficult to practice full commercialisation of their products because of the range of challenges and barriers which have reduced their intention for full participation. Empirical findings have given credence to

some of the challenges. For instance, According to Mary (2007), some of the major constraints facing the production of indigenous vegetables in western Kenya, were poor seed quality, pests and diseases, drought, poor marketing channels, transport to markets, lack of agronomic and utilisation packages were among the major constraints that hindered optimal production of African leafy vegetables. Seed quality was normally affected by the agronomic practices used, the time of harvest and seed processing procedures. Judging from the above, it is unequivocal to state that non-availability of good seedling could be a great threat to the commercialisation of indigenous vegetables.

In addition, Agboola (2001) saw the availability of credit source, high cost of inputs, irregular fuel supply, irregularity in water pump operation and frequent breakdown of water pump as constraints facing vegetable farmers in Remo Local Government Area of Ogun State. Also, Adebisi, Olajide-Taiwo and Adeoye, (2001) identified credit facilities and inputs as the major challenges of vegetable farmers in Oyo State, Nigeria. Sabo and Dia (2009) identified the use of crude implements, non-availability of inputs, illiteracy, expensive and complex technologies as constraints facing vegetable farmers in Nigeria.

Besides, Leavy and Poulton (2007) identified access to staple foods and asset accumulation as critical factors that determined the success of agricultural commercialisation among smallholders. Also, Mahelet (2007) found several factors that can either facilitate or constrain the commercialisation of African leafy vegetables in Ethiopia. These factors included, among others, distance to the market, access to transportation services and roads; availability of credit, extension services and market information; output, input and factor prices; land size, access to modern inputs and storage facilities; and integration into output markets. The above results were supported by the reports of the studies conducted by the World Bank (2007) and Deji, Koledoye and Owombo (2012) who identified non-availability of land, inadequacy of inputs, lack of extension contact, transportation, storage, high cost of input as constraints facing men and women vegetable farmers but at different degrees; which was attributed to the differences in roles and responsibilities of each gender along with the vegetable production chain.

Again, the study conducted by Lyatuu, Msuta, SakalaMarope, Safi, and Lebotse (2009) indicated that there was an increase in demand for indigenous vegetables in Tanzania, Botswana and Zambia. On the other hand, indigenous vegetables were at risk of being eroded in these countries, as farmers were replacing them with improved varieties. The reason was the lack of seed and information about their performance, input requirements and marketing. It was also indicated that

indigenous vegetables marketing was characterised by inadequate government intervention. The challenges that farmers were facing were lack of reliable market information, market advisory service providers and lack of pricing mechanism. Farmers sold their products just to cover their cost of living, rather than considering their production cost, supply and demand conditions. Highly perishable nature of indigenous vegetables created a major challenge in distribution and marketing.

Moreover, Muriithi and Matz (2014) examined the factors responsible for participation of smallholders in commercial horticultural farming in Kenya. The study employed panel survey data on smallholder producers of both international (export) and indigenous vegetables sold in domestic market and controls for unobserved heterogeneity across farmers. The study found out that the participation of smallholders in both the domestic and export vegetable markets declined and that this trend was associated with weather risks, high costs of inputs and unskilled labour, and erratic vegetable prices, especially in the international market. Again, the study established that different factors were at play in determining a household's market choice for the commercialisation of vegetables: credit facilities was important only when vegetables were (also) exported and distance to the nearest market town positively related to all pathways of commercialisation.

Finally, Pandit and Basak's (2013) study was conducted to determine the constraints facing the farmers in commercial cultivation of vegetables and to explore relationship between the selected characteristics of the farmers and constraints faced by them. The researchers conducted personal interview on 142 randomly selected respondents out of 1422 vegetable farmers. The results showed that low price of vegetables during harvesting ranked first followed by lack of quality seed and high wages of labourers. Among the ten selected characteristics, level of education, family size, farm size, extension media contact, knowledge on vegetable production and cosmopolitanism showed significant negative correlation and family subsistence pressure showed significant positive correlation with farmers' constraints in commercial cultivation of vegetables. Consequent upon the points raised above, it is expedient to investigate the perception of women toward the commercialisation of the Nigeria-Canada indigenous vegetables vis-à-vis the challenges being faced by the farmers in the commercialisation of the product.

II. OBJECTIVES OF THE STUDY

- Investigate the perception of women toward the commercialisation of the Nigeria-Canada indigenous vegetables project in Southwestern Nigeria;



- b. Establish the extent of commercialisation of NICANVEG indigenous vegetables among the women;
- c. Investigate the challenges facing the commercialisation of the Nigeria-Canada indigenous vegetables project; and
- d. Determine the relationship between levels of participation in the training on NICANVEG indigenous vegetables project and extent of commercialisation of the product.

III. METHODOLOGY

The study used primary data. The population for the study comprised 1,200 women in 22 vegetables cooperative groups in the four Southwestern Nigeria states who participated in the project (Osun, Oyo, Ondo and Ekiti). Multistage sampling technique was used to select 390 project (300 for quantitative and 90 for qualitative) women for the study. Three states were selected using a simple random sampling technique out of the four states where the project took place between year 2011 and 2014. From each state, five Local Government Areas (LGAs) were selected using simple random sampling technique. Thereafter, using a simple random sampling technique, two communities were selected in each LGA. From each community, 10 project women were selected using convenience sampling technique. Another set of three participants were

selected randomly in each community for focus group discussion. Two adapted instruments titled "Questionnaire on NICANVEG Project and Commercialisation (QNPC)" and "Interview on NICANVEG Project and Commercialisation" (INPC) were used to collect data from the participants. The instruments were duly validated and the reliability tests were conducted using Cronbach's Alpha and Spearman-Brown Split-half Coefficient. Internal consistency revealed the extent to which instrument items were homogenous and reflected the same underlying constructs. The results showed that QNPC and INPC yielded Cronbach's Alpha values of 0.78 and 0.81 and Spearman-Brown Split-half Coefficient values of 0.83 and 0.84 respectively. Also, data collected were analysed using percentages, relative significant index and chi-square statistical analyses. Qualitative data were collected on the three research questions. The data collected were transcribed and analysed using software package (Atlas ti).

IV. RESULTS

Research Question One: What is the perception of women toward the commercialisation of the Nigeria-Canada indigenous vegetables project in Southwestern Nigeria?

Table 1: Perception of Women toward the Commercialisation of the Nigeria-Canada indigenous Vegetables Project in Southwestern Nigeria

Perception	Frequency(F)	Percent (%)
Negative	118	39.3
Positive	182	60.7
Total	300	100.0

Source: field survey, 2019

Table 1 showed the perception of women toward the commercialisation of the Nigeria-Canada indigenous vegetables project. The results indicated that 182 (60.7%) of the women expressed a positive perception towards the commercialisation of the product, while 118 (39.3%) of the participants had a negative perception towards the commercialisation of the Nigeria-Canada indigenous vegetables project. By these results, it is pertinent to state that most of the women who took part in the NICANVEG project supported the commercialisation of the product.

Qualitative Results on the Perception of women toward the commercialisation of the Nigeria-Canada indigenous vegetables.

Series of questions were thrown to the women about their perception toward the commercialisation of the vegetables. For instance, women were asked whether have benefitted from the NICANVEG training programme? Most of the responded indicated that

training has equipped them with better way of cultivating their vegetables. They were also asked whether they would like to put the skills and experiences gained from the training to practice. The positions were that a few of them believed that it might be impossible because of some perceived challenges. Others saw it as an avenue to boost their vegetables production. The participants were also asked whether they were prepared to shift from subsistence to full-scale cultivation of the NICANVEG indigenous vegetables. The responses of the women to this question differed. While few of the women saw it as not necessary, the majority of women believed that with the training and availability of the necessary assistance, they were ready to go into a large scale production of the indigenous vegetables.

From the above, it can be summarized that most women perceived it as very important to go into a full commercialisation of the vegetables.

Research Question Two: What is the extent of commercialisation of NICANVEG indigenous vegetables among the women?

Table 2: Extent of Commercialisation of the Nigeria-Canada Indigenous Vegetables among Participated Women in the Study Area

Parameters	SA (N/%)	A (N/%)	D (N/%)	SD (N/%)	\bar{X}	RSI	Rank
1. I planted more than two species of indigenous vegetables on my farm	70(23.3%)	218(72.7%)	2(0.7%)	10(3.3%)	4.14	0.832	1 st
2. I have more than two plots of land for indigenous vegetables planting	62(20.7%)	223(77.3%)	3(1.0%)	12(4.0%)	4.10	0.823	2 nd
3. I sell the surplus harvested vegetables in the market	50(16.7%)	232(77.3%)	1(0.3%)	17(3.7%)	4.05	0.810	3 rd
4. I sell my harvested vegetables to the retailers	50(16.7%)	235(78.3%)	2(0.7%)	13(4.3%)	4.04	0.815	4 th
5. I have some labourers working for me in my vegetables farm	45(15.0%)	237(79.0%)	4(1.3%)	14(4.7%)	4.04	0.809	5 th
6. I produce indigenous vegetables on a large scale	50(16.7%)	228(76.0%)	5(1.7%)	17(5.7%)	4.02	0.807	6 th
7. I sell my harvested vegetables once a week	14(4.7%)	214(71.3%)	7(2.3%)	65(21.7%)	3.57	0.716	7 th
8. I usually target wholesalers for sale of my harvested vegetables	42(14.0%)	169(56.3%)	4(1.3%)	85(28.4%)	3.55	0.711	8 th
9. I only make use of hoes and cutlasses in my vegetables farm	45(15.0%)	158(52.7%)	2(0.7%)	93(31.7%)	3.51	0.700	9 th
10. I mostly sell my harvested vegetables in bulk	18(6.0%)	210(70.0%)	2(0.7%)	70(23.3%)	3.47	0.713	10 th
11. I usually take my harvested vegetables to the market for sale	49(16.3%)	133(44.3%)	1(0.3%)	117(39.1%)	3.36	0.675	11 th
12. I have a lot of farm equipment that I can use to work in my vegetables farm	27(9.0%)	138(46.0%)	3(1.0%)	132(44.0%)	3.18	0.637	12 th
13. I only sell my harvested vegetables on the road side	30(10.0%)	105(35.0%)	2(0.7%)	164(54.4%)	3.00	0.600	13 th
14. I mostly sell my harvested vegetables in pieces	34(11.3%)	96(32.0%)	0(0.0%)	167(55.7%)	2.97	0.595	14 th
15. I mostly plant indigenous vegetables for family consumption	2(0.7%)	44(14.7%)	0(0.0%)	254(85.1%)	2.30	0.461	15 th
16. I sell my harvested vegetables fortnightly	4(1.3%)	15(5.0%)	6(2.0%)	275(91.6%)	2.13	0.429	16 th
17. I sell my harvested vegetables once a month	3(1.0%)	8(2.7%)	1(0.3%)	286(96.0%)	2.04	0.409	17 th

Source: field survey, 2019

From the Table, the results showed that the top ranked parameters of commercialisation were planting more than two species of indigenous vegetables on the farm ($\bar{X} = 4.14$, RSI = 0.832), second, I have more than two plots of land for indigenous vegetables

planting ($\bar{X} = 4.10$, RSI = 0.823), third, selling the surplus harvested vegetables in the market ($\bar{X} = 4.05$, RSI = 0.810) while the last ranked was selling the harvested vegetables once in a month ($\bar{X} = 2.05$, RSI



= 0.409). The implication of these results was that the women who participated in the study were equipped with all necessary knowledge to go into full commercialisation of their vegetables. In order to

provide more information on the extent of commercialisation of Nicanveg indigenous vegetables, the data were further analysed with frequency count and percentage as shown below:

Table 2.1: Extent of Commercialisation of The Grown Nigeria-Canada Indigenous Vegetables among Participated Women in the Study Area

Level	Frequency(F)	Percent (%)
Subsistence	25	8.3
Semi commercial	41	13.7
Full Commercialisation	234	78.0
Total	300	100.0

Source: field survey, 2019

From Table 2.1, the extent of involvement of women in the commercialisation of the grown Nigeria-Canada indigenous vegetables showed that 234(78.0%) of the women indicated that they have gone into full commercialisation of the under-utilised indigenous vegetables; 41(13.7%) mentioned that they were practicing semi-commercialisation, and 25(8.3%) indicated low level (subsistence) production. Arising from above, the results implied that majority of the women who participated in the NICANVEG project training embraced full commercialisation of the indigenous vegetables.

Qualitative Results on the extent of commercialisation of the grown Nigeria-Canada indigenous vegetables among the participants

The participants were asked the extent of their commercialisation in NICANVEG project. Although there were mixed responses from the women on the extent of their commercialisation of the vegetables. Some planted for commercial purposes while some could not go into full scale production because they had limited funds. Most of the women affirmed that they planted vegetables for commercial purposes and sold them in bulk (wholesale). The participating women believed that before the training they received through NICANVEG project, they were producing mostly for home consumption. However, since the introduction of NICANVEG project, the opportunity

they enjoyed had assisted them to embark on full commercialisation of indigenous vegetables. Although few of the women were still operating at subsistence level, some were operating both subsistence and commercial levels while majority claimed that they were operating full commercialisation of the vegetables. In their responses, the women claimed that the project had helped them to be planting and supplying vegetables to many customers. They revealed that most of them that participated in the NICANVEG project now planted and sold vegetables to other people (retailers) who take the vegetables to the markets to sell.

In summary, majority of the respondents interviewed on the extent of commercialisation of NICANVEG project indicated that their involvement in the project had provided them with a better opportunity to go into full commercialisation of the under-utilised vegetables. While few of the women engaged in subsistence production; others indicated that they practised both subsistence and commercialisation, but most of them revealed that they produced for commercial purposes.

Research Question Three: What are the challenges facing the commercialisation of the Nigeria-Canada indigenous vegetables project?

Table 3: Challenges facing the Commercialisation of the Nigeria-Canada Indigenous Vegetables Project

Survey Items	SA (N/%)	A (N/%)	D (N/%)	SD (N/%)	\bar{X}	RSI	Rank
1. The farm equipment is too expensive to buy	14 (4.7%)	217 (72.3%)	6 (2.0%)	63 (23.0%)	3.57	0.719	1 st
2. Fund is not timely made available to participant women	20 (6.7%)	207 (69.0%)	2 (0.7%)	71 (23.7%)	3.53	0.711	2 nd
3. Poor market prices of vegetable	12 (4.0%)	184 (61.3%)	4 (1.3%)	100 (33.3%)	3.32	0.666	3 rd
4. Destruction of planted vegetables by pests and rodents	24 (8.0%)	140 (46.7%)	1 (0.3%)	135 (43.0%)	3.14	0.629	4 th

5. Most of the harvested vegetables got spoilt while waiting to be taking to the market	20 (6.7%)	111 (37.0%)	57 (19.0%)	112 (37.3%)	3.12	0.626	5 th
6. Not having enough money to buy some farming equipment	11 (3.7%)	149 (49.7%)	0(0%)	140 (46.6%)	3.07	0.618	6 th
7. There are not good access roads for easy transportation of harvested vegetables from the farm to the market	14 (4.7%)	115 (38.3%)	1 (0.3%)	170 (56.7%)	2.89	0.581	7 th
8. Flooding in the vegetable farm at the inception of rain	20 (6.7%)	93 (31.0%)	1 (0.3%)	186 (62.0%)	2.80	0.559	8 th
9. Not having enough land to plant the vegetables	17 (5.7%)	93 (31.0%)	0 (0%)	190 (64.4%)	2.74	0.555	9 th
10. People are not treating women farmers well	8 (2.7%)	98 (32.7%)	1 (0.3%)	193 (64.3%)	2.71	0.545	10 th
11. Have problem of how to read and write (illiteracy)	2 (0.7%)	75 (25.0%)	0 (0%)	223 (74.3%)	2.50	0.500	11 th
12. Not having enough experience on how to plant the vegetables	5 (1.7%)	57 (19.0%)	4 (1.3%)	234 (78.0%)	2.42	0.485	12 th
13. Most of the seeds used for planting are of low quality	2 (0.7%)	34 (11.3%)	1 (0.3%)	263 (87.6%)	2.24	0.449	13 th

Source: field survey, 2019

Table 3 showed the challenges being faced by the women in their effort to commercialise NICANVEG indigenous vegetables project. The highest among them were expensive farm equipment ($\bar{X} = 3.57$, RSI = 0.719), untimely fund ($\bar{X} = 3.53$ RSI = 0.711), poor market prices of vegetables ($\bar{X} = 3.32$, RSI = 0.666) and destruction of planted vegetables by pests and rodents ($\bar{X} = 3.14$, RSI = 0.629). The least two challenges being faced by the vegetables farmers were not having enough experience on how to plant the vegetables ($\bar{X} = 2.89$, RSI = 0.581) and most of the seeds used for planting were of low quality ($\bar{X} = 2.80$, RSI = 0.559). From the results, it is essential to mention that the challenges being faced in the women's bid to commercialise the vegetables were basically centred around inadequate financial support, lack of adequate infrastructure, inexperience and illiteracy of some of the women. These suggested that although the women actively participated in the projects, their post-training practices depended largely on the availability of basic infrastructural facilities such as good roads, access to good transportation, availability of financial support by the government and donor agencies, among others.

Qualitative Results on the Challenges Faced by the Participants' Women in the NICANVEG Project

According to the participants, they faced series of challenges in their bid to embark on the commercialisation of under-utilised indigenous vegetables. One of the challenges faced by the women is their inability to get financial assistance on time. They believed that money was a major problem for them. The participants explained that some of

them had enough land where they could go into full commercialisation but there was not enough money to engage labour. The women noted that most of the labour they employed charged too much money before they could work on their farms. Apart from this major challenge, the participants mentioned challenges of getting fertilisers, pests' infection and lack of chemicals. The respondents submitted that the challenges did not allow them to produce a good yield. It limited their quantity and could not go into large-scale farming.

It can be inferred from the responses of the women interviewed on the challenges faced by the participants' women in the NICANVEG project that several challenges were being faced by the women who took part in the production of under-utilised indigenous vegetables. Among the challenges was lack of enough capital which had hindered them from buying some of the needed equipment. Others were poor storage facilities (which made some of the vegetables to be affected by pests, rodents or diseases), lack of water (especially during dry season), high cost of labour as well as high cost of seedlings which were posing threat to better performance of some of the women farmers to cultivate under-utilised indigenous vegetables.

Hypothesis One: There is no a significant relationship between levels of participation in the training on NICANVEG indigenous vegetables project and extent of commercialisation of the product.

Table 3: Relationship between Levels of Participation in the Training on NICANVEG Indigenous Vegetables Project and Extent of Commercialisation of Product

Level of Participation	Extent of Commercialisation			Total	χ^2	p value
	Low	Moderate	Full			
Low	6	9	10	25		
	2%	3%	3.3%	8.3%		
Average	5	8	11	23		
	1.7%	2.6%	3.7%	7.6%	111.865	.000
High	7	11	233	252		
	2.3%	3.7%	77.7%	84.0%		
Total	18	28	254	300		
	6.0%	9.3%	84.6%	100.0%		

Source: field survey, 2019

The Table revealed a significant relationship between levels of participation in the training on NICANVENG indigenous vegetables project and the extent of commercialization of the product ($\chi^2 = 111.865$, $p < 0.05$). This implies that levels of participation in the training have a significant relationship with the extent of commercialisation of the vegetables.

V. DISCUSSION OF FINDINGS

Quite a number of findings have emerged from the results above. One of the findings was that most of the women who took part in the NIVANVEG project training had a positive perception towards the commercialisation of the indigenous vegetables. It was revealed from the study that with the skills and knowledge acquired, the farmers were ready to embrace the market-oriented cultivation of the product. The above finding was evidently supported by the attitude of the women to vegetables cultivation after the NICANVEG training. For instance, the report of the study conducted by Akinfaye (2013) revealed that women in Osun State participated more in vegetables production. The above result was supported by Adebooye, Deji, Ayanwale, Oyedele and Alao (2014) that the introduction of NICANVEG project, has re-packed participating farmers toward the adoption of a range of technologies, including seedbed preparation, seed treatment to prevent soil-borne diseases and pests, seed planting rate, reduction of germination period and botanical pest control which have improved the yield of indigenous vegetables. Contrarily, Edeogbon (2016) showed that despite the importance of the indigenous vegetables, some farmers still displayed a negative attitude towards the large-scale production of the vegetables. To him, women were still cultivating vegetables on small-scale using traditional techniques. Nonetheless, it can be established the introduction of NICANVEG project has really equipped the women modern technologies of cultivating under-utilised indigenous vegetables.

The results also revealed that the extent to which women participa in the NICANVEG project was at full commercialisation. It was revealed that in spite of the constraints that the participating women were facing, they were still operating at the level of full commercialisation. For instance, findings showed that commercialisation of indigenous vegetables were given full attention among the women in southwestern Nigeria. The finding was supported by Ele, Omini and Adinya (2013) that the extent of commercialisation of vegetables in Southern part of Nigeria was moderately high. However, the finding was at variance with that of Edeoghon (2016) study that commercialisation of indigenous vegetables was given less attention in Nigeria. Bye and large, the enthusiastic attitude of women involved in the NICANVEG project was as a result of the acquired skills from the NICANVEG project which has compensated for their educational deprivation and equipped them to successfully embark on full-scale production.

Findings revealed that factors such as expensive farm equipment, untimely fund, poor market prices of vegetable and destruction of planted vegetables by pests and rodents were some of the challenges faced by the women in the NICANVEG project. The findings were in line with Buabeng *et al.* (2002) that identified poor market structures, unreliable market arrangements, transportation and lack of storage facilities as the major challenges hindering commercialisation of vegetables. In her own submission, Mary (2007) listed poor seed quality, pests and diseases, drought, poor marketing channels, transport to markets, lack of agronomic and utilisation packages were among the major constraints that hinder the optimal production of African leafy vegetables. In their own study, Deji *et al.* (2012) identified non-availability of land, inadequate inputs, lack of extension contact, transportation, storage and high cost of input as constraints facing men and women vegetable farmers. Pandit and Basak's (2013) study established that low price of vegetables, lack of quality seed and

high wages of labourer were the most prevailing constraints to mass production of indigenous vegetables. Also, Muriithi and Matz (2014) corroborated the findings by citing high costs of inputs, unskilled labour, weather risks and erratic vegetable prices as the major constraints to women full participation in the commercialisation of under-utilised indigenous vegetables. Arising from above, it is pertinent to state that the major challenges that were common to the indigenous vegetable farmers were poor storage, poor funding, poor marketing price and incessant pests and diseases.

Above all, the finding from the study revealed a significant relationship between the levels of participation in NICANVEG project and extent of commercialisation of indigenous vegetables. This implies that the participants who actively took part in the training and the enlightenment programme of the project had the opportunity of being exposed to the new technologies of production and this has afforded them to shift from subsistence farming of indigenous vegetables to a more market-oriented system of cultivation which is known as commercialisation.

VI. CONCLUSION/RECOMMENDATIONS

It can be concluded from the study above that most women who actively participated in the training on NICANVEG indigenous vegetables project developed a positive perception towards the commercialisation of the indigenous vegetables. Also, it was concluded from the study that as a result of their positive disposition to the project, most of the women shifted from subsistence farming of the vegetables to full-scale production.

Arising from the conclusion, it is recommended that the government and other stakeholders can assist farmers by providing constant agricultural extension services to women farmers. This will help them to acquire technical know-how that can assist them in their agricultural practices. Also, farming activities can be improved through provision of some incentives and farm equipment to farmers. Lastly, it is recommended that farmers should always make better use of the opportunities available to them any time such opportunities are given to them.

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GLOBAL JOURNAL OF MANAGEMENT AND BUSINESS RESEARCH: A ADMINISTRATION AND MANAGEMENT

Volume 21 Issue 3 Version 1.0 Year 2021

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals

Online ISSN: 2249-4588 & Print ISSN: 0975-5853

Introduction to Labour-Management Relations

By Igbokwe Philoemna Ify

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GJMBR-A Classification: JEL Code: M10



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Strictly as per the compliance and regulations of:



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I. INTRODUCTION

Traditionally, labour relations were considered as a relationship between employees and employers.

But nowadays, this has become a burning issue consisting of the relationship between workers, employers and the social environment of the organisation. It is a dynamic socio-economic process that makes a social dialogue among employees, employers and the organisational social environment.

The importance of the human factor in any organisation cannot be overemphasized. Land and capital as non-human factors of production are worthless unless there is the labour to utilize the machinery and the tools, and unless there is the management to coordinate all other factors towards the achievement of the goals of the organisation, be it production of goods or delivery of services. Indeed, an organisation can only be as effective and efficient as its human resources. Traditional personnel management sees human beings in an organisation as machines but if these machines are not constantly lubricated, then they may breakdown or cease to function and that is just about what the human resource management sets out to accomplish in organizations'. The strength of any organisation lies in its manpower, no matter the size of an organisation or the worth of its owner(s), the organisation and its life span are in the hands of the people working in that organisation.

The importance of human resources in an organisation is further buttressed by the observation of Romana and Anca (2013), they observed that in most organizations people are now recognized as the vital asset whose knowledge, skills and abilities must be deployed to the maximum effect if the organisation is to become successful. They further observed that the value of an organisation relating to the people it employs and its human resource strategies is gaining recognition and

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is generally accepted and goes to say that this has implications for long-term sustained performance. Managers and employers of labour, therefore, take very seriously, the training and development of its workforce (labour) to make them more effective and efficient, so that the objectives of organisations are achieved with minimal efforts.

In general, there is a need for good human resource management. The recruitment and selection process has to be standard and based on merit. Orientation, deployment, training and development have to be put in place. Adequate compensation, benefits, rewards and motivation have to be provided for employees and welfare issues addressed at the right time. Workers wellbeing should be given adequate consideration.

According to Hassan (2016). The relationship between labour and management determines the kind of industrial climate that may prevail in an organisation. In the same vein, Long (2014) observed that there is a need to maintain proper relations with employees and trade unions. That is, there must be a cordial relationship between the two major human elements of production, labour on one hand, and the managers on the other hand. This is where the concept of labour-management relation becomes significant. Labour-management relation is concerned with the relationship between workers, not as individuals but in their collective identity. Labour-management relations deal with the internal arrangement between employers and workers' unions (the trade unions) in bilateral relationship within an industry, across industries or within an enterprise, to regulate their relations affecting employment and its compensation (Yoder, 1958). Indeed, no meaningful development could be achieved in an environment devoid of peace and understanding, most especially, one involving labour and management.

Labour-management relations refers to interactions between employees, as represented by labour unions, and their employers. Labour unions are organizations of employees in particular industries, companies, or groups of industries or companies, who join together to further workers' interests. The primary focus of Labour-Management Relations should be on the grievance, handling the industrial dispute, and interpretation of labour laws, etc. it provides a context in which organizational rules and regulations are framed so that organizational roles assigned to members are performed.



The study of labour-management relations refers to the rules and policies which govern and organize employment, how these are established and implemented, and how they affect the needs and interests of employees and employers (Von Otter, 2007). Hence, labour relations or employee relation of industrial relation is a system that makes the social dialogue between employees, employers and society/government. It refers to all means of the relationship between management and employees, unions and management, unions and employees and between the employees themselves. It is a joint effort of these major influences that produce harmonious industrial relations between them. Its concern is to promote a healthy and harmonious relationship between employees and employers.

It is said that the most complicated set of relations that managers deal with is the issue of labour-management relations. Efficient maintenance of labour relations helps the human resource managers in developing a harmonious environment within the organisation which, in turn, helps the organisation in effectively achieving its goals and objectives. Well managed labour relations provide a competitive advantage to the organisation by negating the hassles arising out of labour or union-related issues and conflicts. Labour-management relations is concerned with the internal arrangement between employers and trade union in a joint relationship within an industry or across industries or within an enterprise to regulate their relations affecting employment and its compensation, this relation connotes a relationship between workers and the employers.

However, human wants are many while the means of satisfying them are very limited. This economic principle is valid for the organisation just as it is valid for individuals. The management may have the interests of workers at heart, they may tend towards the practice of the soft model of human resource management, but would definitely, not be able to satisfy all the demands of its workers due to scarcity of resources. Hence, conflicts can hardly be completely avoided in labour-management relations. Conflicts form an integral part of the industrial relation system, it is inevitable. Some conflicts are legitimate and even desirable, such are not disruptive, but then, a delicate balance is required to obtain the advantages and restrict the disadvantages of organizational conflicts (Sacks, 1979). But due to the adverse effect of conflicts in organizations, conflicts must be resolved and properly managed. The ability of management to resolve and manage conflict with minimum friction, whenever it occurs, among the workers or between the workforce and management is important to the growth and development of any organisation.

a) Objectives

The general objective of this paper is to introduce the subject of labour-management relations. While the specific objectives are to:

- (i) Discuss the different types of conflicts,
- (ii) Examine their manifestations and
- (iii) Identify various methods of conflict resolution

II. LITERATURE REVIEW

Conflict is as old as man, it is a natural phenomenon in all human society that occurs in man's day-to-day activities. Given that every individual is unique, some views and opinions will defer from those of others. The reason is that people of various background, culture, religion and belief come together and live in the same space. Conflict can come in form of serious disagreement, misunderstanding or argument about something important. It could also be a state of mind in which one finds it impossible to make a decision. The conflict could also mean fight, battle, contention, clash, incompatibility, oppositional disturbance, sharp disagreement and struggle. Conflict is a kind of disagreement through which the parties involved perceive a threat to their existence, need, interest or concern. According to Oyeshola (2005), conflict is part of human experience, and to keep our sanity, we must know how to handle it creatively. Healthy conflict can lead to growth, innovation, and new ways of thinking which can lead to development. If it is well managed, it leads to mutual benefits and it could strengthen the relationship. Therefore, conflict in itself is not a problem, it is when conflict is poorly managed or when it becomes intractable or unresolved that it becomes a problem.

a) Types of Conflict

Whether a conflict is good or bad depends on the type of conflict, but to say that conflict is all good or bad is inappropriate and naïve. Conflict in an organisation is a situation in which the expectation(s) of a person or group is hindered or about to be hindered by another person or group. Conflicts are part and parcel of human beings, they are daily occurrences within an individual and among people. Conflict occurs in both public and private organisations.

b) Functional or Constructive Conflict

This type of conflict supports the goals of the group and improves its group's performance. The interactionist view does not propose that all conflicts are good but the argument is that if conflicts lead to normal competition among groups and the groups work harder and produce more, it is advantageous to the group and the organisation. It is viewed as a confrontation between two ideas, goals and parties that improve employees and organizational performance. The major benefit of constructive conflict is that it gives its members a



chance to identify the problems and see the opportunities, they are fully involved, which may lead to new ideas, learning and growth among individuals and by extension the growth of the organisation.

c) *Dysfunctional/Destructive Conflict*

As earlier mentioned, conflict is inevitable and desirable in organizations, but if not properly addressed by way of effective handling, may lead to temporal or permanent damage. They hinder group performance and can tear relationships apart, thus, interfere with the exchange of ideas, information and resources in groups and between departments. This type of conflict hinders and prevents organisational goals from being achieved. Destructive conflict as implied by the name usually hinders organizational performance and leads to decreased productivity. It is characterized by competing for individual interests overriding the overall interest of the business. It could manifest in several ways such as opposing groups forming within a company, inability to move forward and productivity slowdowns, loss of trust, avoidance of working with some or all people, hiding behaviour from outsider's view, call by some for outsider help, feeling of being unwelcome, anger, confusion, anxiety and absence of proper communication.

d) *Causes of Conflict*

Conflict is part of organizational life and may occur within and between individuals, between the individuals and the group, within and between groups and sometimes within the individual. Ordinarily, the conflict will bring to the fore management defects which will lead to reexamination and adjustment that will, in turn, lead to the overall effectiveness of the organisation. Therefore, conflict can occur as a result of structural or personal factors.

e) *Structural Factors*

- i. **Specialisation:** Over some time, employees tend to become specialists in a particular job or get a general knowledge of many tasks. Sometimes they erroneously assume the role of a specialist when in reality they are not. This can lead to conflict because they have little knowledge of each other's job responsibilities. For example, a sales representative at a tailors shop can say that a suit can be made in a time that is not realistic, since the sales representative does not know much about the tailor's job, he should not give an unrealistic deadline when the suit will be ready. This situation can lead to conflict between the sales representative and the tailor.
- ii. **Common Resources:** Some resources in an organisation may be scarce. In many work situations, resources have to be shared. Resource scarcity leads to conflict because each person that needs the same resources necessarily undermines others who pursue their own goals. Limited

resources may include money, supplies, people or even information. For example, according to Mcshare and Glinow, (2008). The Redmond Washington based software company may dominate several markets, but its staff members still disagree over limited resources. Sartorial support computer time can contribute to conflict. Considering the company that installs a new computer for administrative and research purpose, at first, there is plenty of computer time and space for both uses. However, as both factions make more and more use of the computer, access becomes a problem and conflict may erupt.

- iii. **Goal Differences:** The possibility of conflict increase substantially when departments in the organisation have different or incompatible goals. For example, the goal of a computer salesperson is to sell many computers as fast as possible. The manufacturing facility may, however, lack the capacity to meet the salesperson's promises. In this instance, conflict may occur as two persons have different goals or incompatible goals.
- iv. **Inter-dependence:** Often, conflict tends to increase with the level of task interdependence. When a person has to depend on someone else to complete a task, it becomes easier to blame a co-worker when something goes wrong. Interdependence, as a rule, exists when team members must have an interest in the process of work and receive outcomes that depend on the performance of others.
- v. **Authority Relationships:** Conflict is any situation in which two or more parties feel themselves in opposition to power, status or property. In many organisations, there is an underlying tension between managers and employees because most people do not like being told what they have to do. In many organisations, managers/supervisors have privileges (flexible hours, free personal long-distance calls, longer breaks, etc) sometimes people try to engage in conflict to increase their power or status in an organisation. Many strict managers often have conflicts with their employees.
- vi. **Roles and Expectations:** A role is the expected behaviour of an individual in society or this case in an organisation. Every employee has one or more roles in the organisation. These roles include such elements of job title, description of duties and agreement between the employee and the organisation. Manager-subordinate conflict can result when the subordinate's role is not determined and each part has a different understanding or misunderstanding of that role.
- vii. **Jurisdictional Ambiguities:** Employees tend to pass unwanted responsibilities to others when responsibilities are not clearly stated. When the lines of responsibility in an organisation are uncertain,



then jurisdictional ambiguities appear. Ambiguous goals, jurisdictions, or performance criteria can lead to conflict. Under such ambiguity, the formal and informal rules that govern interactions break down. Ambiguous jurisdictions are often revealed when new programmes are introduced, or when the workload increases. This is a common occurrence in higher institutions.

f) *Manifestation of Conflict*

As earlier stated, the conflict could manifest in several ways, such as opposing groups forming within a company, inability to move forward and productivity slowdowns, loss of trust, avoidance of working with some or all people, hiding behaviour from outsider's view, call by some for outsiders help, feeling of being unwelcome, anger, confusion, anxiety, overwork and absence of proper communication. According to Yakubu (2000), the conflict could be classified into four broad spectrums. Intrapersonal conflicts, interpersonal conflicts, intragroup conflicts, and intergroup conflicts.

Intrapersonal Conflict: This type of conflict is psychological, it involves the thoughts, values, principles and emotions of the individuals. It is quite difficult to handle, as it can cause depression. The solution is to let go of anxiety. This type of conflict can be experienced when someone has just been laid off suddenly from the place of work.

Interpersonal Conflicts: This refers to the conflict between two or more individuals, as a result of differences in temperament which usually result from incompatible choices and opinions.

Intragroup Conflicts: In this type of conflict, individuals within a group disagree on issues. Also called infighting. Usually between two or more members of the same group or team, relating to disagreement or misconceptions between individuals within a workgroup, such as a project team. Normally, members of a group share common goals or other identifying characteristics. Intragroup conflicts can be small-scale, such as within a workplace or large-scale, such as between members of a population group.

Intergroup Conflicts: This type of conflict occurs when misunderstandings arise among different teams within an organisation. Intergroup relations between two or more groups and their respective members are often necessary to complete the work required to operate a business. Many times, groups inter-relate to accomplish the organisation's goals and objectives and to achieve this, sometimes the friction may lead to conflict.

g) *Industrial Conflict*

An organisation is made up of management and a labour workforce. To administer such organizations, both parties, management (employer) and the labour workforce (employee) have to work together for the success and survival of the

organisation. Industrial conflict occurs when employees express their dissatisfaction with management over the current state of the management-employee relationship. The causes of such dissatisfaction are typically matters related to regular wage payment, wage increase or remunerations according to terms of the employment contract.

Causes of Industrial Conflicts: It is not easy to identify a single factor as a cause of industrial conflicts, as multifarious causes blend to result in industrial disputes. The causes are many and varied. The major ones are related to wages, union rivalry, political interference, unfair labour practices, the multiplicity of labour-laws, economic slowdown, etc. They can be categorized as industrial factors, management's attitude towards workers, government machinery and matters of discipline.

h) *Types of Industrial Conflicts*

When all efforts to settle industrial disputes by established procedure fails. Employees can express such dissatisfaction in formal or informal ways. Formal methods are organized and are planned, while informal ones are spontaneous and unorganized, usually taking management by surprise. There are different types of formal and informal industrial conflicts, but the most common of them are strike and lock-outs.

A few of these techniques of industrial action will be discussed.

Strike: It is the weapon that is ultimate and often most potent available to the collectivity of employee when collective bargaining between the union and management breaks down. It occurs as a result of fundamental maladjustments, injustices and economic disturbances. Strikes are temporary cessation of work by a group of employees to express grievances or to enforce demands concerning changes in work conditions. It can come in form of employees temporal withdrawal of services, contrary to an employment contract. It is a formal form of industrial conflict that is usually organized by a trade union. During typical strikes, trade unions ensure that there are no alternative means of getting the services that employees have refused to provide. Usually, strikes continue until management addresses the matter of dissatisfaction that led to it.

Lockout: This is a type of stoppage made by employers in dispute situations. It is a weapon that can be used by the employer to shut down the factory until workers resume work on the conditions formulated by the employer. It is utilized in a manner that forces the employee to yield to the pressure exerted by the employer. Lock-out includes the closing of a place of employment by an employer, the suspension of work by an employer, or a refusal by an employer to continue to employ employees, to compel the employer's

employees, or to aid another employer in compelling the employees of that employer, to accept terms or conditions of employment. Lock-outs normally occur when economic activities are slowed down. It is used to put psychological pressure on the work-force to make them agree to the conditions led by the employer or face closure of the work premises. The closure should be temporal, the element of demand must be present, and the intention to re-open or call the workers back if they accept the demands. Again, the employer and employees must be engaged in an industrial process carried on in an institution within the ambit of the law.

Gherao: In this process, a group of workers start collective action to prevent members of the management from leaving the premises this is done through the act of surrounding the premises. Gherao is a word originally from Hindi, it denotes a tactic used by labour activists and union leaders in India, it is similar to picketing. Usually, a group of people would surround a politician or a government building until their demands are met, or answers given.

Picketing: In picketing, employees display signs, banners and placard to demonstrate the dispute; they also try to prevent others from gaining access into the workplace, persuading them to join in the strike. In doing this the workers also draw public attention to their cause.

Work-to-Rule: An industrial action where, in contrast to a strike, workers do not withdraw their labour, instead, they stay on their jobs but drastically slow down the operations by punctilious adherence to a narrow interpretation of work rules included in the collective bargaining agreement, it is a form of protest in which employees do exactly what is stated in their contracts, and nothing more, to make the management uncomfortable. A work-to-rule is seen as a way to protest against low pay or bad working conditions. The employees at such time, deliberately refuse to make use of their initiative and act rigidly, like pre-programmed machines. Since this does not go against any formal terms of the contract, it rarely attracts punishment. However, it naturally slows down work progress and affects the management and the organisation.

Absenteeism: This is a habitual pattern of absence from a duty or obligation without good reason. Generally, absenteeism is unplanned absences. It has been viewed as an indicator of poor individual performance, as well as a breach of an implicit contract between employees and employers. Absenteeism is classified under the informal form of industrial conflict, it can occur when employees deliberately refuse to report to their workplace. It is not always a sign of industrial conflict since employees can fail to report to work due to injury or illness, but it is not a welcome act because it increases the loss of productivity and revenue that an

organisation suffers due to the failure of workers to report for duty, due to reasons of personal incapacity that they sometimes cannot help.

Sabotage: This is a deliberate action aimed at weakening a polity, effort or organisation through subversion, obstruction, disruption or destruction. It is another form of informal industrial conflict that occurs when employees deliberately damage their organisation's production or reputation. This could take the form of slowing down production, temporarily disabling machinery, direct destruction of the organisation's property or slandering the organisation. Employers who engage in sabotage (saboteurs) usually hide their identities, but do not shy away from identifying themselves as a pressure group.

Boycott: A boycott is an act of voluntary and intentional abstention from using, buying, or dealing with a person, organisation, or country as an expression of protest, usually for moral, social, political or environmental reasons. The noun boycott is the protest itself. This noun comes from the name of Charles C. Boycott, an English land agent in 19th century Ireland who refused to reduce rents for his tenant farmers. As a result, the residents did not want to have any dealings with him. Boycotts are an effective way to use your spending of resources/money to affect change.

In summary, the coming together of people makes conflict inevitable in organizations. Conflicts cannot be ruled out in any organisation involving people who work together. This is underscored by the varying interest of employers and employees. The interest of the employers is "Productivity", while that of the employee is "Satisfaction". Conflict in itself is not a problem as noted by many scholars, it is when conflict lingers, is poorly managed or when it becomes intractable or unresolved that it becomes a problem. Therefore, conflicts have both positive and negative sides.

Some of the positive bearings conflicts have on organizations are, they can bring problems to the fore, get them addressed and proffer solutions. This positive bearing sensitizes the management of an organisation. Conflicts can also lead to innovations, social changes and justice. These are achievable because better approaches, ideas and methods of operation are devised. This, in turn, leads to new and better results due to deviation from the status quo.

Conflicts also provide the opportunity of developing the 'whole person', so that they can possess the capability to reflect, project, and take appropriate actions. This can serve as a mirror that projects the true inward picture of the person with regards to his/her strengths and weaknesses. The conflict could provide an opportunity for actual self-assessment and movement forward if the required change is embraced. One other provision is that conflicts provide a channel for releasing emotion, anxiety and stress that have been



piling-up. Such emotions, anxiety and stress that led to apathy and unethical work behaviour on the side of both parties are released when there are conflicts. In the end, conflict help to build cohesiveness among people by sharing and participating in the conflict, celebrating its settlement, learning more about one another, and building on the lessons learnt.

Conflicts when poorly managed or become unresolved may lead to wastage of time and energy, the working time and energy of executives and managers are wasted while conflicts last. Valuable time and energy that could have been invested in productive activities for the organisation are lost and productivity hampered. Conflicts breed stress for the whole organisation, management and employees suffer, the brain and body are unnecessarily overworked while the conflicts last, the morale of workers would be affected negatively which may lead to emotional stress for the workers, as a result of a prolonged period of conflict resolution, the employees may engage in dangerous and inappropriate behaviour e.g. hatred, name-calling, fighting and destruction of properties.

Unresolved conflicts could lead to more and continued conflicts: the situation may become complex and assume very dangerous dimensions with negative cost implication that could be damaging to the organisation. It may bring a probable large financial drain on an organisation; working activities disturbed, facilities and equipment may also be affected, personal emolument of the employee still paid and sometimes withheld, everyone is affected.

i) Conflict Resolution Methods

According to Otite (1997), conflict resolution is necessary and essentially aimed at intervention through facilitation, mediation, counselling and therapy, organisation development, conciliation to change the counsel that is the scope, intensity and effects of conflict. Hence, the root cause must be identified and dealt with, and attention given to the justice and fairness of the process as well as the outcome of the settlement. Whenever conflicts occur in an organisation, there is a need to resolve them as soon as possible to ensure the smooth running of the organisation to promote organizational efficiency. There are different methods in which conflicts can be resolved in an organisation. These methods include:

Negotiation: Fisher (2000), defined negotiation as a structured process of dialogue between conflicting parties about issues in which their opinions differ. This is one of the most basic means of settling differences. It involves going back-and-forth communicating between the parties of the conflict, trying to find a solution. Negotiation allows you to participate directly in decisions that affect you, in the most successful negotiations, the needs of both parties are considered. A negotiated agreement can become a contract and be

enforceable. Negotiation is a conflict resolution method that was used to settle the boundary conflict between Nigeria and Cameroon, where the African Union (AU) and the United Nations (UN) through the International Court of Justice (ICJ) played major roles in resolving the dispute without war and its concomitant effects.

Mediation: This is the process of conflict resolution that is pervasive across levels of social interaction from the interpersonal to the international. It attempts to settle the controversy by assisting the parties to reach a voluntary agreement. The ultimate decision is made by the parties themselves while a neutral person is invited to settle the dispute. Mediation as a method of settling dispute usually has the third party who serves as the intermediary between the parties to the conflict. The third-party intervenes by listening to the parties to resolve the conflict by bringing it to a peaceful settlement. The essence of using mediation as a method of resolving conflict is to let peace and harmony reign. The role of the mediator is to make recommendations, giving assessments, conveying suggestions on behalf of the parties, emphasizing relevant norms and rules, envisaging the situation if an agreement is not reached, or repeating of the agreement already attained.

Arbitration: This is the submission of a disputed matter to an impartial person, just like in mediation, there is a third party, but unlike in mediation, this third party has the power to render a decision, usually called an award. Arbitration is usually or typically an out-of-court method for resolving a dispute. The arbitrator controls the process, listens to both parties and makes a decision, which is expected to be binding on the parties involved. Like a trial, only one side will prevail. Unlike a trial, appeal rights are limited.

Conciliation: This strategy always has a conciliator who communicates separately with the parties and allows them to develop their own proposed solutions. It is a situation/process by which representatives of the employees and employers are brought together before a third person (the conciliator) or group of persons (board of conciliators) to convince them to end the deadlock by mutual discussion.

Litigation: This is the use of the courts and the civil justice system to resolve legal controversies. Specific rules of procedure, discovery and presentation of evidence must be followed. Litigation is begun by filing a lawsuit in a court. It can be used to compel the opposing party to participate in the solution. If the parties involved are unable to agree on how to settle the case, either the judge or a jury will decide the dispute through a trial. The decision is made by applying the facts of the case to the applicable law. The verdict or decision can conclude the litigation process and be enforceable; however, the loser can appeal the decision to a higher court.

Collective Bargaining: Bargaining takes place between an employer and one or more workers of an organisation. It is a method to determine the working conditions and terms of employment through negotiations. The negotiation process helps the two sides to reach an agreement. Collective bargaining is the fundamental principle on which the trade union system is based. It is meant to be a good-faith process between an organisation's management and a trade union representing its employees for negotiation of basic employee's issues and other matters of mutual interest. It is useful to both parties; to the management, this process usually presents one set of people to negotiate with; to the employees, it gives greatly enhanced bargaining power. It does not necessarily require either side to agree to a proposal or make concessions but does establish procedural guidelines on good-faith bargaining. This method is very effective for solving industrial conflict and is a partnership relationship.

Allocating: In this method, conflict is resolved by the government. The government does this by directly intervening in the affairs of public organizations. It is not a partnership relationship because the government steps-in by determining the term of reference for resolving such a conflict. This method is more autocratic and mostly used by military regimes.

Adjudication: This is a strategy whereby panels are constituted to resolve conflicts and the findings of the panel (usually in form of a white paper) are used as the term of reference for resolving conflicts. It is done through the court system.

Repression: This method is closely linked with oppression. Just like allocating, it is an undemocratic way of resolving conflicts. It is autocratic and oppressive. This method can adopt the use of assassination, detention, arrest, tactful elimination etc.

Submerging: This process involves the development of an initiative to overcome conflict. It could be in the form of the introduction of a new programme, developing higher goals, refraining perception and the use of preempting measures.

Opting out: This is a method whereby the aggrieved party steps down and withdraws from negotiation with the other party. It is sometimes seen as a defeatist attitude, but it is a very good strategy for ensuring peace.

III. MODELS OF LABOUR-MANAGEMENT RELATIONS

a) Guest Model of Labour: Management

Guest (1989) developed what can be viewed as a prescriptive theoretical framework that reflects the general view that a core set of integrated labour management practices can achieve superior individual

and organizational performance. Guest prescribed six components in his model. A set of labour management strategies; A set of labour management practices; A set of labour management outcomes; Behavioural outcomes; Several performance outcomes and financial outcomes.

Guest's model acknowledges the close links between labour management strategy and general business strategies: differentiation, focus, and cost-effectiveness strategies. The core principle of the model's hypothesis is that labour management practices should be designed to lead to a set of labour management outcomes of high employee commitment, high-quality employees, products, and services, and highly flexible employees. Guest views high employee commitment as a vital labour management outcome, concerned with the goals of binding the employees to the organisation and obtaining behavioural outcomes of increased effort, cooperation, involvement, and organizational citizenship. The central hypothesis of Guest's model is that if an integrated set of labour management practices is applied coherently, with a view of achieving the normative goals of high employee commitment, high-quality assurance, and task flexibility, the result would be a superior individual performance.

IV. FOMBRUM, TICHY AND DEVANNA MODEL OF LABOUR MANAGEMENT

The Fombrum *et al* model emphasizes the interrelatedness and coherence of labour management activities. The labour management cycle, according to this model consists of four key constituent components, including selection, appraisal, development and rewards. These activities are aimed at increasing organizational performance. The model has however been criticized for the fact that it appears to have ignored different stakeholder interests, situational factors, and the notion of management's strategic choice.

V. BEER, SPECTOR AND LAWRENCE LABOUR MANAGEMENT MODEL

This model is termed the "Harvard Model". It was developed as a result of the shortfalls in Fombrum's model. The model emphasizes the analytical framework which consists of six basic components:

- i. Situational factors, which influences managements' decision on a labour management strategy;
- ii. Stakeholders' interest, which recognizes the importance of trade-offs, either explicitly or implicitly, between the interests of owners or stakeholders and those of the employees and their unions;
- iii. Labour management policy choices, which emphasise the fact that management's decisions and actions in the management of labour can be fully appreciated only if it is recognized that such



- decisions and actions result from the interaction between constraints and choices;
- iv. Labour outcomes, reflecting high employee commitment to organizational goals and high individual performance leading to cost-effective products or services, assuming that employees have talents that are rarely fully utilized at work and they indicate the desire to experience growth through work;
 - v. Long-term consequences, which distinguishes between three levels: individual, organizational, and societal levels. At the individual employee level, the long-term consequences comprise the psychological rewards workers receive in exchange for their efforts. At the organizational level, increased effectiveness ensures the survival of the organisation. At the societal level, some of the society's goals (employment and growth) are attained as a result of full utilization of people at work; and
 - vi. The feedback loop through which the outputs flow directly into the organisation and to the stakeholders.

VI. BENEFITS OF LABOUR-MANAGEMENT RELATIONS

The following are some of the benefits of labour-management relations.

- i. Harmonious Relations
- ii. Effective Communication
- iii. Industrial Peace
- iv. Productivity and Organisational Effectiveness
- v. Reduction of Industrial Actions
- vi. Organisational Stability
- vii. Change Management
- viii. Legal Representation
- ix. Physical Facility

VII. CONCLUSION

A cordial relationship between labour and management as human factors in an organisation is necessary for the smooth running of any organisation. Labour-management relations cannot be overemphasized as long as conflicts /disputes occur in an organisation. A well-established relationship between the workforce (labour) and the management of any organisation will promote harmony in the organisation thereby enhancing productivity and organizational efficiency at all levels.

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GLOBAL JOURNAL OF MANAGEMENT AND BUSINESS RESEARCH: A
ADMINISTRATION AND MANAGEMENT
Volume 21 Issue 3 Version 1.0 Year 2021
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4588 & Print ISSN: 0975-5853

Evaluating the Performance of Some Selected Cement Companies of Bangladesh

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Abstract- This aim of this study is to investigate the financial performance among the selected cement companies of Bangladesh. This study also includes comparative performance evaluation through financial ratio analysis. This study is based on five leading cement companies, which are Aramit Cement Ltd., Confidence Cement Ltd., Heidelberg Cement Ltd., Premier Cement Ltd., and Crown Cement Ltd. This research is based upon five years of analysis, from 2015 to 2019, and carried by secondary information, and to produce ratio analysis, data has been taken from annual reports, articles, and publications, etc. This study reveals the financial position of selected cement companies which is very important for the industry because of its growth and role in development. Financial Ratios such as Current Ratio, Return on Assets (ROA), Return on Equity (ROE), Net Profit Margin, inventory Turnover Ratio, Total Asset Turnover Ratio, Earnings per share, Debt to Equity Ratio were used for comparing performance of these cement companies.

Keywords: *current ratio, return on assets (ROA), return on equity (ROE), net profit margin, inventory turnover ratio, total asset turnover ratio, earnings per share, debt to equity ratio.*

GJMBR-A Classification: JEL Code: M19



Strictly as per the compliance and regulations of:



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I. INTRODUCTION

At Present Cement industry is one of the most promising sectors in Bangladesh. Bangladesh cement industry is the 40th largest market in the world. Currently, there are more than 125 cement manufacturing companies in Bangladesh. And among those 125 firms, 45 cement suppliers, including five multinationals, are in operation, along with 63 grinding plants throughout Bangladesh. Also, there is a domestic demand of over 18 million metric tons per year. The enormity of cement demanded by a country is an exponent of the development of the construction sector, which points towards the economic growth. The economic growth of Bangladesh express by the expansion of urban development, road connectivity, public services, housing building, apartment blocks, etc. Recently, there is a rise in urbanizing, which has boosted the need for building materials and cement. Even then, the development of the cement industry began just about a decade ago. The production of

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Bangladesh's cement industry dates back to the early 1950s. Dramatically, the country has been experiencing an increase in cement production for the last 6 to 7 years. The growth rates of GDP and population are correlative over time, and the demand for cement is maintaining almost a positive growth rate. Also, the GDP (In billion USD) and per capita consumption of cement (in kg) have been increasing over time. The export of cement has started its journey in 2003 in Bangladesh, and the export rate is continuously getting upward every year. The highest amount of cement exported in 2010, and Bangladesh earned more than 21 million USD that year.

II. LITERATURE REVIEW

Nagarajrao B.S & Chandra K- (1980): Dissected the financial effectiveness of cement companies for the chosen time of the investigation 1970 - 71 to 1977-78. It tends to be investigated productivity of chosen cement companies, It has been discovered descending pattern from 1970-71 to 1974-75 because the explanation of inflation, ascending of manufacturing cost, persistent fall in capacity utilization because of numerous reasons.

Kumar B. Das-(1987): Has made an investigation of the monetary performance of the cement industry. It very well may be investigated that the net fixed assets as a percentage of total assets have diminished for the time frame 1970-71 to 1977-78 that was 553.5% to 44.04 % individually. Current liabilities have expanded than the current assets. The Liquidity performance of the cement industry isn't solid at the time of the study. The Debt Asset ratio has to descend during the time of the examination, and the Debt Equity ratio has somewhat expanded while total assets proportion has diminished throughout the long term.

Dr. Dinesh A. Patel- (1992): Reviewed Financial Research, a report of India's cement industry from 1979-80 to 1988-89. He should have dissected the profitability of the cement industry, investigated the short-term monetary strength of the cement industry by analyzing the administration of working capital, and evaluated the long-term monetary strength by researching the building of capital.

Niam. K.-(1991): Focused on the production efficiency part of the Cement Industry of India. This study showed

that cement which is a development material, involved in an essential spot in the economy of India. This research also uncovered that, in 1990-91, the industry production capacity was 60 million tons but 48 million tons were produced. In this research, the cement industry was estimated to have a product development of around 100 million tons by the year 2000. To identify the major problem areas and the possibilities, this report also examined the productivity and financial output ratios of the cement industry.

Haq & Sohail & Zaman & Alam-(2011): The relationship between Working Capital Management and Profitability: A Pakistan Cement Industry Case Study were analyzed. The relationship between managing working capital and profitability was explored in this report. In the Khyber Pakhtunkhwa Province (KPK) of Pakistan, researchers picked 14 firms in the cement industry. The analysis is focused entirely on secondary data obtained from the audited financial statements of the companies listed on the Karachi Stock Exchange for the 2004-2009 period. The data was analyzed using the correlation coefficient and multiple regression analysis statistical techniques.

Subir Cokavn and Rajendra Vaidha-(1993): the output of the cement industry after decontrol was evaluated for evaluation. They noticed that the cement industry's success after decontrol was marked by results that were relatively competitive and improved health. This research showed that the composition of the market had shifted dramatically, with many new entrants in the industry producing a vast amount of relative technical and superior ability. This report also noted that substantial actual price rises and a related rise in profitability were observed. For businesses running comparatively new plants, the output of companies in the strategic community was different and big plants seemed to have an edge. Also, the report discussed the essence and impact of inter-company heterogeneity in the cement industry.

Hajihassani- (2012): A financial results comparison of the cement industry in Iran. This study showed a review of the financial results of the 2006-2009 study period. An analysis of the financial results of selected cement companies can be evaluated using different financial measures and metrics of cement companies operating in Iran. Financial ratios are divided into three categories. This concludes that the output of cement companies is distinct from that of the liquidity ratio and the debt ratio based on profitability ratios.

Dharmendra S-(2011): Liquidity, relative to solvency ratios such as Net Assets Ratio, Turnover Ratio (Inventory), Debt to Equity Ratio, and Operating Expenses Ratio, is closely linked to the profitability of the Indian Cement Industry.

Dr. Abdul Ghafoor Awan. Parvez Shahid, Jahanzeb Hassan, Waqas Ahmed- (2014): The effect of Working

Capital Management on the output of the cement sector in Pakistan has been analyzed. The research period represented the period from 2009 to 2013. The analysis is solely focused on secondary data obtained from these firms' audited financial statements that are listed on the Karachi Stock Exchange. To measure the effect of Management of working capital on the performance of the business, the return was used as the dependent variable, and independent variables were, Inventory Turnover in Days, Cash Payment Cycle, Current Ratio, and Quick Ratio. The Public Sector Growth Scheme, Total Working Capital, Average Payment, business size, and Government Approved Funds. The panel data tool is used to research the influence of Working Capital Management on the competitiveness of Pakistan's cement industry. He should infer that the duration of cash transfer, product turnover of days, and average payment length have a negative association with business output and are important in their likelihood. In this analysis, the current ratio has proven to be statistically negligible and hurts return on equity.

Chandrasekaran N- (1993): Attempts to assess profitability in the cement industry were made by CHANDRASEKARAN N. He has observed that institutional and behavioral factors have defined profitability. He also observed that the company's growth, working capital management, capital turnover ratio, inventory turnover, etc., were other variables that impacted profitability. During 1980's some main changes in the cement industry environment has been found in this study which was: Total power for decontrol, new entrants and major capability additions, from inefficient wet process to produce dry process, and from conditions of cement shortage to close gloat throughout the sector, are transforming technology.

Nand Kishore Sharma- (2002): In its report on the financial evaluation of the cement industry in India, it was found that the liquidity situation, current ratio, and rapid ratio showed a downward trend, and these ratios also differed from time to time. Six companies scored better in contrast between the current ratio and the quick ratio of the cement industry, and Four companies were found to be lower than the industry average. In the first four years, the solvency position - debt-equity ratio showed a decreasing pattern, after which the trend rose. More than 100% of the fixed assets and gross debt ratios indicated that the outsiders' claims were covered by the cement companies' fixed assets.

Raja Mohan S. & Vijayaragavan T. - (2008): The output of the production of madras cement Ltd has been evaluated. He used the statistical tool Mann Whitney U-test to evaluate the comparative production output of Madras cement and all other cement firms in India. The study results revealed that the production performance of the chosen unit was comparable to the production performance of all other cement units in India.

III. OBJECTIVES OF THE STUDY

The primary objective of this study is to assess comparative output among Bangladeshi cement companies. The basic objectives of the review are as follows:-

- To describe the cement industry of Bangladesh.
- To access the financial performance of sample cement companies for the period of 2015 to 2019.
- To draw a comparative analysis of selected cement companies of Bangladesh for the period of 2015 to 2019.

IV. METHODOLOGY

The methodology of the research was stated in the following sections based on data collection, sample, and data analysis, and study design.

a) Sample

Conducting this study, five cement companies of Chittagong have been chosen as sample cement companies purposively, namely Aramit Cement Ltd., Confidence Cement Ltd., Heidelberg Cement Ltd., Premier Cement Ltd., and Crown Cement Ltd. Reason for choosing those companies are the data availability on financial performance.

b) Data Collection

This research is primarily focused on secondary data. The quantitative information for this analysis is taken from the respective websites and annual reports of the company. The financial data for a total of five companies were used in this study. The following are the sources:

- Annual reports of Aramit Cement Ltd.
- Annual reports of Heidelberg Cement Ltd.
- Annual reports of Confidence Cement Ltd.
- Annual reports of Premier Cement Ltd.
- Annual reports of Crown Cement Ltd.
- Various reports related to the study.

c) Analysis of Data

To perform the comparative analysis I have used different financial ratios for this study because they are designed to evaluate a financial statement. Different ratios such as Liquidity Ratio, Profitability Ratio, Solvency Ratio, Market Value Ratio, and Asset Turnover Ratio. Ratio analysis is used based on essential variables to include indications regarding a company's past results.

d) Data Analysis Variables

This research uses the following different variables for comparative financial performance analysis:

e) Current Ratio

It represents the relation between the current assets of the company and its current liabilities. A higher

current ratio is often more desirable than a lower current ratio because it illustrates that current debt payments can be made more efficiently by the company.

Current Ratio=Current assets/Current liabilities

Return on Assets (ROA): This offers an analysis of how successful the management is in making income using its assets.

Return on Assets (ROA)= Net income/Average Total assets

Return on Equity (ROE): The amount of net profits returned as a percentage of the shareholder's equity is presented here. It also tests a corporation's profitability by concentrating on how much profit a business will produce with the investment of the shareholder.

Return on Equity (ROE)= Net income/Shareholder's equity

Net Profit Margin: Once all costs and expenditures, including interest and taxes, have been deducted, the net profit margin calculates the amount of each revenue dollar left. The higher the net profit margin for companies, the better it is.

Net Profit Margin=Net Profit after Tax/Sales

Inventory Turnover Ratio: Stock turnover is a ratio showing how many times a business's product is sold and replaced over a lifetime.

Inventory turnover ratio=Cost of goods sold/Inventory

Total Asset Turnover: The absolute turnover of resources demonstrates the efficiency with which the organization uses its resources for production deals. The higher the absolute resource turnover of the organization, the more efficiently its resources are used.

Total Asset Turnover= Sales/Total Asset

Earnings per share: This calculation does not in any way represent the market price of the stock of a company, but can be used by investors to derive the price they feel is worth the shares.

Earnings per share=Total Earnings/Outstanding shares

Debt to Equity Ratio: The debt-to-equity ratio represents the proportion of lenders and owners with corporate capital. A higher debt to equity ratio means that more borrower finance (bank loans) is used than lender funding (shareholders).

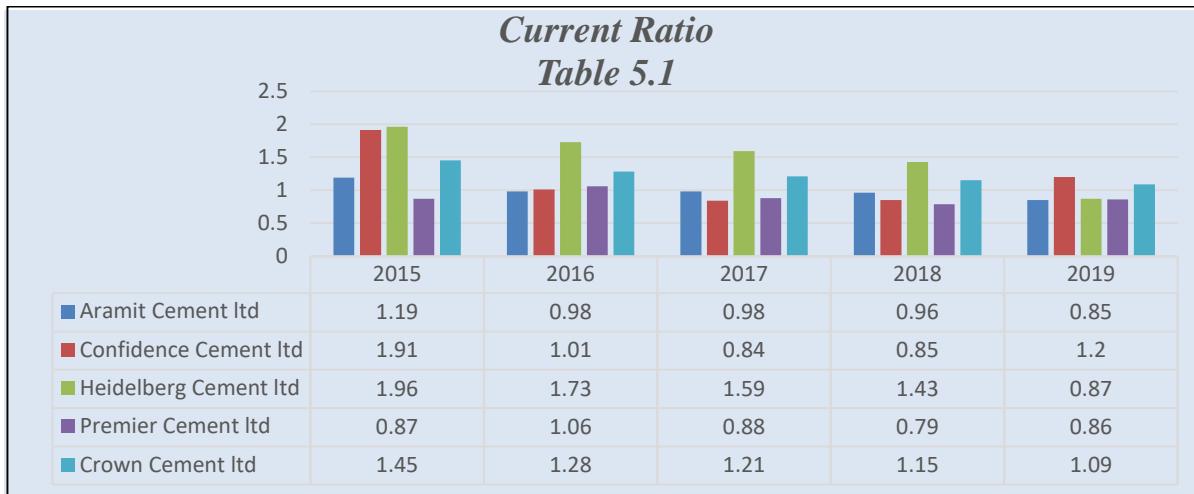
Debt to Equity Ratio = Total Liabilities/Total Equity

V. ANALYSIS OF THE STUDY

a) Liquidity Ratio

Liquidity refers to a company's ability to satisfy its short-term financial commitments when and when

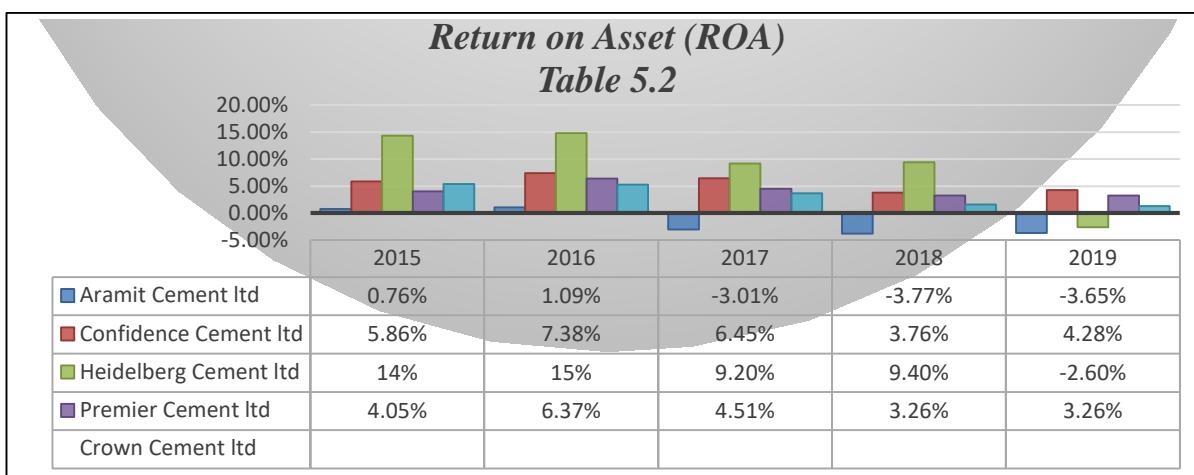
they are due. The primary purpose of the liquidity ratio is to determine the willingness of companies to satisfy their short-term maturing obligations.



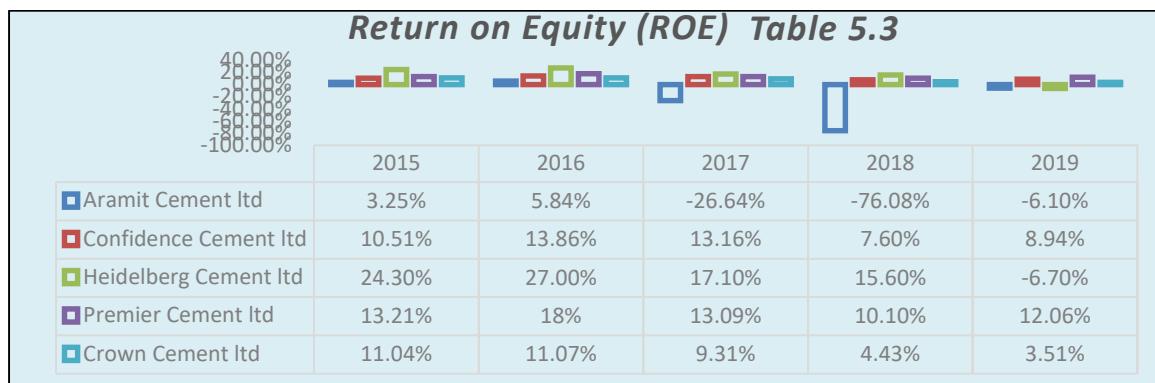
In the above table the short-term financial solvency of Heidelberg Cement Ltd. Crown Cement Ltd. is in good condition in past five years with an average of 1.52& 1.24respectively. Besides, Confidence Cement Ltd. had ups and downs of current ratio with an average rate of 1.16. On the other side, Aramit Cement Ltd. & Premier Cement Ltd. are very lower than other cement companies over the last five years with an average rate of 0.99 & 0.89 accordingly.

b) Profitability Ratios

The capacity of an organization to gain profit over some time is profitability. Although the profit figure is the starting point for any cash flow calculation, as already indicated, due to lack of cash, successful businesses may still fail.

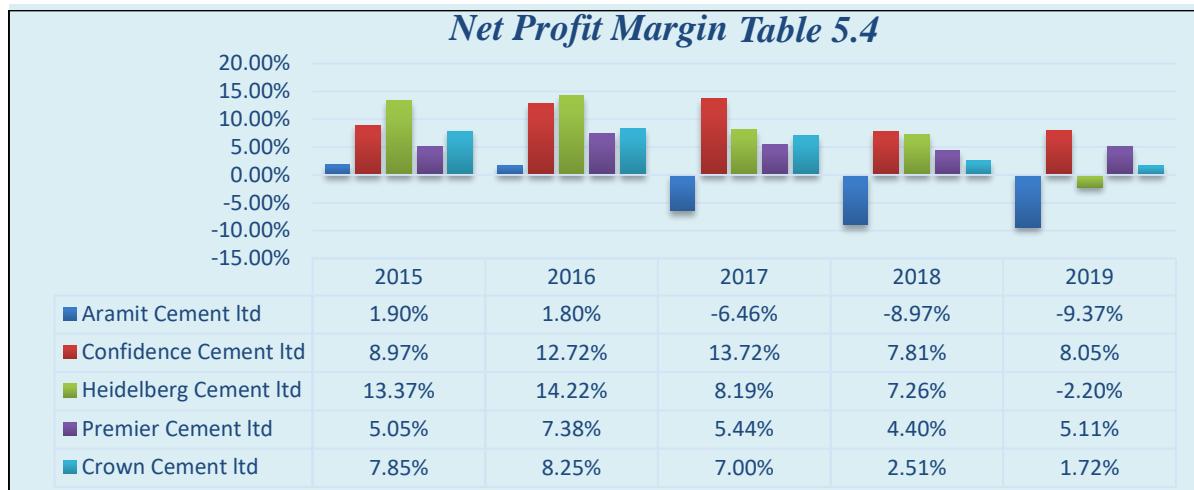


In the above table, Heidelberg &Confidence Cement Ltd. had the highest ROA in 2016 and the lowest in 2018 & 2019 with an average of 9% & 5.55% mutually compared to other cement companies. On the other side, Premier Cement Ltd. had the highest ROA in 2016 & the lowest in 2019 with an average rate of 4.29%. Moreover, The Rate of Aramit Cement Ltd is declining dramatically over the years. Also, Crown Cement had fluctuated over the years with an average rate of 3.45%.



In table 5.3, in 2016 all cement companies had highest ROE percentage. On the other side, Aramit Cement Ltd. 's ROE is declining from 2017 to 2018. but in 2019 they had have recovered their ROE rate by

69.98%. Moreover, the average rate of Heidelberg Cement Ltd. 15.46%, Premier Cement Ltd.13.29%, Confidence Cement Ltd. 10.81%, and Crown Cement Ltd.7.87%, respectively.

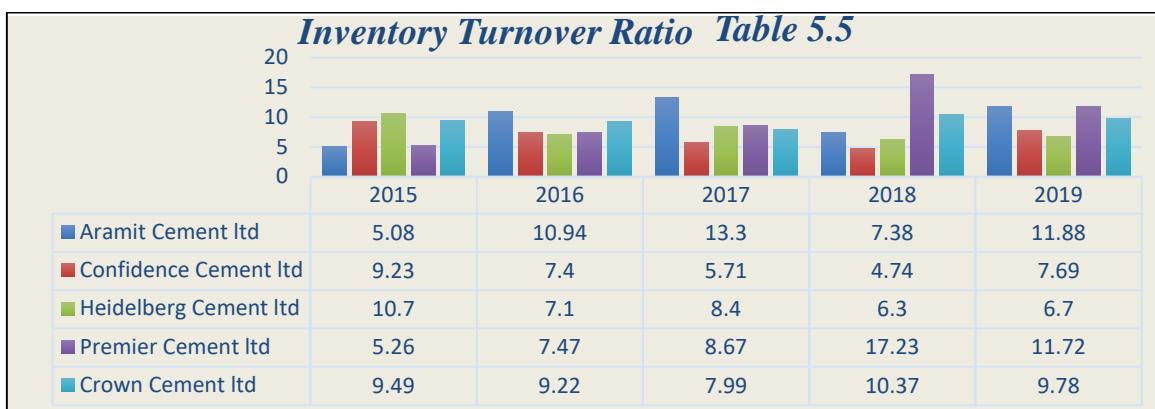


In table 5.4, all the cement companies except Aramit Cement managed to put them within an acceptable limit between 5% to 10%. But the net profit margin of Aramit Cement Ltd. was declining rapidly over the years and ended up with a negative rate in 2019 (-9.37%). This implies that during the time, Aramit cement Ltd was not productive in sales performance and did not achieve the cost-effectiveness of operations. Furthermore, the average data of Net Profit Margin for

Confidence Cement Ltd. 10.25%, Heidelberg Cement Ltd 8.17%, Premier Cement Ltd. 5.48%, Crown Cement Ltd. 5.47% .

c) Asset Management ratio

The asset management ratio is a collection of ratios that determines how efficiently a business manages its assets.



In table 5.5, we see that all the cement companies faced ups & downs in inventory turnover ratio over the last five years. Considering above average data, Premier Cement Ltd. had the highest average inventory turnover rate of 10.07 times compared to other cement companies, while Aramit Cement Ltd. had the

2nd highest average rate of 9.72 times. It signals of the efficiency for sales of inventory is good of these two companies. Adding to this, the average rate for Crown Cement Ltd. 9.37 times, Heidelberg Cement Ltd. 7.84 times & Confidence Cement Ltd. 6.95 times, respectively.

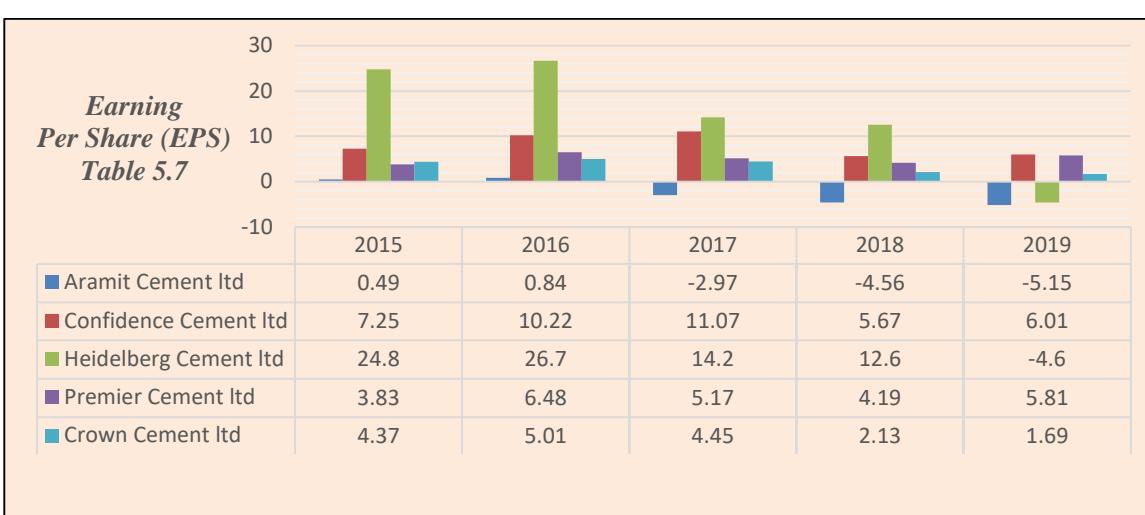


In table 5.6. Generally, for large companies, the appropriate total asset turnover ratio is 2 (two) times. But none of the cement companies could maintain it. Considering the average data, Heidelberg Cement Ltd (1.16) & Premier Cement Ltd. (0.77) are a better position compared to other cement companies. On the other hand, the average total asset turnover rate of Aramit Cement Ltd. (0.49), Confidence Cement Ltd. (0.54) & Crown Cement Ltd. (0.65) are below one time which

suggests that total assets are not used effectively in the span to produce revenue.

d) Market Value Ratios

Calculating the current share price of the stock of a publicly traded firm, market value ratios are used. Present and prospective investors use these ratios to determine if the shares of a company are overpriced or underpriced.



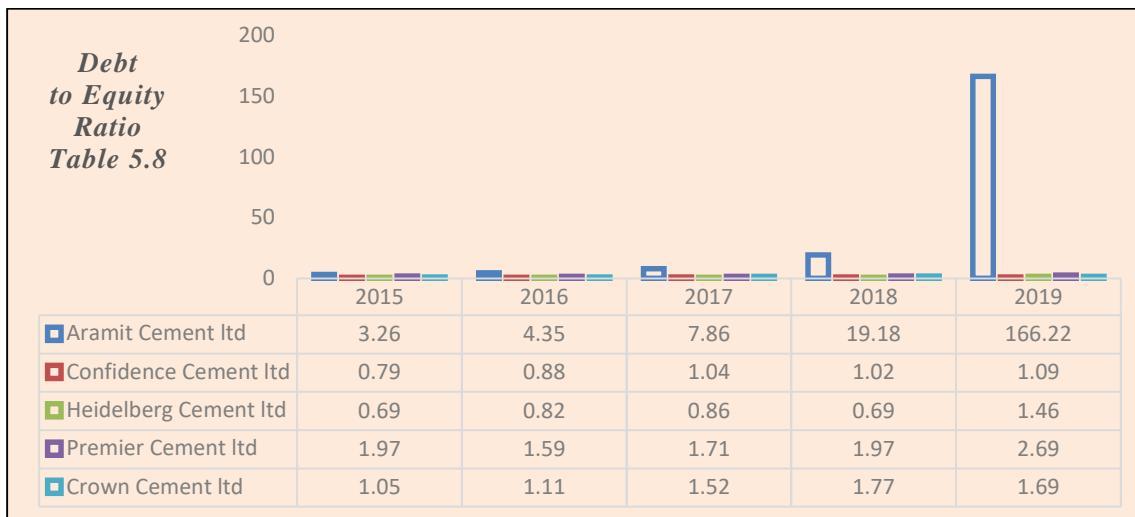
From table 5.7, we can see the EPS of Heidelberg Cement Ltd. is better than the other three cement companies with an average of 14.74. Diversely, the EPS of Aramit Cement Ltd. faces a declining trend with a negative EPS rate of 2.97, 4.56 & 5.15 from 2017 to 2019. Moreover, Confidence Cement Ltd. managed a

satisfactory average EPS rate of 8.04 compared to Premier Cement, Crown Cement & Aramit Cement Ltd. The average EPS rates of Aramit Cement (2.27), Premier Cement (5.10) & Crown Cement (3.53).

e) *Solvency Ratio*

Solvency is a company's ability to fulfill its long term financial commitments. Solvency ratios, also known as leverage ratios, measure the willingness of a business to indefinitely continue operations by contrasting debt levels with equity, assets, and profits.

Solvency ratios reflect the ability of a corporation to make payments and pay off creditors, bondholders, and banks for its long-term obligations. In the long-term, better solvency ratios suggest a more creditworthy and financially stable company.



In table 5.8, the debt to equity ratio of Aramit Cement Ltd. shows an upward trend over the years with an average ratio of (40.17), compared to the other five cement companies, which tells that more creditors funds (bank loans) are being used. Contrarily, Heidelberg Cement Ltd. and Confidence Cement Ltd. had the lowest average debt to equity ratio, which are (0.90) & (0.96). Moreover, Both Premier Cement Ltd. & Crown Cement Ltd. face ups and downs with an average rate of (1.99) & (1.43) respectively.

f) *Findings on comparative analysis of financial ratio: Liquidity*

Although the liquidity position of Heidelberg Cement Ltd. is showing a downtrend up to 2018, considering average, they are in the best position among the five companies. Besides, Crown Cement Ltd. also maintained a good liquidity position along with Heidelberg Cement Ltd. This shows that these two companies are capable of pay off their current liabilities more immediately in comparison with Premier Cement Ltd., Aramit Cement Ltd & Confidence cement Ltd.

Profitability: Heidelberg Cement Ltd. had the best profitability ratio performance with an average percentage of 9% in ROA & 15.46% in ROE among five cement companies. That means this company can generate earnings as compared to its expenses and other relevant costs. Confidence Cement Ltd. was also close with an average rate of 5.55% in ROA but could not manage to get the second-best ROE rate where the average ROE of Premier Cement Ltd. is 13.29%. This indicates that Premier Cement Ltd. has a better capacity

of the total equity in generating net profit than Confidence Cement Ltd. But Premier Cement Ltd., lacks behind in the ROA rate compared to Confidence Cement Ltd. Apparently, Aramit Cement Ltd. has the poorest average negative rate of ROA (1.72%) & ROE (19.95%) among five cement companies.

Considering net profit margin, Confidence Cement Ltd. has obtained the best average net profit margin of 10.25%. This indicates that the cost of goods sold is rightly managed by them, which produced a sufficient net profit margin ratio. On the contrary, Heidelberg Cement Ltd. achieved the second best average of 8.17% in net profit margin. In addition, Premier Cement, Crown Cement & Aramit Cement Ltd. have taken second, third & fourth place in terms of profitability out of five companies.

Inventory Turnover: Premier Cement Ltd. is in the best position in inventory turnover among the five companies which indicates the good efficiency of their salespersons. On the other case, the average inventory turnover of Heidelberg Cement Ltd. is 7.8 times closer than the average turnover rate of Aramit Cement Ltd. 9.72 times. In Addition, Confidence Cement Ltd. has the lowest average rate of inventory turnover of 7.10 times out of five cement companies.

Asset Turnover: Furthermore, Heidelberg Cement Ltd. has the highest total asset turnover rate compared to five cement companies with an average of 1.16. This represents better efficiency in total asset utilization of Heidelberg Cement Ltd. Besides; Premier Cement Ltd. also managed the second rank in utilizing total assets turnover efficiently. Moreover, Crown Cement,



Confidence Cement & Aramit Cement Ltd. have third, fourth & fifth appealing positions in utilizing total assets.

Marketability: In terms of EPS, Heidelberg Cement Ltd. is taking a solid ground than among five cement companies with an average rate of 14.74 in EPS. Confidence Cement Ltd. comes to a second better place with an average EPS of 8.04. In Addition to, Premier Cement Ltd. has third a favorable average rate of EPS 5.10. Moreover, Aramit Cement Ltd. has the least appealing average rate with a negative EPS of (-2.27) among five cement companies.

Solvency: Heidelberg Cement Ltd. had the best solvency ratio performance out of five cement companies. The average debt to equity ratio of Heidelberg Cement Ltd., which is 0.90, indicates less creditor financing (bank loans) is used than investor financing. Confidence Cement Ltd. also maintained lower debt to equity ratio of Heidelberg Cement Ltd. with an average rate of 0.96 which is better than Premier Cement, Crown Cement & Aramit Cement Ltd. On the contrary, the average debt to equity ratio of Aramit Cement Ltd. is the highest among five cement companies. This represents higher use of creditors financing, which comes with higher interest expense that would reduce net profit. Moreover, Premier Cement Ltd. is taking the second position, and Crown Cement Ltd. is taking the third position in terms of the firm's solvency situation compared to other cement companies.

i. Recommendations for Liquidity position

- ❖ Aramit Cement Ltd. can increase its liquidity by getting rid of its useless asset and paying off its liabilities as early as possible.
- ❖ Premier Cement Ltd. can raise its liquidity by enhancing more cash sales and improving the invoice collection period.

ii. Recommendations for Profitability position

- ❖ Aramit Cement Ltd., Premier Cement Ltd., and Crown Cement Ltd. can enhance their earnings by managing their operating costs efficiently.
- ❖ Aramit Cement Ltd. can increase its income by using more financial leverage. Furthermore, Confidence Cement Ltd. and Crown Cement Ltd. should provide more effort to get a better return from the money invested.
- ❖ Aramit Cement Ltd. Also, should try hard to intensify its efficiency in utilizing the firm's assets to generate adequate profitability. Also Premier Cement Ltd., and Crown Cement Ltd. should take effective steps to accelerate the current return on asset.
- ❖ Aramit Cement Ltd., Premier Cement Ltd. and Crown Cement Ltd. should amplify their management ability to operate the business by enhancing sales with the cost price effectiveness of the operation.

iii. Recommendations for the Turnover position

- ❖ Confidence Cement Ltd. should take steps to increase sales to improve its inventory turnover ratio.
- ❖ Both Crown Cement Ltd. and Heidelberg Cement Ltd. need to ensure sales growth to improve its sales performance and maintain a good inventory turnover ratio.
- ❖ All the companies should enhance asset turnover at a satisfactory level. Especially, Aramit Cement Ltd., Confidence Cement Ltd., and Crown Cement Ltd. can increase efficiency to improve asset turnover by increasing sales via more promotion and advertisement.

iv. Recommendation for Market Value position

- ❖ Aramit Cement Ltd. needs to take proper actions to increase its EPS.
- ❖ Aramit Cement Ltd., Premier Cement Ltd. And Crown Cement Ltd. can improve their EPS more by managing operating activities more efficiently and decreasing outstanding shares.

v. Recommendation for Solvency position

- ❖ Aramit Cement Ltd. can reduce its high debt to equity ratio by managing inventory more effectively.
- ❖ Premier Cement Ltd. And Crown Cement Ltd. also needs to take the necessary steps to improve the debt to equity ratio.

VI. CONCLUSION

At the end of this analysis, it is very much clear that the study is prepared based on the comparative financial performance of five selected cement companies in Bangladesh. Moreover, Financial ratios are also used to compare the performance of these cement companies, which is an important part of financial performance analysis, and through this, we can know the five companies' past and present performance. Most importantly it gives us an idea that which company's performance is the best among the five and which one is the worst.

Throughout the study, Aramit Cement Ltd., Trust Cement Ltd., Heidelberg Cement Ltd., Premier Cement Ltd., and Crown Cement Ltd. were made aware of the financial power, organizational effectiveness and efficacy of the analysis.

From the above analysis, we can say that Heidelberg Cement Ltd. is the best performing company among the five companies. On the other hand, Aramit Cement Ltd. is in the worst position than four other cement companies in financial performance. But some threats are increasing recently. If those risks or threats can be handled properly, then they can survive successfully. If we look at financial performance, we can see that Confidence Cement Ltd. maintained an average

position compared to four cement companies. They just need to improve financial performance such as total asset turnover and inventory turnover by following the recommendations. In addition to, Premier Cement Ltd. had an outstanding position in financial performance except the debt to equity and liquidity ratio. Such as their liquidity position, and solvency position should be improved to perform better than other cement companies.

20. Annual reports (2015-2019) of Premier Cement Ltd.
21. Annual reports (2015-2019) of Crown Cement Ltd.

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GLOBAL JOURNAL OF MANAGEMENT AND BUSINESS RESEARCH: A
ADMINISTRATION AND MANAGEMENT
Volume 21 Issue 3 Version 1.0 Year 2021
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4588 & Print ISSN: 0975-5853

Role of Boards in Cyber Security Risk Profiling: The Case of Bangladeshi Commercial Banks

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Keywords: *cyber security, cyber risk, board governance, enterprise risk management, risk profile, top-ten risks, risk map.*

GJMBR-A Classification: *JEL Code: M10*



ROLE OF BOARDS IN CYBER SECURITY RISK PROFILING THE CASE OF BANGLADESHI COMMERCIAL BANKS

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Role of Boards in Cyber Security Risk Profiling: The Case of Bangladeshi Commercial Banks

Md. Bazlur Rahman ^a, Tania Karim ^o & Imtiaz Uddin Chowdhury ^p

Abstract- Cybercrime becomes costlier than physical crime in developed economies. As a result, it has become the top priority in governance issues in financial institutions. As a developing nation in Bangladesh, the banking sector faces multi-dimensional challenges to adopt IT applications in banking with cybercrime. The paper examines what the banking industry faces cyber security risks and how the board members contribute to identify and mitigate the risk. Through an in-depth interview among the directors of commercial banks in Bangladesh, we identified the possible cyber risk and prepared the risk profile describing the sources, implications, severity of impact, likelihood of occurrence and ranked them. The result shows that the IT governance risk, IT investment risk, and information risk are most critical among the significant cyber security risks. The results of the study have important implications for both corporate boards and policymakers.

Keywords: cyber security, cyber risk, board governance, enterprise risk management, risk profile, top-ten risks, risk map.

I. INTRODUCTION

Research documented cybercrime as costlier than physical crime (Wilshusen, 2010). Malicious software alone, for instance, in recent years, caused damages multi-billion dollars. Cybercrime generated \$81 million theft from the Bangladesh Bank (central bank of Bangladesh) via SWIFT. JP Morgan had data on 76 million US household account recorded stolen, and US Federal Government had \$18 million personal details stolen (Danielsson, Fouché, & Macrae, 2016). Cybercrime causes financial losses and creates other risks, including reputation risk, market risk, operational risk, competency risk, and business continuation risk. The high magnitude of impact and the possibility of cybercrime leads to the use of information technology (IT) in financial institutions vulnerable on the one hand, the emergence of IT application in those institutions is robust on the other. As a result, cyber security has become the top priority list of organizations' governance issues. Identification and mitigation of cyber risk are the core functions of Enterprise Risk Management (ERM) and the board of directors must oversee these functions. Recent literature, corporate governance standards, and the legal framework of

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governance significantly emphasize the board's role in mitigating cyber risk among the ERM functions, especially in the financial sector. Therefore, in the financial institutions, the board members' role on the issue and their profound knowledge and IT expertise are highly required.

Information and communication technology is rapidly expanding towards every corporate sector globally, and the Bangladeshi banking sector is no exception. The use of electronic banking is growing in parts of the developing world. As the new software is introduced, existing financial transactions and services are being changed. However, still in Bangladesh, Cash is the dominant medium of exchange. During the last decade, almost all banks adopted electronic banking in thousands of branches. The banking sector faces multi-dimensional challenges to adopt and adapt

E-Banking applications fully. However, it is unclear whether the commercial banks most significantly consider the cyber risk to identify assets' vulnerability. It should also be unveiled whether the IT governance and the board governance mechanisms are adequate for cyber security. While numerous studies have investigated the means of cybercrimes and IT governance for different countries and sectors, to the best of the authors' knowledge, such studies in the Bangladeshi banking sector are absent. This study will first examine the attributes of cybercrime available in the Bangladeshi banking sector and the oversight role of boards of directors on cyber security. Our empirical analysis is based on a comprehensive survey on the impact and likelihood of cybercrimes among the board of directors of ten commercial banks operating in Bangladesh. This paper draws on cyber security risks experienced by financial institutions and identifies traditional risk management's limitations in explaining corporate boards' roles and contributions. Also, this paper focuses on the enterprise risk management (ERM) techniques on preparing the risk profile and makes three main contributions. First, the paper identifies the possible cyber risks with their sources in commercial banks in Bangladesh. Second, applying the ERM tools and techniques, the study measures the severity and likelihood and severity of cybercrimes in a time horizon. Third, it furthers our understanding of whether and how the board members contribute to identify and mitigate the cyber security risks in commercial banks. Because of the increasing pressure



to raise banking and computer technology, this study's results may have important implications for corporate boards and policymakers. The paper is divided into six sections. The second section includes the literature review, the third section outlines the methodology, the fourth section presents the results and findings of the study, the fifth section includes the discussion of the results. Finally, the last section comprises the conclusion, implication, and future research direction.

II. LITERATURE REVIEW

In the 1990s, when the internet emerged massively in all public and private sectors, things began to change information security management, focusing on the security related to people, processes, information, and IT. Since then, there have been many improvements taking us to where we are now with these old security management standards being changed in international standards (Humphreys, 2008). We reviewed the recent literature, reflecting on the operational risks, nature, sources, and impact of cyber risks, IT governance and risk mitigation, and the board of directors' role in risk management in the financial sector, given in the following sections.

a) Cyber Risk and Cybercrimes

Cyber is used as the short term for cyberspace to elucidate all-digital networks used to create, modify, store, and communicate information (GCHQ, 2012). The system includes all technical resources used in businesses, infrastructure, and services. Wilshusen (2010) identified the cyber risk as costlier than real crimes. Biener, Eling, and Wirsfs (2015) refer to the term cyber risk as to the different sources of risk which affect a company's information and technology resources. They specified the cyber risk as to the business's common loss and harm arising from the technical computer system failures, thefts of data by hackers, and criminals' attacks in the system. In the USA, the National Association of Insurance Commissioners (NAIC) reported some noticeable ways of cybercrimes, including business interruption, the disclosure of sensitive information, and identity theft (Eling & Wirsfs, 2016). Many studies attempted to define cyber risk from different perspectives. Some researchers focus on specific areas, such as Mukhopadhyay et al. (2013) refer cyber risk to malicious electronic events disrupting business operations.

On the other hand, many researchers define the cyber risk in a broader perspective as an information security risk (Ogut, Raghunathan, & Menon, 2011) or risk failing information systems

(Bohme & Kataria, 2006). The definition of cyber risk we employ as an expansive operational risk based on how the financial institutions categorize the cyber risk. Cebula and Young (2010) define cyber risk as an operational risk to resources in a way that affects

availability, confidentiality, or integrity. In this paper, we focus on operational risks that concern IT assets.

Although a considerable amount of literature on cyber risk is found in previous studies, the empirical evidence of cyber risk in a specific industry, country or region is relatively limited. The Ponemon Institute regularly publishes reports on the number of data breaches and how they happen. The Ponemon Institute reports that in 2013, the average expense of a data breach amounting to nearly \$10 million was incurred (Ponemon Institute, 2013). The report predicted the figure to be increased significantly in the following years.

Similarly, McAfee (2013) estimated a global economic impact of cybercrimes and cyber espionage for up to US\$ 1 trillion each year. World Economic Forum (2012) estimate total financial losses from cybercrime in 2009 in the US alone at more than US\$ 500 million. Some other studies provided more technical data for some specific countries and types of cybercrime. Danielsson, Fouché, and Macrae (2016) documented the financial loss by cybercrime in recent years in the public, private, and corporate sectors. The most significant losses and methods of cybercrime occurred recently, such as \$81 million theft from the Bangladesh Bank via SWIFT,

\$12 million stolen from Ecuador's Banco del Austro via SWIFT, \$100 million loss caused by DRIDEX virus, data on 76 million US household account details of JP Morgan stolen, Stuxnet worm sabotaging Iran's nuclear program, and US government had 18 million personal records stolen.

b) Nature, Sources, and Methods of Cyber Crime

Biener et al. 2015 divided the sources of cyber risk into four broad categories: systems and technology failures, actions of people, internal processes failure, and external events. Obsolescence of hardware, failure due to capacity, compatibility of software, configuration management, security settings, coding practices, change control, system design, system specifications are the elements of cyber risk that occurred in system and technology failures. The errors, omissions, and mistakes, lack of appropriate knowledge and skills of employees, shortage of personnel to take action, intentional vandalism, theft, sabotage, and fraud are the common cyber risks in the action of people category. The internal processes failure category includes the causes of cyber risks are the failure of processes due to poor process design or inadequate execution, lack of control operating the process, and failure of supporting processes to deliver resources. The major elements of cyber risks come from external events are unfavorable weather, loss by fire, flood, earthquake, and risk arising from legal issues, changing business environment, and external parties. The ultimate impact of cybercrime is a financial loss of the organization, and the methods of crime are not always similar. Cybercrime affects the

functional departments (Accounting and Finance, Marketing, Operation or Production, Human Resources) directly or indirectly of an organization. Raghavan and Parthiban (2014) argue that cybercrime by ATM frauds, phishing, identity theft, and denial of service directly affects a firm's financing activities. Also, Raghavan and Parthiban (2014) assert that companies that fall prey to cybercriminals lose their market value because of the legitimate concerns of financial analysts, investors, and creditors and because of customers' worries about the security of their business transactions.

The cyber threats come from internal and external sources of the organization. Riem (2001) concludes that the most critical computer security threats come from employees, consultants, and contractors working in the company rather than outside hackers. In a similar study, Yapp (2001) agrees that more than 70 percent of threats to cyber security like frauds, misuses, and abuses originate mostly from the inside. The weak password policies and controls are the roots of the most internal cyber security problems.

c) *Role of Board of Directors in IT Governance and Cyber Risk Mitigation*

One of the earliest improvements in corporate governance was made in 1994 when the Toronto Stock Exchange Committee on Corporate Governance in Canada issued its report. The report included the groundbreaking guidelines for the board's role that the board of directors should explicitly assume responsibility for identifying the key risks of the corporation and ensuring the implementation of appropriate systems to mitigate those risks (Leblanc & Fraser, 2016).

Leblanc and Fraser (2016) also mentioned that, in 2010, the Securities and Exchange Commission (SEC) in the USA brought in new guidelines for the boards to involve in the oversight of the risk management functions and disclosures to the investors. Following the SEC in the USA, the UK's Financial Reporting Council, in its September 2014 publication, the UK Corporate Governance Code, stipulates that the board's responsibility is to determine the nature and extend of the critical risks that impact on firm's strategic objectives. Also, the board should monitor the sound internal control systems.

Leblanc and Fraser (2016) emphasized the effective board governance and IT knowledge of board members. On the other hand, Kröger (2008) suggested the process and accountability of risk management relating to cyber security risks. Kröger (2008) recommended that the board should comprehensively address the cyber security issues, and finally, ensure who is responsible and who pays needs to be answered.

Shackelford (2012) argued that companies must take a proactive approach toward managing cybercrimes to improve overall cybersecurity. Similarly,

Sajeva and Masera (2006) recommended that the corporate governance framework should ensure strategic guidance, active monitoring, and board accountability to the shareholders in managing cybersecurity risk.

However, many lacks on the board regarding cybersecurity governance are indeed available in the literature. Interestingly, many organizations argue that they do not need to invest enough in cybersecurity and cyber-insurance. Parent and Reich (2009) believe that this stance underscores the importance of boards to action against potential IT disasters. To make risk management decisions in a practical, fair, and rational way, Sajeva and Masera (2006) addressed that the governance strategies would have to consider a more accredited governance principle in both public and corporate levels through the participatory, efficient, and fair decision-oriented process. Furthermore, Skelcher (2005) and Renn and Walker (2008) criticized the multi-layer and complex decision making and reporting process because the present governance structures are not good enough to ensure the independence of the CIO, CRO, and other executive officers in risk reporting. Therefore, it is now generally recognized that the board has full accountability for overseeing the firm's approach to managing cybersecurity risks. However, exactly how boards do this in practice can vary. Fraser and Simkins (2010) explained some of the more popular approaches of enterprise risk oversight: first, delegating oversight of enterprise risk management to the audit committee, second, delegating oversight of risk management to the risk committee (or another existing committee such as the governance committee), third, have the full board engaged in the oversight of enterprise risk management.

III. METHODOLOGY

a) *Objectives of the study*

The primary objective of the study is to identify the top cybersecurity risks in Bangladeshi commercial banks and present their severity and likelihood through a risk profile. Also, the study demonstrates to find out whether the oversight role of the board adequate mitigating major cyber risks. The specific objectives of the study are as follows:

- To identify the critical cyber security risks that have a significant effect on the Bangladeshi banking sector; and
- To measure the severity and likelihood of the identified risks through the risk profiles.

b) *Study Sample, Data Collection and Analysis*

The target population for the study is the directors of banks operating in Bangladesh. We have selected ten major stock exchange listed private commercial banks operating in Bangladesh for at least 20 years and have online banking (Table -1). The

sample banks have a total of 132 directors on boards. We have collected primary data through a structured questionnaire.

Table 1: Study Sample: Commercial Banks and Assets

No.	Name of the bank	Stock Exchange Listed	Online Banking	Year of Establishment	Assets Ending 2019 in Million BD Taka	Size of Board of Directors
1.	A B Bank Limited	Yes	Yes	1982	368,076	6
2.	Bank Asia Limited	Yes	Yes	1999	355,720	16
3.	Brac Bank Limited	Yes	Yes	2001	414,855	8
4.	Dhaka Bank limited	Yes	Yes	1995	286,437	18
5.	Dutch Bangla Bank Limited	Yes	Yes	1995	380,182	6
6.	Eastern Bank Limited	Yes	Yes	1992	338,201	11
7.	Islami Bank Bangladesh Limited	Yes	Yes	1983	1,093,188	22
8.	Exim Bank Ltd.	Yes	Yes	1999	433,018	12
9.	First Security Islami Bank Ltd.	Yes	Yes	1999	437,832	14
10.	Shahjalal Islami Bank Limited	Yes	Yes	2001	268,697	19

Source: *Lanka Bangla*, 2020

Through a rigorous literature review, we pointed out the cybercrimes and cyber risks (Table-2) with their nature and sources. Then we asked 30 structured questions about cyber security, risk knowledge, risk profiling, and overseeing risk management functions. It

is not easy to access primary data on the board of directors in financial institutions because they keep their business secret (Daily, Dalton, & Cannella, 2003). Moreover, since the directors are busy professionals, the response rate is meager (Pettigrew, 1992).

Table 2: Cyber risk and cybercrime

Type of Risk	Cybercrime
1. IT Investment Risk 2. IT Governance Risk 3. Cyber Competence Risk 4. Cyber Infrastructure Risk 5. IT Project Risk 6. Business Continuity Risk 7. Information Risk 8. Financial Risk 9. Public Perception Risk 10. IT Reputation Risk	a) Computer virus b) ATM frauds c) Identity theft d) Phishing e) Spoofing f) E-theft g) Netspyionage h) Online credit card fraud i) Online denial of services j) Software piracy k) Spam l) E-fraud m) Cyber terrorism

To increase the response rate, we devoted careful attention to questionnaire design and wording of questions avoiding vague concepts and reducing items' ambiguity (Tourangeau, Rips, & Rasinski, 2000). We prepared a cover letter, emphasizing the need for research and increasing interest in the directors' topic (Minichilli, Zattoni, & Zona, 2009). We have also prepared a detailed description of the cyber risk terms and the questionnaire that allows the directors to be aware of cyber risk, cybercrimes, and risk analysis.

We have divided the questionnaire into three sections. In the first part of the questionnaire, we asked about the current and potential cyber risks that impact the bank's internal and external environment to assess the impact, nature, and sources of risks. In the second

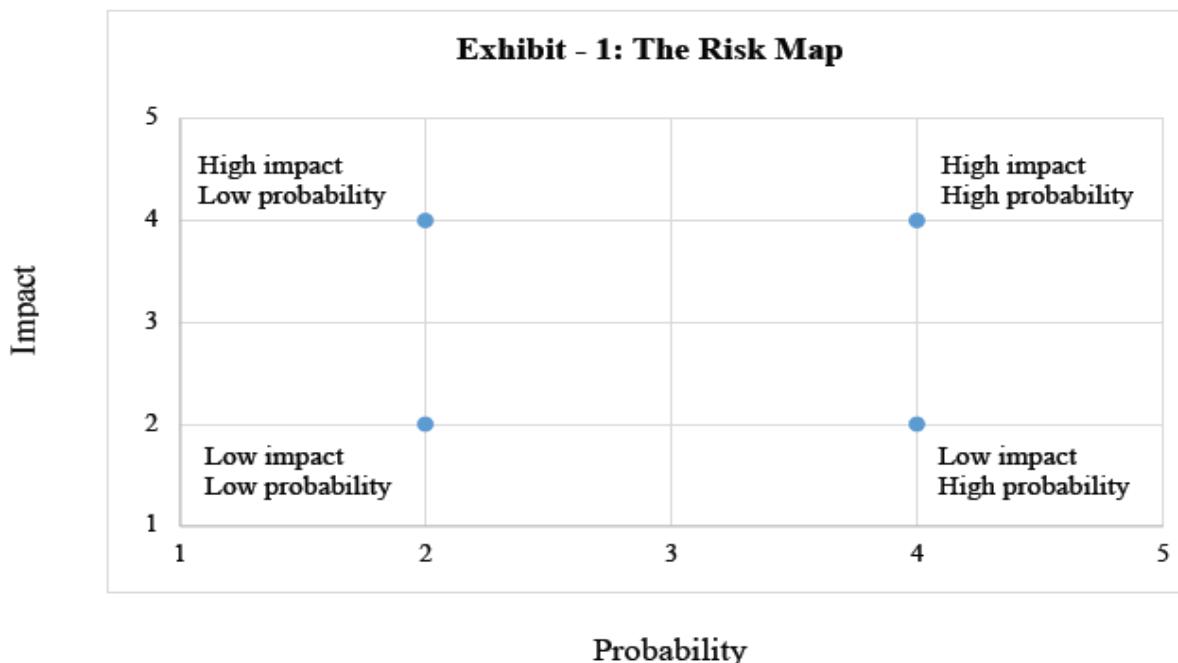
part, we asked to rate the impacts of identified cyber risks, and in the final part of the questionnaire, we asked to measure the likelihood of risks. We measured the impact and likelihood of risk on a five-point magnitude scale (Fraser & Simkins, 2010).

Table 3: Impact and Likelihood/Probability Scale

Rating	Impact	Likelihood Scale	Probability Scale in the Time Horizon
5 = Worst Case	Very High	5 = Very Likely	□ 90%.
4 = Severe	High	4 = Likely	65% - 90%
3 = Major	Medium	3 = Medium	25% - 65%
2 = Moderate	Low	2 = Unlikely	5% - 25%
1 = Minor	Very Low	1 = Remote	□ 5%

The five-point scales (Table 3) to measure risk are 1 = Minor, 2 = Moderate, 3 = Major, 4 = Severe, and 5 = Worst Case. Similarly, the impact scales are Very Low, Low, Medium, High, and Very High. The Likelihood/Probability scales are 1 = Remote, 2 = Unlikely, 3 = Medium, 4 = Likely, and 5 = Very Likely. The directors of the sample banks rated the cyber risks (Table 2). In their opinion, we assessed the impact and likelihood of the "Top 10" risks (Fraser & Simkins, 2010) with a three-year time horizon. A "Top 10" risk profile exhibits a ranked listing of the most significant risks an organization faces. It is the simplest method of identifying and ranking the risks and easy to

communicate. Also, we presented the identified risks on the risk map. A risk map (Exhibit-1) is one of the most widely described ways to present critical risks facing an organization (Fraser & Simkins, 2010). It is easy to understand and exhibit, and visually appealing. The vertical axis shows the potential impact of risks, and the horizontal axis shows the estimated likelihood of risks. The map has four areas: high impact/ low likelihood, low impact/ low likelihood, high impact/ high likelihood, and low impact/ high likelihood areas. The risks falling into the area of high impact/ high likelihood are considered critical and require the extensive attention of the board and management.



IV. RESULTS

We summarized the risk as "Top-Ten" risk (Table 4) with sources, implications/events, and possible cybercrimes in Bangladeshi commercial banks based on directors' opinions. The significant cyber risks (Top-Ten) that may happen in the banking sector in Bangladesh are IT governance risk, IT investment risk, cyber competence risk, cyber infrastructure risk, IT project risk, business continuity risk, information risk, financial risk, public perception risk, and IT reputation risk. The study results in IT governance risk as to the

most significant risk in the Bangladeshi banking sector. The sources of IT governance risk are the absence of IT expert directors on the board, lack of separate board committees for IT and risk, and insufficient oversight functions regarding IT functions and cyber risk of board committees and the board of directors. The impacts of the IT governance risk on the decision-making process are delaying in the process, risk of mistake and reporting barriers to decision making, and the cost is beyond control. The respondents also agreed that cybercrimes might happen in the Bangladeshi banking

sector, including computer viruses, ATM frauds, identity theft, phishing, spoofing, E-theft, Netspionage, and online credit card fraud, online denial of services, software piracy, spam, E-fraud, and cyber- terrorism.

Table 4: Types and Sources of "Top-10" Risks

Type of Risk	Sources of Risk	Implications/ Risk Event	Cybercrime
1. IT Governance Risk	Lack of IT Expert on the Board. Lack of separate board committee for IT and Risk. Inadequate oversight function.	Delay in the decision-making process. Reporting barriers and risk of mistake in decision making. Cost is beyond control.	1. Computer virus 2. ATM frauds 3. Identity theft 4. Phishing 5. Spoofing 6. E-theft 7. Netspionage 8. Online creditcard fraud 9. Online denial of services 10. Software piracy 11. Spam 12. E-fraud 13. Cyber terrorism.
2. IT Investment Risk	Theft of Data. Hardware Damage.	Capital lost Low profit	
3. Cyber Competence Risk	Loose Customer Employee Turnover	Revenue downturn Customer dissatisfaction	
4. Cyberinfrastructure Risk	Loose Information Physical Damage	Risky Operation. Lack of insurance coverage or high insurance premium.	
5. IT Project Risk	Lack of skilled IT Expert. Lack of advanced technological infrastructure.	Hampered smooth operation. Long decision-making process.	
6. Business Continuity Risk	Lower Capital/Liquidity Low Business Growth	Business shutdown. Share price fall.	
7. Information Risk	Weak Password Dishonest Employee	Loosing competency. Mistrust among the customers.	
8. Financial Risk	Budget pressure/ Insufficient IT fund. High cost of IT project.	Lack of advanced technological infrastructure. Negative impact on net income.	
9. Public Perception Risk	Cyber security is not considered as top priority. Lack of prompt action against the cybercrime. Lack of updated information and community engagement.	Growing public mistrust. Reduction in using online banking and credit card. Negative reports in media	
10. IT Reputation Risk	Identity Theft. Lack of communication.	Lower customer loyalty. Additional regulatory scrutiny.	

Source: Survey opinions

Table 5: Prediction of Impact and Likelihood of Risk in Three-Year Time Horizon

No.	Type of Risk	Impact				Likelihood			
		N	Average	St. Dev.	Magnitude	N	Average	St. Dev.	Magnitude
1	IT Governance Risk	50	4.62	0.6966	Very High	50	4.58	0.7309	Very Likely
2	IT Investment Risk	50	4.22	0.9101	High	50	4.44	0.8369	Likely
3	Information Risk	50	3.64	0.8021	High	50	3.92	1.0069	Likely
4	Cyberinfrastructure Risk	50	4.28	0.9267	High	50	2.80	0.8806	Medium
5	Cyber Competence Risk	50	3.92	0.6952	High	50	2.66	0.9172	Medium
6	IT Project Risk	50	3.78	0.6788	High	50	2.30	0.9529	Unlikely
7	Financial Risk	50	2.56	0.8609	Medium	50	4.62	0.6667	Very Likely
8	IT Reputation Risk	50	2.24	0.9161	Low	50	3.90	1.0738	Likely
9	Business Continuity Risk	50	2.48	0.8628	Medium	50	2.24	0.8466	Unlikely
10	Public Perception Risk	50	1.82	0.8003	Very Low	50	2.02	0.7421	Unlikely

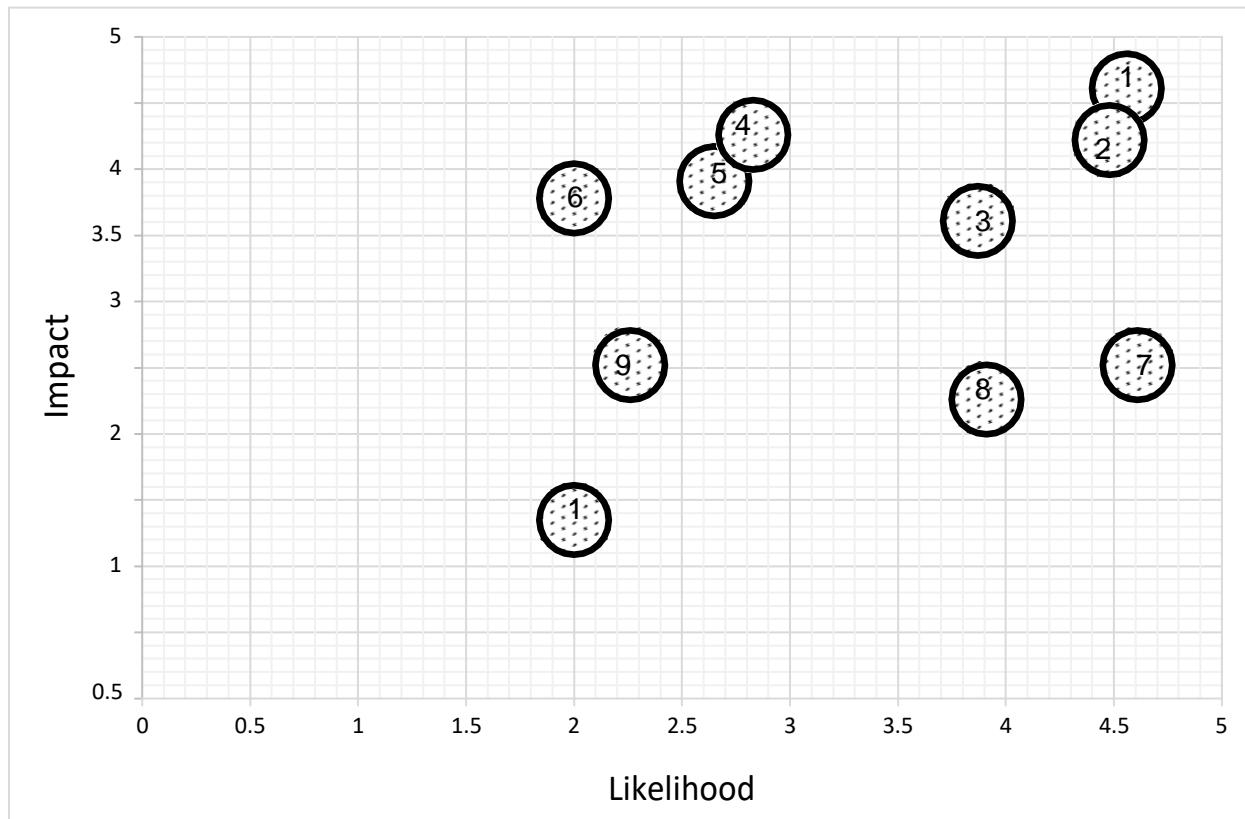
Source: Authors' Figure

The respondents further evaluated the risks through a risk voting method (Fraser & Simkins, 2010), measuring the impact and likelihood of risk on a five-point scale. We summarized the voting scores of top-ten risks. IT governance risk, IT investment risk, and information risk are the most critical risks among the major cyber security risks in voting scores (Table 5). Above all, the impact of IT governance is very high and is very likely to happen. On the other hand, the cyber infrastructure risk and cyber competence risk have high impacts but medium likely to happen in the banking sector. IT reputation risk, business continuity risk, and

public perception risk are identified as low significant risks.

We further presented the risk scores through the risk map in impact and likelihood magnitudes. In the risk map (Exhibit-2), IT governance and IT investment risk fall in the critical area (Red Zone), where both impact and probability are high. Information risk, cyber infrastructure risk, cyber competence risk, financial risk, and IT reputation risk fall in the alarming area (Yellow Zone) where the risk impact and probability are in medium magnitudes. On the other hand, IT project risk, business continuity risk, and public perception risk ate in the safe area of the risk map (Green Zone).

Exhibit 2: The Risk Map



Source: Table 5

V. DISCUSSION

To investigate both existing and possible cyber risks, we gathered empirical evidence from the banking industry in Bangladesh. We combined the theories/literature about cyber security risk and IT governance and primary data to explain whether and how the risk managers and board of directors can identify and mitigate cyber security risk in the Bangladeshi banking industry. The results show that cyber security risks and their sources, impacts, and likelihood are identifiable, depending on the methods used by the organizations, and risks can be mitigated through the effective risk management process and robust oversight by the board. Hence, the board has a

role in identifying and mitigating the cyber risk enhancing risk management effectiveness, and board committees' effectiveness in operational and strategic control.

Our discussion suggests that IT governance has three core targets: IT project implementation, data and information security, and hardware and systems integrity. Risk governance requires plans and implementation for each IT target. In the wake of catastrophic incidents at Target, JPMorgan Chase, Home Depot, and many other well-known established international brands worldwide, the boards of directors are now very aware of their responsibility for the safety and integrity of the data and information networks (Straight, 2015). Financial corporations are now



adopting the responsibility to monitor cyber risk management and establish three primary IT governance functions: learn, ensure, and inspect. The boards' best position is to mitigate cyber security risk and limit the damage when a cyber-attack occurs.

Similarly, the risk committee or audit committee plays a critical role in monitoring management's prevention from and response to cyber security risks and the associated regulatory framework and business developments. If all banks do not have their cyber risk committee, the audit committee may play the oversight role on cyber security risk. Implementing a successful cyber security program requires continuous and proactive engagement from the board and the risk committee. In its capacity to oversee risk management's functions and monitoring management's policies, the risk committee must play a notable strategic role in coordinating cyber security initiatives and policies.

IT investment risk arises from different types of cybercrimes, which lead to a significant loss of cyber security investment. Although banks invest a lot of money in their cyber security, the criminals break down this security and steal the data. As a result, the investment for this security becomes worthless and, consequently, the customers lose their trust and banks lose their reputation. The IT professionals' competence level falls at risk, and the new projects can face risky start for cybercrimes increasing costs.

VI. CONCLUSION, IMPLICATION, AND FUTURE RESEARCH DIRECTION

In this study, using the risk profiles, we have explored whether the board of directors can identify and mitigate the cyber security risks and whether the Bangladeshi banking sector is vulnerable. The banking sector, for its vulnerability, is under the spotlight with stakeholders, including the public, regulators, media, and international agencies. Therefore, we aim to contribute to the development of cyber security in the industry by drawing attention to the board's monitoring functions. This section addresses our conclusions, policy implications, and future research directions.

This study explored the impact and likelihood of known and possible cyber risks in the Bangladeshi banking sector. We found cyber risk and their sources, events, and common cybercrimes. We employed the "Top-Ten" risk and risk map approaches to identify the most critical cyber risk that should be considered immediately. This study found that IT governance risk and IT investment risk are more critical than made the banking sector vulnerable. Also, information risk, cyber infrastructure risk, cyber competence risk, financial risk, and IT reputation risk are high in impact and likelihood magnitude. The increase of cyber risks can increase the overall risk positions, and the chance of revenues will drop, and customers can divert to competitors. Cyber

incidents cause long-term intangible costs that directly impact all lines of business and, therefore, in the worst case, sharply drop the market value. Therefore, IT governance should be implemented as a process, subject to continuous monitoring, reviewing, and improvement. We find out that most of the banks do not have their separate IT committee, and very few of the board members are IT experts or IT knowledgeable. Even most of the banks do not have the position of Chief Information Officer (CIO). In contrast, Chief Risk Officer (CRO) or Chief Financial Officer (CFO) is responsible for the IT department. Consequently, the board cannot implement their IT plan appropriately and not getting specific feedback from them.

Based on the above discussion, holistic governance of cyber security risks appears to be vital in the Bangladeshi banking sector. IT governance is necessary to implement industry-wide cyber risk because of the increased importance of information and technology. We think preventive measures for IT security and coverage by cyber insurance policies can be a risk governance tool to minimize cyber risk exposures.

Moreover, the findings of the study will be helpful to planners, policymakers, regulators, including the central bank and Security Exchange Commission (SEC) of Bangladesh. The findings will be useful to stress the importance of designing and implementing a sophisticated IT governance for the financial sector to cope with the challenges and uncertainties in the changing environment arising from globalization, rapid technological changes, deregulation, and market competition.

Though our study does not concentrate on a particular governance framework, further research can be conducted on the governance framework that can effectively monitor cyber risk management to protect the firm from cybercrimes. Also, potential research can be done to determine the prevention strategies that best help individuals, businesses, and government agencies avoid cybercrime, and international best practice responses and suitable governance framework for the financial sector to mitigate cyber risk and avoid catastrophic cyber scandals.

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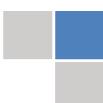
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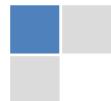


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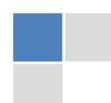
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Unless specified in the notification, the Editorial Board's decision on publication of the paper is final and cannot be appealed before making the major change in the manuscript.

Acknowledgments

Contributors to the research other than authors credited should be mentioned in Acknowledgments. The source of funding for the research can be included. Suppliers of resources may be mentioned along with their addresses.

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Authors can submit papers and articles in an acceptable file format: MS Word (doc, docx), LaTeX (.tex, .zip or .rar including all of your files), Adobe PDF (.pdf), rich text format (.rtf), simple text document (.txt), Open Document Text (.odt), and Apple Pages (.pages). Our professional layout editors will format the entire paper according to our official guidelines. This is one of the highlights of publishing with Global Journals—authors should not be concerned about the formatting of their paper. Global Journals accepts articles and manuscripts in every major language, be it Spanish, Chinese, Japanese, Portuguese, Russian, French, German, Dutch, Italian, Greek, or any other national language, but the title, subtitle, and abstract should be in English. This will facilitate indexing and the pre-peer review process.

The following is the official style and template developed for publication of a research paper. Authors are not required to follow this style during the submission of the paper. It is just for reference purposes.



Manuscript Style Instruction (Optional)

- Microsoft Word Document Setting Instructions.
- Font type of all text should be Swis721 Lt BT.
- Page size: 8.27" x 11", left margin: 0.65, right margin: 0.65, bottom margin: 0.75.
- Paper title should be in one column of font size 24.
- Author name in font size of 11 in one column.
- Abstract: font size 9 with the word "Abstract" in bold italics.
- Main text: font size 10 with two justified columns.
- Two columns with equal column width of 3.38 and spacing of 0.2.
- First character must be three lines drop-capped.
- The paragraph before spacing of 1 pt and after of 0 pt.
- Line spacing of 1 pt.
- Large images must be in one column.
- The names of first main headings (Heading 1) must be in Roman font, capital letters, and font size of 10.
- The names of second main headings (Heading 2) must not include numbers and must be in italics with a font size of 10.

Structure and Format of Manuscript

The recommended size of an original research paper is under 15,000 words and review papers under 7,000 words. Research articles should be less than 10,000 words. Research papers are usually longer than review papers. Review papers are reports of significant research (typically less than 7,000 words, including tables, figures, and references)

A research paper must include:

- a) A title which should be relevant to the theme of the paper.
- b) A summary, known as an abstract (less than 150 words), containing the major results and conclusions.
- c) Up to 10 keywords that precisely identify the paper's subject, purpose, and focus.
- d) An introduction, giving fundamental background objectives.
- e) Resources and techniques with sufficient complete experimental details (wherever possible by reference) to permit repetition, sources of information must be given, and numerical methods must be specified by reference.
- f) Results which should be presented concisely by well-designed tables and figures.
- g) Suitable statistical data should also be given.
- h) All data must have been gathered with attention to numerical detail in the planning stage.

Design has been recognized to be essential to experiments for a considerable time, and the editor has decided that any paper that appears not to have adequate numerical treatments of the data will be returned unrefereed.

- i) Discussion should cover implications and consequences and not just recapitulate the results; conclusions should also be summarized.
- j) There should be brief acknowledgments.
- k) There ought to be references in the conventional format. Global Journals recommends APA format.

Authors should carefully consider the preparation of papers to ensure that they communicate effectively. Papers are much more likely to be accepted if they are carefully designed and laid out, contain few or no errors, are summarizing, and follow instructions. They will also be published with much fewer delays than those that require much technical and editorial correction.

The Editorial Board reserves the right to make literary corrections and suggestions to improve brevity.



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The full postal address of any related author(s) must be specified.

Abstract

The abstract is the foundation of the research paper. It should be clear and concise and must contain the objective of the paper and inferences drawn. It is advised to not include big mathematical equations or complicated jargon.

Many researchers searching for information online will use search engines such as Google, Yahoo or others. By optimizing your paper for search engines, you will amplify the chance of someone finding it. In turn, this will make it more likely to be viewed and cited in further works. Global Journals has compiled these guidelines to facilitate you to maximize the web-friendliness of the most public part of your paper.

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A major lynchpin of research work for the writing of research papers is the keyword search, which one will employ to find both library and internet resources. Up to eleven keywords or very brief phrases have to be given to help data retrieval, mining, and indexing.

One must be persistent and creative in using keywords. An effective keyword search requires a strategy: planning of a list of possible keywords and phrases to try.

Choice of the main keywords is the first tool of writing a research paper. Research paper writing is an art. Keyword search should be as strategic as possible.

One should start brainstorming lists of potential keywords before even beginning searching. Think about the most important concepts related to research work. Ask, "What words would a source have to include to be truly valuable in a research paper?" Then consider synonyms for the important words.

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Numerical methods used should be transparent and, where appropriate, supported by references.

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Authors must list all the abbreviations used in the paper at the end of the paper or in a separate table before using them.

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Authors are advised to submit any mathematical equation using either MathJax, KaTeX, or LaTeX, or in a very high-quality image.

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TIPS FOR WRITING A GOOD QUALITY MANAGEMENT RESEARCH PAPER

Techniques for writing a good quality management and business research paper:

1. Choosing the topic: In most cases, the topic is selected by the interests of the author, but it can also be suggested by the guides. You can have several topics, and then judge which you are most comfortable with. This may be done by asking several questions of yourself, like "Will I be able to carry out a search in this area? Will I find all necessary resources to accomplish the search? Will I be able to find all information in this field area?" If the answer to this type of question is "yes," then you ought to choose that topic. In most cases, you may have to conduct surveys and visit several places. Also, you might have to do a lot of work to find all the rises and falls of the various data on that subject. Sometimes, detailed information plays a vital role, instead of short information. Evaluators are human: The first thing to remember is that evaluators are also human beings. They are not only meant for rejecting a paper. They are here to evaluate your paper. So present your best aspect.

2. Think like evaluators: If you are in confusion or getting demotivated because your paper may not be accepted by the evaluators, then think, and try to evaluate your paper like an evaluator. Try to understand what an evaluator wants in your research paper, and you will automatically have your answer. Make blueprints of paper: The outline is the plan or framework that will help you to arrange your thoughts. It will make your paper logical. But remember that all points of your outline must be related to the topic you have chosen.

3. Ask your guides: If you are having any difficulty with your research, then do not hesitate to share your difficulty with your guide (if you have one). They will surely help you out and resolve your doubts. If you can't clarify what exactly you require for your work, then ask your supervisor to help you with an alternative. He or she might also provide you with a list of essential readings.

4. Use of computer is recommended: As you are doing research in the field of management and business then this point is quite obvious. Use right software: Always use good quality software packages. If you are not capable of judging good software, then you can lose the quality of your paper unknowingly. There are various programs available to help you which you can get through the internet.

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7. Revise what you wrote: When you write anything, always read it, summarize it, and then finalize it.

8. Make every effort: Make every effort to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in the introduction—what is the need for a particular research paper. Polish your work with good writing skills and always give an evaluator what he wants. Make backups: When you are going to do any important thing like making a research paper, you should always have backup copies of it either on your computer or on paper. This protects you from losing any portion of your important data.

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Verbs have to be in agreement with their subjects. In a research paper, do not start sentences with conjunctions or finish them with prepositions. When writing formally, it is advisable to never split an infinitive because someone will (wrongly) complain. Avoid clichés like a disease. Always shun irritating alliteration. Use language which is simple and straightforward. Put together a neat summary.

14. Arrangement of information: Each section of the main body should start with an opening sentence, and there should be a changeover at the end of the section. Give only valid and powerful arguments for your topic. You may also maintain your arguments with records.

15. Never start at the last minute: Always allow enough time for research work. Leaving everything to the last minute will degrade your paper and spoil your work.

16. Multitasking in research is not good: Doing several things at the same time is a bad habit in the case of research activity. Research is an area where everything has a particular time slot. Divide your research work into parts, and do a particular part in a particular time slot.

17. Never copy others' work: Never copy others' work and give it your name because if the evaluator has seen it anywhere, you will be in trouble. Take proper rest and food: No matter how many hours you spend on your research activity, if you are not taking care of your health, then all your efforts will have been in vain. For quality research, take proper rest and food.

18. Go to seminars: Attend seminars if the topic is relevant to your research area. Utilize all your resources.

19. Refresh your mind after intervals: Try to give your mind a rest by listening to soft music or sleeping in intervals. This will also improve your memory. Acquire colleagues: Always try to acquire colleagues. No matter how sharp you are, if you acquire colleagues, they can give you ideas which will be helpful to your research.

20. Think technically: Always think technically. If anything happens, search for its reasons, benefits, and demerits. Think and then print: When you go to print your paper, check that tables are not split, headings are not detached from their descriptions, and page sequence is maintained.



21. Adding unnecessary information: Do not add unnecessary information like "I have used MS Excel to draw graphs." Irrelevant and inappropriate material is superfluous. Foreign terminology and phrases are not apropos. One should never take a broad view. Analogy is like feathers on a snake. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grown readers. Never oversimplify: When adding material to your research paper, never go for oversimplification; this will definitely irritate the evaluator. Be specific. Never use rhythmic redundancies. Contractions shouldn't be used in a research paper. Comparisons are as terrible as clichés. Give up ampersands, abbreviations, and so on. Remove commas that are not necessary. Parenthetical words should be between brackets or commas. Understatement is always the best way to put forward earth-shaking thoughts. Give a detailed literary review.

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23. Upon conclusion: Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium through which your research is going to be in print for the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects of your research.

INFORMAL GUIDELINES OF RESEARCH PAPER WRITING

Key points to remember:

- Submit all work in its final form.
- Write your paper in the form which is presented in the guidelines using the template.
- Please note the criteria peer reviewers will use for grading the final paper.

Final points:

One purpose of organizing a research paper is to let people interpret your efforts selectively. The journal requires the following sections, submitted in the order listed, with each section starting on a new page:

The introduction: This will be compiled from reference material and reflect the design processes or outline of basis that directed you to make a study. As you carry out the process of study, the method and process section will be constructed like that. The results segment will show related statistics in nearly sequential order and direct reviewers to similar intellectual paths throughout the data that you gathered to carry out your study.

The discussion section:

This will provide understanding of the data and projections as to the implications of the results. The use of good quality references throughout the paper will give the effort trustworthiness by representing an alertness to prior workings.

Writing a research paper is not an easy job, no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record-keeping are the only means to make straightforward progression.

General style:

Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

To make a paper clear: Adhere to recommended page limits.

Mistakes to avoid:

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- Separating a table, chart, or figure—confine each to a single page.
- Submitting a manuscript with pages out of sequence.
- In every section of your document, use standard writing style, including articles ("a" and "the").
- Keep paying attention to the topic of the paper.



- Use paragraphs to split each significant point (excluding the abstract).
- Align the primary line of each section.
- Present your points in sound order.
- Use present tense to report well-accepted matters.
- Use past tense to describe specific results.
- Do not use familiar wording; don't address the reviewer directly. Don't use slang or superlatives.
- Avoid use of extra pictures—include only those figures essential to presenting results.

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Choose a revealing title. It should be short and include the name(s) and address(es) of all authors. It should not have acronyms or abbreviations or exceed two printed lines.

Abstract: This summary should be two hundred words or less. It should clearly and briefly explain the key findings reported in the manuscript and must have precise statistics. It should not have acronyms or abbreviations. It should be logical in itself. Do not cite references at this point.

An abstract is a brief, distinct paragraph summary of finished work or work in development. In a minute or less, a reviewer can be taught the foundation behind the study, common approaches to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Use comprehensive sentences, and do not sacrifice readability for brevity; you can maintain it succinctly by phrasing sentences so that they provide more than a lone rationale. The author can at this moment go straight to shortening the outcome. Sum up the study with the subsequent elements in any summary. Try to limit the initial two items to no more than one line each.

Reason for writing the article—theory, overall issue, purpose.

- Fundamental goal.
- To-the-point depiction of the research.
- Consequences, including definite statistics—if the consequences are quantitative in nature, account for this; results of any numerical analysis should be reported. Significant conclusions or questions that emerge from the research.

Approach:

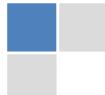
- Single section and succinct.
- An outline of the job done is always written in past tense.
- Concentrate on shortening results—limit background information to a verdict or two.
- Exact spelling, clarity of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else.

Introduction:

The introduction should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable of comprehending and calculating the purpose of your study without having to refer to other works. The basis for the study should be offered. Give the most important references, but avoid making a comprehensive appraisal of the topic. Describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will give no attention to your results. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here.

The following approach can create a valuable beginning:

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Approach:

Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done. Sort out your thoughts; manufacture one key point for every section. If you make the four points listed above, you will need at least four paragraphs. Present surrounding information only when it is necessary to support a situation. The reviewer does not desire to read everything you know about a topic. Shape the theory specifically—do not take a broad view.

As always, give awareness to spelling, simplicity, and correctness of sentences and phrases.

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Materials may be reported in part of a section or else they may be recognized along with your measures.

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- Report the method and not the particulars of each process that engaged the same methodology.
- Describe the method entirely.
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures.
- Simplify—detail how procedures were completed, not how they were performed on a particular day.
- If well-known procedures were used, account for the procedure by name, possibly with a reference, and that's all.

Approach:

It is embarrassing to use vigorous voice when documenting methods without using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result, when writing up the methods, most authors use third person passive voice.

Use standard style in this and every other part of the paper—avoid familiar lists, and use full sentences.

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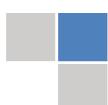
- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings—save it for the argument.
- Leave out information that is immaterial to a third party.

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The principle of a results segment is to present and demonstrate your conclusion. Create this part as entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Use statistics and tables, if suitable, to present consequences most efficiently.

You must clearly differentiate material which would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matters should not be submitted at all except if requested by the instructor.



Content:

- Sum up your conclusions in text and demonstrate them, if suitable, with figures and tables.
- In the manuscript, explain each of your consequences, and point the reader to remarks that are most appropriate.
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- Do not discuss or infer your outcome, report surrounding information, or try to explain anything.
- Do not include raw data or intermediate calculations in a research manuscript.
- Do not present similar data more than once.
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- Never confuse figures with tables—there is a difference.

Approach:

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Put figures and tables, appropriately numbered, in order at the end of the report.

If you desire, you may place your figures and tables properly within the text of your results section.

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Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact, you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved the prospect, and let it drop at that. Make a decision as to whether each premise is supported or discarded or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."

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- Give details of all of your remarks as much as possible, focusing on mechanisms.
- Make a decision as to whether the tentative design sufficiently addressed the theory and whether or not it was correctly restricted. Try to present substitute explanations if they are sensible alternatives.
- One piece of research will not counter an overall question, so maintain the large picture in mind. Where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.



Approach:

When you refer to information, differentiate data generated by your own studies from other available information. Present work done by specific persons (including you) in past tense.

Describe generally acknowledged facts and main beliefs in present tense.

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Topics	Grades		
	A-B	C-D	E-F
<i>Abstract</i>	Clear and concise with appropriate content, Correct format. 200 words or below Above 200 words	Unclear summary and no specific data, Incorrect form Above 250 words	No specific data with ambiguous information
<i>Introduction</i>	Containing all background details with clear goal and appropriate details, flow specification, no grammar and spelling mistake, well organized sentence and paragraph, reference cited	Unclear and confusing data, appropriate format, grammar and spelling errors with unorganized matter	Out of place depth and content, hazy format
<i>Methods and Procedures</i>	Clear and to the point with well arranged paragraph, precision and accuracy of facts and figures, well organized subheads	Difficult to comprehend with embarrassed text, too much explanation but completed	Incorrect and unorganized structure with hazy meaning
<i>Result</i>	Well organized, Clear and specific, Correct units with precision, correct data, well structuring of paragraph, no grammar and spelling mistake	Complete and embarrassed text, difficult to comprehend	Irregular format with wrong facts and figures
<i>Discussion</i>	Well organized, meaningful specification, sound conclusion, logical and concise explanation, highly structured paragraph reference cited	Wordy, unclear conclusion, spurious	Conclusion is not cited, unorganized, difficult to comprehend
<i>References</i>	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring

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ISSN 9755853

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