

# GLOBAL JOURNAL

OF MANAGEMENT AND BUSINESS RESEARCH: C

## Finance

Bourse De Casablanca

Performance of Nigerian Economy

Highlights

Signalisation Par Le Rachat

Effects of Foreign Direct Investment

Discovering Thoughts, Inventing Future

VOLUME 16

ISSUE 3

VERSION 1.0



GLOBAL JOURNAL OF MANAGEMENT AND BUSINESS RESEARCH: C  
FINANCE

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VOLUME 16 ISSUE 3 (VER. 1.0)

OPEN ASSOCIATION OF RESEARCH SOCIETY

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GLOBAL JOURNAL OF MANAGEMENT AND BUSINESS RESEARCH: C  
FINANCE

Volume 16 Issue 3 Version 1.0 Year 2016

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals Inc. (USA)

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

## Signalisation Par Le Rachat D'actions : Cas Des Sociétés Cotées A La Bourse De Casablanca

By Mimoun Benzaouagh & Jamal Eddine Tebbaa

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**Resume-** Le rachat d'action est l'une des stratégies financières de signalisation auxquelles recourent les dirigeants d'entreprises pour régulariser les cours jugés sous-évalués (DANN (1980)).

La présente recherche a pour principal objectif d'analyser les mobiles qui poussent les entreprises marocaines à recourir au rachat de leurs propres actions. S'agit-il d'activité de signalisation positive pour annoncer au marché que l'action est sous-évaluée ? Ou au contraire, s'agit-il d'une stratégie d'enracinement qui permettra aux dirigeants de renforcer leur contrôle sur la société ?

**Motsclés:** théorie de signal, rachat d'actions, études d'évènement, gouvernance d'entreprise.

**GJMBR - C Classification :** JEL Code : G140, G320



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# Signalisation Par Le Rachat D'actions : Cas Des Sociétés Cotées A La Bourse De Casablanca

Mimoun Benzaouagh <sup>a</sup> & Jamal Eddine Tebbaa <sup>a</sup>

**Résumé**- Le rachat d'action est l'une des stratégies financières de signalisation auxquelles recourent les dirigeants d'entreprises pour régulariser les cours jugés sous-évalués (DANN (1980)).

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Pour répondre à ces questions, nous avons eu recours à un test d'événement classique à partir d'un échantillon de cinq entreprises choisi parmi quatorze, ayant annoncé la mise en place d'un programme de rachat d'actions au cours de la période 2005-2008. Nous avons constaté que le marché ne réagit pas aux programmes de rachat concernés. Ce qui permet d'affirmer, que les investisseurs sont insensibles à de telles activités de signalisation.

**Mots Clés:** théorie de signal, rachat d'actions, études d'événement, gouvernance d'entreprise.

## I. RACHAT D'ACTIONS : REVUE DE LITTÉRATURE

Le rachat d'actions a été largement étudié tant sur le plan théorique que pratique. La théorie propose plusieurs réponses, allant de la réduction du free cash-flow à l'enracinement des dirigeants, en passant par la réduction des risques de prise de contrôle hostile. En 1976, Jensen et Meckling prolongent les analyses de Berle et Means (1938) sur la gouvernance managériale en mettant en avant la nécessité pour les actionnaires de se protéger de la domination des dirigeants, et prévoient le remplacement définitif d'un «capitalisme managérial» par un «capitalisme actionnarial» (ou financier). D'autres facteurs vont influer dans le même sens et accélérer l'évolution. La gouvernance actionnariale va infléchir profondément les stratégies des entreprises. Dans un système qui privilégie la création de valeur pour l'actionnaire, l'entreprise cherche à maximiser le cours boursier des titres. Les intérêts des dirigeants s'alignent sur ceux des actionnaires et des investisseurs financiers. L'organisation du conseil d'administration et la réglementation en matière de

transparence et de rémunération des dirigeants sont définies dans cet objectif.

Sur le plan pratique, considéré comme une autre forme alternative de distribution de liquidités aux dividendes, le rachat d'actions permet également aux firmes d'améliorer leur rentabilité. En effet, cette pratique permet à l'entreprise « d'augmenter la rentabilité de ses actions, non pas en augmentant le numérateur, le bénéfice, mais en réduisant le dénominateur, le nombre d'actions » (ENRHART, 1998). Toutefois, si le rachat d'actions présente l'avantage de restituer les fonds inutilisés aux actionnaires au lieu de les employer dans des dépenses ostentatoires, il souffre aussi d'inconvénients dans la mesure où les dirigeants montrent, avec cette décision, leur incapacité à investir ces fonds dans des projets à valeur actuelle nette (VAN) positive. En plus, en réduisant son autofinancement, l'entreprise réduit ainsi sa capacité future de croissance, voir aussi d'endettement, lorsque des occasions se présentent.

Sur le plan théorique, le rachat d'actions trouve sa principale justification en la théorie de signal, du fait du différentiel d'information qui existe entre d'une part les dirigeants (insiders) bien informés sur la situation financière et les perspectives futures de leur firme, et d'autre part les actionnaires (outsiders) mal ou peu informés. Le signal est, selon JACQUILLAT et LEVASSEUR (1984), une variable de comportement qui suppose que l'activité de signalisation varie en fonction des motivations des dirigeants, mais aussi de l'information à signaler. Ainsi, la nécessité d'obtenir la confiance des actionnaires, peut justifier l'envoi de signaux au marché.

DANN (1980) a examiné les effets des rachats d'actions américaines sur les cours boursiers des firmes à partir d'un échantillon constitué de 143 offres de rachat à prix fixe annoncées par 122 entreprises. La méthodologie utilisée est celle d'une étude classique d'événement sur les prix des actions. Ces différentes observations permettent de conclure à une activité de signalisation des offres de rachat qui permet aux dirigeants de révéler au marché de nouvelles informations favorables sur la valeur des perspectives futures de la firme. VERMAELEN (1981) a réalisé son étude sur un échantillon de 243 rachats par ramassage boursier effectués entre 1970 et 1978 par 198 firmes du NYSE. Il remarque que 5,01% des actions en circulation étaient rachetées à travers l'opération. La prime de

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rachat dépassait le cours boursier 5 jours avant l'offre de 22,76% en moyenne, ce qui correspond aux observations de DANN.

D'autres auteurs, par contre, considèrent que l'approche par l'enracinement est la principale motivation des dirigeants à recourir au rachat d'actions. NETTER et MITCHELL (1989) notent, en étudiant la vague de rachat d'actions qui a suivi le crash boursier de 1987, que la réduction des actions en circulation six mois après l'annonce des programmes est très faible. En effet, la plupart de ces entreprises n'ont pas conduit les programmes jusqu'à leur terme. Si comme le suggère la théorie du signal, les actions sont rachetées pour communiquer au marché la sous-évaluation des titres de la firme, il aurait été plutôt normal que les programmes soient achevés. Ces observations laissent donc à penser que les actions ne sont pas seulement rachetées pour régulariser le cours, mais aussi probablement pour satisfaire aux besoins opportunistes de certains dirigeants pour renforcer leur mainmise sur la société. Selon KRACHER et JOHNSON (1997), le rachat d'actions serait en contradiction avec la bonne gouvernance et éthique des affaires qui devrait guider les transactions entre les individus. Les dirigeants manipuleraient ainsi, selon leur besoin, l'annonce du rachat de leurs propres actions. Par ailleurs, le rachat d'actions est aussi utilisé comme mécanisme anti-OPA. STULZ (1988) montre que quand le rachat des actions aboutit à une augmentation de la part des actions détenues par les dirigeants ainsi que de leurs droits de vote, il paraît normal que l'initiation d'une OPA ne puisse aboutir, surtout lorsque cet accroissement de part dépasse ou égale 50% des actions de la firme.

GILLET (1999) a procédé à une double étude sur le cas français. La première porte sur le dépouillement d'un questionnaire adressé aux dirigeants des 33 firmes françaises ayant annoncé des programmes de rachat d'actions. La plupart des dirigeants considèrent que l'objectif principal des opérations de rachat étant de revaloriser le cours des titres ayant été sous-évalués par le marché. Ils écartent largement toute intention de se servir de ces programmes pour mettre en place des stratégies personnelles d'enracinement. La seconde étude, quant à elle, porte sur l'étude de réaction du marché à partir d'une étude d'événement classique. Il conclut que les investisseurs ne semblent pas réagir positivement à l'annonce des programmes de rachat d'actions. Lee et al. (2005) ont constaté dans leur étude qu'il n'y a aucune relation évidente entre le rachat d'actions et la performance anormale à long terme des sociétés sud-coréennes. Même résultat a été constaté par Mitchell et Stafford (2000) pour le marché américain. Résultat tout à fait contradictoire auquel aboutissent Ikenberry et al. (1995), Ikenberry et al. (2000), et Zhang (2005) qui mettent en évidence une performance positive à long

terme sur les marchés américain, canadien et celui de Hong Kong.

Si les études empiriques effectuées dans le monde, tantôt aboutissent à l'existence d'une relation positive entre le rachat d'actions et la rentabilité anormale des titres, tantôt constatent l'insensibilité du marché à de telles décisions, qu'en est-t-il du cas marocain ?

## II. ANALYSE DE LA RÉACTION DU MARCHÉ AUX PROGRAMMES DE RACHAT D'ACTIONS AU MAROC: DONNÉES ET MÉTHODOLOGIE

Dans cette section, nous analysons si l'annonce de mise en place de programmes de rachat de leurs propres actions par les sociétés marocaines cotées en Bourse sera ou non sanctionné par le marché. Trois hypothèses peuvent en effet être avancées face à un tel événement :

- soit le marché considère que la préparation de ce type d'opération est conforme à l'intérêt des actionnaires, dans la mesure où il permet par la suite d'augmenter la rentabilité des titres, donc de créer de la valeur en diminuant le free cash-flow ou en laissant aux dirigeants l'opportunité de restituer aux actionnaires des liquidités inutilisées. **On peut alors s'attendre à une réaction positive de sa part, donc à l'apparition d'une rentabilité anormale positive ;**
- soit le marché considère au contraire que le rachat d'actions est une stratégie d'enracinement de la part des dirigeants en accroissant leur contrôle sur la firme, en se protégeant des OPA hostiles ou en tissant des réseaux visant à renforcer leur maintien à la tête des firmes. Dans ce cas, **le marché devrait réagir négativement et on devrait constater une rentabilité anormale moyenne négative pour ces firmes ;**
- soit le marché considère que cette stratégie ne constitue pas une véritable annonce, et ne réagit pas en conséquence. Dans ce cas, **on peut s'attendre à l'absence de rentabilités anormales.**

### a) Données

Pour tester ces trois hypothèses, nous avons eu recours à un test d'événement classique à partir d'un échantillon de 5 entreprises cotées à la Bourse des Valeurs de Casablanca. Ces sociétés ont été choisies parmi 14 entreprises ayant annoncé la mise en place d'un programme de rachat d'actions au cours de la période 2005-2008. Le choix est effectué sur la base des critères de taille et de liquidité à la Bourse de Casablanca. Les sociétés non prise en compte sont peu liquides.

Le tableau 1 récapitule les caractéristiques des 14 sociétés ayant annoncé des programmes de rachat d'actions.

Tableau 1 : Caractéristiques des opérations de rachat d'actions de 14 sociétés cotées à la BVC durant la période 2005-2008

Emetteur	N° Visa	Date de visa	Montant total (en millier de Dhs)	Type de l'opération	Organisme conseil
ADDOHA	VI/EM/007/2008	07/03/2008	2 338 875 000,00	Régularisation du cours	BMCE Capital
AFRIQUIA GAZ	VI/EM/003/2008	04/02/2008	170 156,00	Régularisation du cours	BMCE Capital
ATLANTA	VI/EM/028/2008	12/08/2008	559 359,00	Régularisation du cours	BMCE Capital
AUTO HALL	VI/EM/003/2007	16/02/2007	188 800,00	Régularisation du cours	MSIN
BMCE BANK	VI/EM/030/2008	05/09/2008	5 250 000,00	Régularisation du cours	BMCE Capital
BMCI	VI/EM/018/2008	13/05/2008	685 837,00	Régularisation du cours	BMCI Fin
CDM	VI/EM/013/2007	08/05/2007	406 495,00	Régularisation du cours	CDM
DISTRISOFT	VI/EM/010/2008	12/03/2008	21 000 000,00	Régularisation du cours	BMCE Capital
IB MAROC.COM	VI/EM/019/2008	27/05/2008	13 025,00	Régularisation du cours	BCP Bank
MAROC TELECOM	VI/EM/017/2008	09/05/2008	4 000 000,00	Régularisation du cours	A determiner
SAMIR	VI/EM/005/2005	01/04/2005	297 492,00	Régularisation du cours	Finergy
SCE	VI/EM/017/2006	02/06/2006	12 329,00	Régularisation du cours	CDM
SNEP	VI/EM/008/2008	11/03/2008	222 000 000,00	Régularisation du cours	BMCE Capital
SOTHEMA	VI/EM/005/2007	08/03/2007	19 980,00	Régularisation du cours	BMCE Capital

Source : CDVM

### b) Méthodologie

La méthodologie utilisée a été celle préconisée par Gillet (1999). Cette méthodologie est basée sur trois étapes à suivre :

#### Étape 1: Détermination de la date exacte de l'événement

Cette opération semble facile de premier abord. Toutefois, il ne faut pas négliger que le marché réagit à l'annonce de l'événement plus qu'à l'événement lui-même. Il faut donc retenir la date d'annonce et non la date de l'événement lui-même.

Dans notre cas, la date d'annonce retenue a été la date de publication par le CDVM (Conseil Déontologique des Valeurs Mobilières) de son communiqué de presse dans lequel, ce dernier accorde son visa au programme de rachat d'actions mis en place par la société concernée.

Autour de la date d'événement, il faut construire une fenêtre d'événement, relativement large pour contenir toutes les dates possibles de publication, mais suffisamment étroite afin de conserver à l'étude son intérêt. La fenêtre d'événement est un laps de temps de 5 à 10 jours situé autour de la date exacte de publication de l'événement.

Étape 2 : Calcul de la rentabilité théorique de l'action étudiée pendant la période de test

Le calcul de ces rentabilités est souvent fondé sur le **Modèle de Marché** ou sur le **MEDAF**.

Dans la présente étude, nous avons utilisé la méthodologie basée sur le modèle de marché, proposée par Fama, Fisher, Jensen et Roll (1969). La rentabilité théorique des titres est liée à la rentabilité du marché à travers un coefficient de proportionnalité, le bêta ( $\beta$ ), propre à chaque titre.

Le modèle de marché indique :

$$E(R_{it}) = \alpha + \beta R_{mt} + \varepsilon_{it} \quad [1]$$

où  $E(R_{it})$  indique la rentabilité théorique du titre  $i$  à l'instant  $t$  ;

$R_{mt}$  : le rendement observé du marché au temps  $t$  (mesuré par un indice comme le MASI<sup>1</sup>) ;

$\beta$  : le coefficient de risque du titre  $i$  obtenu par la régression linéaire entre les rentabilités observées du titre  $i$  et celles du marché ;

<sup>1</sup> MASI (Moroccan All Share Index) est un indice mesurant la performance de toutes les sociétés cotées à la Bourse de Casablanca

$\alpha$  : ordonnée à l'origine de l'équation de régression linéaire du modèle de marché ;

$\varepsilon_{it}$  est le résidu, d'espérance nulle, non corrélé à  $R_{mt}$ .

La mesure des rentabilités théoriques, fondée sur le modèle de marché, permet le calcul du coefficient bêta pour chaque action, à partir des cours de 120 jours de bourse précédent l'événement, en tenant compte d'un espace de sécurité de 10 jours entre la fin de la période de calcul des rentabilités et la fenêtre d'événement.

Le modèle de marché permet de connaître ex-post quelle aurait du être la rentabilité d'une action, durant la fenêtre d'événement, en sachant, pour la même période, quelle était la rentabilité globale du marché ainsi que le coefficient de sensibilité entre le titre et le marché, appelé coefficient bêta.

*Étape 3 : Calcul de la rentabilité anormale de l'action étudiée*

On définit la rentabilité anormale<sup>2</sup> comme la différence entre la rentabilité théorique définie par le modèle de marché de Sharpe et la rentabilité observée. On peut écrire :

$$A_{it} = R_{it} - E(R_{it}) \quad [2]$$

avec  $A_{it}$  rentabilité anormale,  $R_{it}$  rentabilité observée et  $E(R_{it})$  rentabilité théorique.

On calcule ensuite les rentabilités anormales cumulées, en additionnant, pour toute la fenêtre d'observation, les rentabilités anormales quotidiennes.

$$RAC = \sum A_{it} \quad [3]$$

où  $RAC$  est la rentabilité anormale cumulée du titre / durant la fenêtre d'événement qui comporte 20 jours.

En effet, la fenêtre d'événement, d'un délai de 20 jours (J-10 ; J+10) autour de la date du communiqué de presse du CDVM<sup>3</sup> visant le programme du rachat, doit être étudiée pour permettre de mettre en œuvre ces rentabilités anormales.

L'étude des rentabilités anormales et des rentabilités anormales cumulées permet de mettre en évidence la réaction du marché à l'annonce de l'événement, en l'occurrence l'annonce du rachat d'actions.

Si l'événement a été entièrement anticipé, le marché ne réagit pas à l'annonce, et il n'y aura donc pas de différence entre la rentabilité théorique calculée et la rentabilité observée.

Si l'événement n'a pas été anticipé, le marché réagira instantanément à l'annonce :

- si les marchés sont efficientes, on doit alors observer une forte rentabilité anormale le jour de l'annonce, puis le cours retrouve son évolution conforme à ce que la théorie prévoit ;

<sup>2</sup> On utilise également l'expression de rentabilité résiduelle.

<sup>3</sup> Le CDVM a été remplacé, en avril 2013, par l'Autorité Marocaine du Marché des Capitaux (AMMC) en vertu de la loi la loi n°43-12

- si les marchés ne sont pas efficientes, le cours s'ajustera lentement à l'annonce ; dans ce cas, on observera alors soit une rentabilité anormale significative positive (appréciation positive du marché quant au rachat d'actions annoncé), soit une rentabilité anormale significative négative (appréciation négative du marché quant au rachat d'actions annoncé).

Pour vérifier ces hypothèses, on recourt aux tests statistiques de Student et de Fischer. Il s'agit de tester l'hypothèse selon laquelle la rentabilité anormale moyenne (RAM)<sup>4</sup> est égale à zéro. On peut écrire :

$$H_0 : RAM = 0 \text{ contre } H_1 : RAM > 0$$

$$\text{et } H_0 : RAM = 0 \text{ contre } H_1' : RAM < 0$$

Ce qui revient à vérifier si :

$$t^* = RAM / \sigma_{RAM} \text{ suit } N(0, 1)$$

où  $\sigma_{RAM}$  est l'écart type de la rentabilité anormale, et  $t^*$  la statistique empirique de Student.

Si la valeur calculée  $t^* < t$  lue dans la table statistique de Student à  $n-2$  degrés de libertés pour un niveau de confiance de 5%, on peut dire que la RAM n'est pas significativement différente de 0, on accepte alors  $H_0$  (l'hypothèse de nullité).

Dans le cas contraire, on rejette  $H_0$ ; autrement dit, on constate soit une rentabilité anormale positive (si  $RAM > 0$ ) c'est-à-dire que le marché réagit positivement, soit une rentabilité anormale négative (si  $RAM < 0$ ) c'est-à-dire que le marché réagit négativement.

Le même test peut être appliqué pour vérifier l'hypothèse de la normalité de la rentabilité anormale cumulée (RAC). L'étude de celle-ci est préférable au test de la RAM, car ses résultats sont plus explicites.

### III. PRÉSENTATION ET ANALYSE DES RÉSULTATS

#### a) Résultats

En suivant les différentes itérations mentionnées dans la section précédente, et en respectant la fenêtre d'événement présentée au graphique 1, nous avons obtenu les résultats résumés au tableau 2.

<sup>4</sup> La RAM est calculée en rapportant la somme des rentabilités anormales au nombre d'observations durant la fenêtre d'événement, soit  $\sum A_{it} / N$ .

Graphique 1 : Détermination de la fenêtre d'événement



Tableau 2 : Caractéristiques de la fenêtre d'événement des 5 sociétés étudiées

Date du visa	Emetteur	Calcul du coefficient bêta J-140 à J-20		Fenêtre d'événement J-10 à J+10		Part du capital visé	RAM (%)	RAC (%)
07/03/2008	ADDOHA	16/08/2007	08/02/2008	22/02/2008	25/03/2008	3,00%	0,15%	1,43%
05/09/2008	BMCE BANK	14/02/2008	05/08/2008	22/08/2008	19/09/2008	9,45%	-0,11%	-2,42%
13/05/2008	BMCI	19/10/2007	14/04/2008	28/04/2008	27/05/2008	5,00%	0,21%	3,07%
09/05/2008	MAROC TELECOM	17/10/2007	10/04/2008	24/04/2008	23/05/2008	1,82%	-0,21%	-0,64%
01/04/2005	SAMIR	13/09/2004	04/03/2005	18/03/2005	15/04/2005	5,00%	0,22%	0,16%

Les annexes numérotées de 1 à 5 présentent une récapitulation des résultats de calcul des rentabilités anormales et rentabilités anormales cumulées pour les 5 sociétés étudiées ainsi que les tests statistiques de Student correspondants.

#### b) Analyse et interprétation

D'après les résultats affichés en annexes (1 à 5), et en supposant que les rendements boursiers suivent une loi normale, nous pouvons constater que la rentabilité anormale n'est pas significativement différente de zéro, c'est-à-dire que le marché ne réagit pas à de telles annonces. Toutefois, la BMCE et la BMCI affichent des excès de rentabilités légèrement élevés mais non significatifs.

Plusieurs leçons peuvent tirées de cette étude en réponse aux questions posées en introduction générale ainsi que dans la section précédente consacrée à la méthodologie.

Si les rentabilités anormales ne sont pas significativement différentes de zéro, il n'y a donc pas de différence entre la rentabilité théorique calculée et la rentabilité observée des titres des sociétés étudiés. Si le marché ne réagit pas à l'annonce signifie l'une des deux choses :

- ou bien l'événement a été entièrement anticipé à l'avance ; par conséquent les actionnaires ont déjà intégré la nouvelle dans le cours de l'action ;
- ou bien l'événement n'a pas été anticipé et le marché réagira instantanément à l'annonce : cela signifiera que le marché boursier marocain est relativement efficient ; les cours réalisent une forte rentabilité anormale le jour de l'annonce mais reste non significative et reprennent leur tendance normale par la suite.

Ceci est peut être valable dans la mesure où nous avons retenu seulement les sociétés les plus liquides et qui sont cotées en continu. Les autres sociétés sont moyennement liquides, leur intégration dans l'étude peut biaiser les résultats.

Dans tous les cas, le marché considère que la modification des statuts pour annoncer des programmes de rachat d'actions n'est qu'un simple aménagement technique ne constituant pas une véritable annonce.

Autrement dit, les programmes de rachat d'actions, soient, ils ne représentent pas de signal d'information à transmettre au marché ; soient, ils véhiculent l'information nécessaire au marché qui la reçoit parfaitement en l'anticipant à l'avance à travers son intégration dans les cours boursiers.

Nous en déduisons que les marchés considèrent que la mise en place d'un programme de rachat d'actions est un acte normal de gestion de son actionnariat depuis l'adoption de la loi en 2003.

Peut-être les investisseurs sanctionnent-ils négativement les firmes n'ayant pas mis en place de programmes de rachat d'actions ? Durant la période 2004-2008, plus de 43 programmes de rachat d'actions ont été mis en place par les entreprises marocaines cotées en Bourse, en vue notamment de régulariser les cours des actions. Depuis la crise de 2008 qui a plongé la plupart de marchés financiers dans une baisse continue jusqu'à nos jours, les programmes de rachat ont été accéléré à la Bourse de Casablanca. Une étude plus approfondie pourra nous éclaircir la situation sur la réaction des investisseurs face à de tels programmes, mais aussi nous informer du degré d'efficience du marché boursier marocain.

#### IV. CONCLUSION

La théorie économique moderne s'est largement épanchée sur les conflits et divergences d'intérêt qui peuvent naître des relations entre les dirigeants des firmes et leurs actionnaires, en raison d'une part des comportements parfois opportunistes des premiers, et d'autre part, de l'exigence de création de valeur des actionnaires conformément à la théorie de gouvernance actionnariale. Dans ces conditions, des doutes peuvent subsister quant à la nature et le mobile réels de certaines décisions de gestion, et en particulier par des programmes de « rachat par une entreprise de ses propres actions ».

A l'opposé, même si la plupart d'entre eux pensent attirer sur leur firme l'attention du marché en annonçant de tels programmes, ils rejettent les propositions selon lesquelles l'opération leur serve à faire évoluer la géographie actionnariale en leur faveur, et à s'en servir pour faire barrière à une OPA hostile. En Définitive, les dirigeants semblent être plus guidés par la maximisation de l'utilité de la firme pour les actionnaires, plutôt que par leurs intérêts personnels.

Cependant, les investisseurs ne semblent pas réagir positivement à l'annonce de mise en place de programmes de rachat d'actions. L'absence de toute rentabilité anormale est un signe d'insensibilité du marché à de telles décisions. Il se peut que le rachat d'actions constitue un signal fort important au marché, mais la non-réaction de celui-ci est peut être due à l'étroitesse du marché boursier marocain mais aussi à la taille de l'échantillon. Ce qui n'est pas le cas dans la présente étude. Toutefois, malgré cette limite, on a pu constater que depuis la réglementation des rachats en 2003, les entreprises marocaines recourent de plus en plus à cette technique de rachat de leur propres actions, comme outil moderne et important dans le cadre de leur mode de gouvernance actionnariale, étant donné son rôle dans la création de la valeur.

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## ANNEXES

Annexe 1 : Calcul des rentabilités anormales et rentabilités anormales cumulées de SAMIR

Date	R <sub>t</sub> observée MASI	R <sub>t</sub> observée SAMIR	R <sub>t</sub> théorique SAMIR	RA	RAC
18/03/2005	0,10%	-1,10%	0,13%	-1,23%	-1,23%
21/03/2005	0,35%	0,00%	0,44%	-0,44%	-1,67%
22/03/2005	0,26%	0,83%	0,33%	0,51%	-1,16%
23/03/2005	-0,09%	-0,55%	-0,11%	-0,45%	-1,61%
24/03/2005	0,02%	-1,33%	0,03%	-1,36%	-2,97%
25/03/2005	-0,04%	1,07%	-0,05%	1,12%	-1,85%
28/03/2005	-0,21%	-0,56%	-0,26%	-0,30%	-2,15%
29/03/2005	-0,29%	0,28%	-0,36%	0,63%	-1,51%
30/03/2005	-0,74%	-1,36%	-0,90%	-0,46%	-1,98%
31/03/2005	-0,64%	-1,16%	-0,79%	-0,37%	-2,35%
01/04/2005	-0,70%	1,43%	-0,85%	2,28%	-0,07%
04/04/2005	-0,06%	-0,99%	-0,06%	-0,92%	-0,99%
05/04/2005	0,11%	0,46%	0,14%	0,31%	-0,68%
06/04/2005	0,17%	3,37%	0,21%	3,16%	2,48%
07/04/2005	0,17%	1,37%	0,22%	1,15%	3,63%
08/04/2005	0,14%	-1,35%	0,18%	-1,53%	2,10%
11/04/2005	-0,06%	0,00%	-0,06%	0,06%	2,16%
12/04/2005	0,30%	0,00%	0,38%	-0,38%	1,79%
13/04/2005	0,10%	1,37%	0,13%	1,24%	3,03%
14/04/2005	0,33%	1,08%	0,41%	0,67%	3,70%
15/04/2005	0,05%	1,07%	0,07%	1,00%	4,69%
Moyenne				0,22%	0,16%
Ecart type				1,18%	2,39%
t* de Student				0,1890	0,0671
t <sup>0,05</sup> à 19 ddl				2,093	2,093

Annexe 2 : Calcul des rentabilités anormales et rentabilités anormales cumulées de BMCE

Date	R <sub>t</sub> observée MASI	R <sub>t</sub> observée BMCE	R <sub>t</sub> théorique BMCE	RA	RAC
22/08/2008	-0,03%	0,03%	-0,02%	0,05%	0,05%
25/08/2008	-0,17%	-0,61%	-0,09%	-0,52%	-0,47%
26/08/2008	0,02%	0,00%	0,00%	0,00%	-0,48%
27/08/2008	0,16%	0,32%	0,07%	0,25%	-0,23%
28/08/2008	0,58%	-0,32%	0,28%	-0,60%	-0,83%
29/08/2008	0,04%	0,00%	0,01%	-0,01%	-0,84%
01/09/2008	0,67%	0,00%	0,32%	-0,32%	-1,16%
02/09/2008	-0,28%	-0,13%	-0,14%	0,01%	-1,15%
03/09/2008	0,23%	0,10%	0,11%	-0,01%	-1,17%
04/09/2008	-0,55%	0,03%	-0,27%	0,31%	-0,86%
05/09/2008	-0,68%	-1,29%	-0,33%	-0,96%	-1,82%
08/09/2008	-1,71%	-1,31%	-0,84%	-0,47%	-2,28%
09/09/2008	-0,95%	-0,66%	-0,47%	-0,20%	-2,48%
10/09/2008	-1,00%	-0,67%	-0,49%	-0,17%	-2,65%
11/09/2008	-0,01%	-0,60%	-0,01%	-0,60%	-3,25%
12/09/2008	-0,94%	-0,44%	-0,46%	0,02%	-3,22%
15/09/2008	-3,39%	-5,05%	-1,66%	-3,39%	-6,62%
16/09/2008	-4,08%	-2,14%	-2,00%	-0,14%	-6,76%



17/09/2008	-0,58%	0,00%	-0,29%	0,29%	-6,47%
18/09/2008	2,59%	1,82%	1,26%	0,56%	-5,91%
19/09/2008	4,34%	5,73%	2,12%	3,62%	-2,29%
Moyenne				-0,11%	-2,42%
Ecart type				1,17%	2,21%
$t^*$ de Student				-0,0936	-1,0974
$t^{0,05}$ à 19 dd/				2,093	2,093

Annexe 3 : Calcul des rentabilités anormales et rentabilités anormales cumulées de MAROC TELECOM

Date	$R_t$ observée MASI	$R_t$ observée IAM	$R_t$ théorique IAM	RA	RAC
24/04/2008	-0,64%	-0,30%	-0,40%	0,10%	0,10%
25/04/2008	-0,39%	-0,33%	-0,16%	-0,17%	-0,07%
28/04/2008	0,43%	-0,15%	0,60%	-0,75%	-0,82%
29/04/2008	0,68%	1,52%	0,83%	0,68%	-0,14%
30/04/2008	-0,74%	-0,97%	-0,49%	-0,48%	-0,62%
02/05/2008	-0,02%	0,25%	0,18%	0,07%	-0,54%
05/05/2008	-0,64%	0,05%	-0,40%	0,45%	-0,09%
06/05/2008	0,72%	0,30%	0,87%	-0,57%	-0,66%
07/05/2008	-0,50%	0,32%	-0,26%	0,59%	-0,07%
08/05/2008	0,87%	1,10%	1,01%	0,08%	0,01%
09/05/2008	0,16%	-0,05%	0,35%	-0,40%	-0,38%
12/05/2008	0,70%	2,81%	0,85%	1,96%	1,57%
13/05/2008	0,41%	1,82%	0,59%	1,24%	2,81%
14/05/2008	-0,44%	-1,18%	-0,22%	-0,96%	1,85%
15/05/2008	-0,96%	-3,79%	-0,70%	-3,09%	-1,24%
16/05/2008	0,81%	3,93%	0,96%	2,97%	1,73%
19/05/2008	-0,71%	-3,90%	-0,46%	-3,44%	-1,71%
20/05/2008	0,41%	-0,40%	0,59%	-0,98%	-2,69%
21/05/2008	-0,28%	-1,49%	-0,06%	-1,43%	-4,13%
22/05/2008	0,20%	0,68%	0,39%	0,29%	-3,83%
23/05/2008	-0,27%	-0,63%	-0,05%	-0,57%	-4,41%
Moyenne				-0,21%	-0,64%
Ecart type				1,44%	1,91%
$t^*$ de Student				-0,1460	-0,3321
$t^{0,05}$ à 19 dd/				2,093	2,093

Annexe 4 : Calcul des rentabilités anormales et rentabilités anormales cumulées de BMCI

Date	$R_t$ observée MASI	$R_t$ observée BMCI	$R_t$ théorique BMCI	RA	RAC
28/04/2008	0,43%	0,00%	0,15%	-0,15%	-0,15%
29/04/2008	0,68%	1,35%	0,29%	1,05%	0,90%
30/04/2008	-0,74%	0,00%	-0,53%	0,53%	1,43%
02/05/2008	-0,02%	-0,09%	-0,11%	0,02%	1,45%
05/05/2008	-0,64%	-0,62%	-0,47%	-0,15%	1,30%
06/05/2008	0,72%	1,60%	0,32%	1,29%	2,59%
07/05/2008	-0,50%	-0,18%	-0,39%	0,21%	2,80%
08/05/2008	0,87%	3,51%	0,40%	3,11%	5,91%
09/05/2008	0,16%	0,00%	-0,01%	0,01%	5,91%
12/05/2008	0,70%	0,00%	0,31%	-0,31%	5,61%
13/05/2008	0,41%	-3,99%	0,14%	-4,13%	1,48%
14/05/2008	-0,44%	0,80%	-0,36%	1,15%	2,63%

15/05/2008	-0,96%	0,88%	-0,65%	1,53%	4,16%
16/05/2008	0,81%	0,00%	0,37%	-0,37%	3,79%
19/05/2008	-0,71%	-1,22%	-0,51%	-0,71%	3,08%
20/05/2008	0,41%	0,35%	0,14%	0,21%	3,29%
21/05/2008	-0,28%	0,00%	-0,26%	0,26%	3,55%
22/05/2008	0,20%	-0,35%	0,02%	-0,37%	3,18%
23/05/2008	-0,27%	0,18%	-0,25%	0,43%	3,61%
26/05/2008	-0,45%	-0,44%	-0,36%	-0,08%	3,52%
27/05/2008	-0,25%	0,62%	-0,24%	0,86%	4,39%
Moyenne				0,21%	3,07%
Ecart type				1,31%	1,63%
<i>t</i> * de Student				0,1590	1,8774
<i>t</i> <sup>0,05</sup> à 19 dd/ <i>l</i>				2,093	2,093

Annexe 5 : Calcul des rentabilités anormales et rentabilités anormales cumulées de ADDOHA

Date	R <sub>t</sub> observée MASI	R <sub>t</sub> observée ADDOHA	R <sub>t</sub> théorique ADDOHA	RA	RAC
22/02/2008	0,02%	0,00%	0,09%	-0,09%	-0,09%
25/02/2008	-0,82%	0,00%	-1,21%	1,21%	1,12%
26/02/2008	0,42%	-0,64%	0,71%	-1,35%	-0,23%
27/02/2008	0,08%	0,10%	0,19%	-0,10%	-0,33%
28/02/2008	0,17%	0,50%	0,33%	0,17%	-0,15%
29/02/2008	-0,67%	-0,17%	-0,97%	0,80%	0,65%
03/03/2008	-0,49%	-0,95%	-0,69%	-0,26%	0,39%
04/03/2008	-0,98%	-1,72%	-1,45%	-0,27%	0,12%
05/03/2008	0,67%	0,66%	1,10%	-0,44%	-0,33%
06/03/2008	0,53%	2,78%	0,89%	1,89%	1,57%
07/03/2008	0,39%	0,47%	0,68%	-0,21%	1,36%
10/03/2008	0,21%	4,22%	0,39%	3,82%	5,19%
11/03/2008	0,74%	-0,45%	1,21%	-1,66%	3,52%
12/03/2008	1,71%	0,79%	2,71%	-1,92%	1,60%
13/03/2008	0,26%	-0,11%	0,47%	-0,59%	1,01%
14/03/2008	-0,65%	-0,45%	-0,94%	0,49%	1,51%
17/03/2008	-0,20%	-0,02%	-0,24%	0,21%	1,72%
18/03/2008	-0,64%	-0,99%	-0,93%	-0,06%	1,66%
19/03/2008	0,04%	1,25%	0,13%	1,12%	2,78%
24/03/2008	-0,40%	0,58%	-0,56%	1,14%	3,93%
25/03/2008	0,29%	-0,36%	0,51%	-0,87%	3,06%
Moyenne				0,15%	1,43%
Ecart type				1,28%	1,53%
<i>t</i> * de Student				0,1142	0,9352
<i>t</i> <sup>0,05</sup> à 19 dd/ <i>l</i>				2,093	2,093

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# Distribution Effects of Foreign Direct Investment on the Performance of the Nigerian Economy from 1970 to 2013

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**Abstract-** This study focused on examining the distributive effect of foreign direct investment (fdi) inflows on the performance of the Nigerian economy, with specific reference to the real sector of the economy. The major problem was that despite increasing inflows of fdi to the Nigerian economy, the sectors identified in this work were performing poorly. Thus, the objective of this study were to establish the relationship that exists between capacity utilization rate, export volumes, growth rate of gross domestic and the inflows of fdi to mining & quarrying, manufacturing & processing, agriculture and fisheries, transport & communication, building and construction and trading and business. Literature was reviewed and the OLS multiple regression model was used to analyse the relationships.

**Keywords:** *foreign direct investment (fdi) inflows, distribution effect economic performance.*

**GJMBR - C Classification :** *JEL Code : O16*



*Strictly as per the compliance and regulations of:*



# Distribution Effects of Foreign Direct Investment on the Performance of the Nigerian Economy from 1970 to 2013

Ubom, Anthonia Uduak

**Abstract-** This study focused on examining the distributive effect of foreign direct investment (fdi) inflows on the performance of the Nigerian economy, with specific reference to the real sector of the economy. The major problem was that despite increasing inflows of fdi to the Nigerian economy, the sectors identified in this work were performing poorly. Thus, the objective of this study were to establish the relationship that exists between capacity utilization rate, export volumes, growth rate of gross domestic and the inflows of fdi to mining & quarrying, manufacturing & processing, agriculture and fisheries, transport & communication, building and construction and trading and business. Literature was reviewed and the OLS multiple regression model was used to analyse the relationships. It was discovered among others that, inverse relationship exist between inflows of fdi to manufacturing & processing and capacity utilization rate, inflows of fdi to mining & quarrying, agriculture/fishery, transport & communication, trading/business and export volume, inflows of fdi to transport/communication, building/construction and the growth rate of gross domestic product while few positive and direct relationships were established. On these grounds, it was strongly recommended that fdi be heavily redirected to subsectors such as manufacturing/processing, agriculture/fishery, trading/business, building/construction and transport/communication to boost economic performance.

**Keywords:** foreign direct investment (fdi) inflows, distribution effect economic performance.

## I. INTRODUCTION

In most developed and developing economies of the world, foreign direct investment had served as a major catalyst for economic development. The early recipient of foreign direct investment especially in the Sub Saharan African such as Botswana, Mauritius, Seychelles, Zambia, Angola, Guinea, Ghana, Nigeria, Namibia, Zimbabwe and Uganda among others can testify to this. Though the inflows of foreign direct investments to these economies have declined over the years, such inflows were directed to the mining and oil sectors of these economies. Most of them except very few have enough to show as evidences of being foreign direct investment (fdi) recipients.

Most of the recipient economies have been able to diversify their lending and investment to increase

returns, finance rapid rate of investment and economic growth, enhanced competition in the domestic market, increase consumption and allow transfer of technology especially new varieties of capital inputs among other benefits (Amar, Peter and Sunil, 1997:3) and (Ubom, 2008:319). From the early 1970s, the inflows of foreign direct investment to Nigeria had witnessed serious fluctuations. Specifically inflows of foreign direct investment to mining and quarrying, communication, transport, business and infrastructure, to mention a few were significantly low (Ubom, 2005: 92). However, from the year 1990, the inflow of direct investment to Nigeria had significantly improved though there were some minor fluctuations. A steady rise in the inflows of foreign direct investment to Nigeria was recorded from the year 2003 upwards, (Ubom, 2008:174). During this time, a total of two hundred and twenty four (224) foreign firms invested in Nigeria.

This study sought to establish the trend and effects of the inflows of foreign direct investment to these subsectors and their impact on economic growth and development in Nigeria. Specifically, this work determines the relationship that exist among the inflows of foreign direct investment to the mining and quarrying, manufacturing and processing, agriculture, transportation and communication, trading and business and capacity utilisation rate, export volume and growth rate of gross domestic product in Nigeria. This work is organized into five sections. Section one which is the introduction is almost concluded, section two reviews literature relevant to the study. In section three, research methodology is presented and the empirical review made in section four while section five summarizes the work, makes recommendations and draw conclusion.

## II. THEORETICAL AND CONCEPTUAL REVIEW

### a) *Introduction*

This section reviews literature relevant to this work. Specifically the theories of foreign direct investment, nature and concept of foreign direct investment, sources and types of foreign direct investment, factors affecting foreign direct investment flows to a country and the distribution of foreign direct investment and the performance of the Nigerian economy are reviewed.



*b) Theories of Foreign Direct Investment*

Many theories abound that explain the reason for the inflows of foreign direct investment to a nation. The dependency school are of the opinion that developing economies are exploited by industrialised nations through international trade leading to deteriorating terms of trade and through multinational firms drawing profits out of developing economies (Wilhelms, 1998:2). The modernization school are of the opinion that there is a natural order through which countries ascend to higher developmental stages, thus they see foreign direct investment as prerequisite and catalyst for sustainable growth and development.

The integrative school of thought considers the micro, macro and meso-economic variables as determinants of foreign direct investment inflow to a nation (Ubom, 2005:11). Bende and Ford (1998) in (Egwaike, 2012:123), are of the opinion that inflows of foreign direct investment produces externalities in the form of technology transfers, development of human capital and opening up of the economy among others, thus, these are the reasons for the inflow of foreign direct investment to an economy which are aimed at improving the productive sector of an economy. This work adopts the view of Bende et al.

*c) Nature and Concept of Foreign Direct Investment*

Generally, we know that investment refers to the commitment of funds or other resources into a project with the expectation of future benefits. When such investments move beyond the boundaries of the mother economy, we refer to it as foreign investment. This investment could be in real assets or in financial assets. When such investments are concentrated in real assets such as landed properties, machineries equipment, precious metals among others and undertaken in a country other than the mother country, this is known as foreign direct investment. When the investments are on marketable securities or have any net claims on similar financial assets of foreign countries, they are known as foreign indirect investments or foreign portfolio investments or rentier investments (Robinson & Wrightsman, 1974). This paper focused on foreign direct investment.

Several authors have done a lot of work on this subject matter. (Onyali and Okafor, 2014:214) describes foreign direct investment as an amalgamation of capital, technology, marketing and management in an investment in a foreign country. They further described the context of being foreign to mean that the investor(s) retain control over the investment. According to them, foreign direct investment takes the form of a foreigner setting up a subsidiary or taking over control of an existing firm in the host economy. In this case, the investment must have both foreign ownership and foreign control. Mwillima, (2003) in Egwaike, (2012:1) and The World Bank, (2003) describes foreign direct

investment as an investment made so as to acquire a lasting management interest of (e.g. 10% of voting, stock, 10% of equity shares) in an enterprise operating in another country other than that of the investor's country.

Jacob, Umoh and Chuku, 2012:2 describes foreign direct investment in three folds: (i) An investment that augments domestic savings in the process of capital accumulation. (ii) The main conduct through which technology spillovers lead to an increase in factor productivity and efficiency in the utilization of resources which leads to growth and finally. (iii) An investment that leads to increase in exports as a result of increased capacity and competition in domestic production. Foreign direct investment as seen in the works of Libor, (2012) is described as the transfer of ownership from domestic to foreign residents and as a mechanism that makes it possible for foreign investors to exercise management and control over host country firms. Foreign direct investment could be acquired through the acquisition of shares in associated enterprise, by incorporating a wholly owned subsidiary or company, through merger or acquisition of an unrelated enterprise or participating in an equity joint venture with another investor.

*d) Sources and Types of Foreign Direct Investment in Nigeria*

The sources of foreign direct investment (fdi) could be seen in various dimensions. It could be described in terms of the countries these investments are coming from such as from Europe, Japan, Germany, Asian countries, United States, United Kingdom among others. The sources could also be described in terms of the sectors to which they flow to, such as US \$92.2billion of fdi to real estate as in the United States in the year 2013. It could also be described in terms of the nature it takes such as capital, human resources, machineries, equipment, precious metals, export processing zone, research and development support, special economic zones and investment in financial subsidies among others. In all, inflows of foreign capital to an economy come in three major forms; as official aids, through portfolio equity flows and as foreign direct investment.

Foreign direct investment (fdi) could be horizontal, vertical and/or platform. Horizontal fdi arises when a firm duplicates the activities of the mother firm in a host economy. Vertical fdi arises when a firm performs value adding activities stage by stage in a host country and platform fdi comes from a source country into a destination country through exportation to the third country.

*e) Factors Affecting Foreign Direct Investment Inflows to a Country*

According to Madura and Fox, 2011:55-56, capital flows resulting from foreign direct investment

change whenever conditions in a country change the desires of firms operating there. Changes in restrictions also open way to more foreign direct investment in such economies, for instance, relaxation of the indigenisation policy (trade liberalization) attracted many more foreign investors to Nigeria. Privatization allows for greater international businesses as foreign firms can acquire operations sold by national governments as in Chile when it was used to prevent few investors from controlling all the shares. In France it was used to prevent possible reversion to a more nationalized economy and in the United Kingdom to spread stock ownership across investors to mention but a few. Countries that have growth potentials attract more foreign investors as they may be able to capitalize on that growth by establishing more businesses. Foreign firms also prefer to channel foreign direct investment to countries where the local currency is expected to strengthen against their own. Here, they can invest funds to establish their operations in a country while the country's currency is relatively cheap. Countries that impose relatively low tax rates on corporate earnings are more likely to attract foreign direct investment because these firms gain from the estimate after tax cash flows that they expect to earn. In the work of Yakub, 2005:61, factors affecting fdi flows are those of abundance human and natural resources, openness of the economy, current economic reforms, restoration of macroeconomic stability, financial sector reforms, institutional reforms, privatization, deregulation of the oil sector and external sector reforms.

*f) Distribution of Foreign Direct Investment and the Performance of the Nigerian Economy*

As earlier stated in this study, the performance of the Nigerian economy in this work is measured in terms of the real sector, the amount of foreign direct investment inflows to its subsectors such as mining and quarrying, manufacturing and processing, agriculture, fisheries and forestry, transport and communication, building and construction, trading and business and how these inflows have impacted on capacity utilization rate, export volume, and growth rate of gross domestic product. It is a well-known fact that prior to the oil boom in the early 1970s, agriculture and other sectors of the real economy provided the bulk of employment and national income in Nigeria. The growth of the real sector then was driven by government policy stimulus, research and development support. With its fast growing population, there was need for creation of more job opportunities, industrial raw materials and more food, but the sector still remained in the hands of peasant farms and producers. Then came the oil boom in the early 1970s and foreign direct investment influx into the economy was witnessed.

A critical look shows that concentration of the foreign direct investors were mostly in the extractive

sector, completely ignoring the agricultural sector. However, in recent years, there has been diversification into the manufacturing, transport and communication, trading and business, building and construction among others. That is why we've witnessed Julius Berger Construction Company, Gitto Construction Company, MTN, Airtel, Etisalat Communication Business and Coca-cola among others.

A sectoral analysis made by Ogunkola and Afeikhena, showed that as at the early 1990s, the primary sector accounted for only a little over 30% of total foreign direct investment, while manufacturing attracted 50% and services, close to 20%. They further observed that generally, outflows were smaller than inflows, thereby resulting in positive net flows.

### III. RESEARCH METHODOLOGY

This section presents the research methods, design, types, sources of data and model specification.

*a) Research Design, Types and Sources of Data*

In this article, the desk, descriptive and analytical research designs were used. Secondary data were used in the study. The data were collected from existing documents such as the Central Bank of Nigeria (CBN) Statistical Bulletin, Annual abstract of statistics from the National Bureau of Statistics (NBS), internet websites and journals.

The data were collected on the inflows of foreign direct investment to mining and quarrying, manufacturing and processing, agriculture, transport and communication, building and construction, trading and business and capacity utilization rate, export volume and growth rate of gross domestic product in Nigeria, from 1970 to 2013. The data were presented in tables and analysed using the multiple regression models. The analyses were made to address the research hypotheses posted as below.

1.  $H_0$ : There is no significant relationship between the inflows of foreign direct investment to mining and quarrying, manufacturing and processing, agriculture and forestry, transportation & communication, building & construction, trading & business and capacity utilization rate in Nigeria.  
 $H_1$ : There is a significant relationship between the inflows of foreign direct investment to mining & quarrying, manufacturing & processing, agriculture & forestry, transportation & communication, building & construction, trading & business and capacity utilization rate in Nigeria.
2.  $H_0$ : There is no significant relationship between the inflows of foreign direct investment to mining and quarrying, manufacturing and processing, agriculture and forestry, transportation & communication, building & construction, trading & business and Export Volume in Nigeria.

$H_1$ : There is a significant relationship between the inflows of foreign direct investment to mining and quarrying, manufacturing and processing, agriculture and forestry, transportation & communication, building & construction, trading & business and Export Volume in Nigeria.

3.  $H_0$ : There is no significant relationship between the inflows of foreign direct investment to mining and quarrying, manufacturing and processing, agriculture and forestry, transportation & communication, building & construction, trading & business and growth rate of gross domestic product in Nigeria.

$H_1$ : There is a significant relationship between the Inflows of foreign direct investment to mining and

- $Cut = a_0 + b_1 FDI_{mq} + b_2 FDI_{mp} + b_3 FDI_{af} + b_4 FDI_{tc} + b_5 FDI_{bc} + b_6 FDI_{tb} + e$  - eqn 1
- $ExV = a_0 + b_1 FDI_{mq} + b_2 FDI_{mp} + b_3 FDI_{af} + b_4 FDI_{tc} + b_5 FDI_{bc} + b_6 FDI_{tb} + e$  - eqn 2
- $GDPr = a_0 + b_1 FDI_{mq} + b_2 FDI_{mp} + b_3 FDI_{af} + b_4 FDI_{tc} + b_5 FDI_{bc} + b_6 FDI_{tb} + e$  - eqn 3

Where:

Cut = Capacity utilization rates

ExV = Export Volume in naira

GDPr = Growth rate of gross domestic product

$FDI_{mq}$  = Inflows of foreign direct investment to mining & quarrying

$FDI_{mp}$  = Inflows of foreign direct investment to manufacturing & processing

$FDI_{af}$  = Inflows of foreign direct investment to agriculture, fisheries and forestry

$FDI_{tc}$  = Inflows of foreign direct investment to transport & communications

$FDI_{bc}$  = Inflows of foreign direct investment to building & construction

$FDI_{tb}$  = Inflows of foreign direct investment to trading & business

$b_1-b_n$  = Regression coefficients

$a_0$  = regression constant

$x_1-x_n$  = independent variables

y = dependent variable

e = error term

#### IV. EMPIRICAL REVIEW

##### a) Data Presentation

This work examined the distribution effects of foreign direct investment inflows on the performance of the Nigerian economy from 1970 to 2012. It is expected that the inflows of foreign direct investment to the

quarrying, manufacturing and processing, agriculture and forestry, transportation & communication, building & construction, trading & business and growth rate of gross domestic product in Nigeria.

##### b) Regression Models

The multiple regression model given as:

$Y = a_0 + b_1 x_1 + b_2 x_2 + b_3 x_3 + b_4 x_4 + b_5 x_5 + b_6 x_6 + b_n x_n$  is used to analyze the relationship that exist between inflows of foreign direct investment and the performance of the Nigerian economy from 1970 to 2013. The models are expressed as:

$$Cut = a_0 + b_1 FDI_{mq} + b_2 FDI_{mp} + b_3 FDI_{af} + b_4 FDI_{tc} + b_5 FDI_{bc} + b_6 FDI_{tb} + e \quad \text{eqn 1}$$

$$ExV = a_0 + b_1 FDI_{mq} + b_2 FDI_{mp} + b_3 FDI_{af} + b_4 FDI_{tc} + b_5 FDI_{bc} + b_6 FDI_{tb} + e \quad \text{eqn 2}$$

$$GDPr = a_0 + b_1 FDI_{mq} + b_2 FDI_{mp} + b_3 FDI_{af} + b_4 FDI_{tc} + b_5 FDI_{bc} + b_6 FDI_{tb} + e \quad \text{eqn 3}$$

subsectors of the real sector of our economy should booster development and growth in the entire economy which should be reflected by major economic indicators. In this work, the economic indicators considered were capacity utilization rate, export volume and the growth rate of gross domestic product. The data collected are presented in the table below:

**Table 1** : Trend and Relationships among the Inflow of Foreign Direct Investment to Mining and Quarrying, Manufacturing and Processing, Agriculture, Forestry and Fisheries, Transport and Communication, Building and Construction, Trading and Business and Capacity Utilisation Rates (cut), Export Volume (ExV) and Growth rate of Gross Domestic Product (GDPr) in Nigeria from 1970 to 2013

Period	Cut (%)	Exv (₦'b)	GDPr (%)	FDI <sub>MQ</sub> (%)	FDI <sub>MP</sub> (%)	FDI <sub>AF</sub> (%)	FDI <sub>TC</sub> (%)	FDI <sub>BC</sub> (%)	FDI <sub>TB</sub> (%)	Total inflows of FDI (₦ b)
1970	n/a	374.2	46.80	51.4	22.4	1.0	1.4	1.4	20.6	251.0
1971	n/a	364.0	26.33	52.5	28.6	1.2	0.9	1.2	14.1	489.6
1972	n/a	250.7	8.45	54.7	22.7	0.6	0.8	2.2	15.4	432.8
1973	n/a	2006.0	59.09	52.5.	23.2	0.4	0.7	2.6	16.6	577.8

1974	n/a	430.0	60.00	54.1	20.7	1.0	1.2	3.5	17.0	507.1
1975	76.6	349.8	17.09	41.1	22.2	0.8	1.0	4.9	22.0	757.4
1976	77.4	425.6	24.66	39.3	23.5	0.9	0.7	5.2	26.7	521.1
1977	78.7	523.0	17.41	43.1	27.8	3.0	1.2	4.8	14.4	717.3
1978	72.9	627.7	7.32	14.7	44.1	4.3	1.9	7.8	18.2	664.7
1979	71.8	670.0	19.03	7.32	44.5	3.8	1.9	9.3	17.5	704.0
1980	70.1	553.7	18.62	18.7	41.5	3.3	1.9	8.5	19.1	786.4
1981	73.1	342.8	40.29	14.0	45.4	3.2	1.6	8.7	20.4	584.9
1982	63.6	203.2	2.36	18.1	35.7	2.2	1.3	7.8	27.6	2,193.4
1983	49.7	301.3	9.99	8.6	35.8	2.1	1.3	7.5	38.2	1,673.6
1984	43.0	247.4	11.32	10.9	32.9	2.0	1.3	6.8	40.9	1,385.3
1985	38.3	497.2	13.76	10.9	33.7	1.9	1.3	6.7	39.7	1,423.5
1986	38.6	552.1	0.97	27.0	30.0	1.4	0.9	5.4	29.6	4,024.0
1987	40.4	2,152.0	49.03	22.6	31.2	1.2	0.8	4.6	34.0	5,110.8
1988	42.4	2,757.4	33.39	30.0	32.2	1.1	1.4	4.3	27.6	6,236.7
1989	43.8	2,954.4	54.78	5.8	49.6	1.2	1.5	4.4	32.1	4,692.7
1990	40.3	3,259.6	15.94	10.5	60.7	3.2	2.3	7.1	16.4	10,450.2
1991	42.0	4,677.2	24.31	-6.6	71.0	3.1	3.0	12.0	11.9	5,610.2
1992	38.1	4,228.3	69.69	31.3	47.5	1.9	1.9	6.9	7.2	11,730.7
1993	37.2	4,986.4	26.79	41.5	19.3	1.8	0.8	0.1	2.6	42,624.9
1994	30.4	5,349.0	31.25	37.7	19.9	1.7	0.6	2.4	3.2	7,828.5
1995	29.29	20,102.8	116.46	47.5	23.2	1.0	0.3	1.3	2.5	55,999.3
1996	32.46	20,059.5	42.79	46.3	24.3	1.0	0.4	1.5	3.0	5,672.9
1997	30.40	25,629.3	4.09	46.2	24.4	0.9	0.5	1.5	2.3	10,004.0
1998	32.40	31,222.3	3.48	39.3	22.6	0.8	0.5	1.0	6.9	32,434.5
1999	34.40	19,493.0	2.80	38.2	23.5	0.8	0.5	2.6	7.1	4,035.5
2000	36.1	24,822.9	3.80	38.5	23.7	0.8	0.5	2.6	7.1	16,453.6
2001	42.7	28,018.6	4.60	38.0	23.5	0.8	0.6	2.5	7.5	4,937.0
2002	54.9	95,046.1	3.5	37.0	24.0	0.7	1.0	2.6	7.4	8,988.5
2003	56.5	94,092.5	10.20	34.6	25.6	0.7	1.6	2.6	8.1	13,531.2
2004	55.7	113.3	7.10	38.0	26.5	0.7	1.8	2.5	9.9	20,064.4
2005	54.8	106.0	6.20	4.05	0.01	4.6	21.3	n/a	23.0	26,083.7
2006	53.3	133.6	6.90	0.21	34.5	0.20	1.35	n/a	1.8	616,290.17
2007	53.38	199.3	5.30	0.13	30.4	0.18	1.5	n/a	1.8	721,700.02
2008	54.67	252.9	6.40	0.09	15.9	0.20	0.8	n/a	1.4	978,036.50
2009	55.52	296.7	7.00	0.07	13.5	0.98	1.03	n/a	1.25	1,28,824.06
2010	56.22	406.2	7.9	0.10	19.9	1.61	1.47	n/a	1.97	916,679.7
2011	n/a	499.5	6.8	0.10	13.6	1.13	0.98	n/a	1.36	1,371,646.51
2012	n/a	576.1	6.5	0.83	16.8	1.41	1.3	n/a	1.7	1,122,565.5
2013	n/a	708.9	n/a	0.11	22.8	1.8	1.7	n/a	2.2	882,273.14

Source: CBN Statistical Bulletin of various years, up to 2013.

### b) Data Analysis

Between the years 1970 and 1974, the highest inflow of foreign direct investment (fdi) to Nigeria was in the mining and quarrying sector as at least fifty three percent (53%) of the inflows were directed to this sector. In other words, out of the ₦2, 258.3billion inflows of fdi for that year, ₦1,197.80billion was directed at only the mining and quarrying sector. This was followed by the manufacturing and processing sector that attracted an average of 23.52%, that is ₦531.15billion only. An average of .0084% or ₦18.97billion was spent in agriculture, forestry and fisheries. In the transport and communication sector, .01% or ₦22.58billion of foreign direct investment was attracted to this sector. A total of 0.022% or ₦49.23billion was used in building and construction while 0.167% or ₦378.04billion was directed at trading and business. The balance of

₦60.53billion was used in miscellaneous services and other sector. Within this period, there was no record of capacity utilisation rate, export volume ranged between ₦364billion and ₦2006.0billion while GDP moved from between 8.45% and 60%.

From the year 1975 to 1979, the distribution of foreign direct investment to these sectors totalled ₦3, 364.5billion. Out of this amount, an average of 0.3076% or ₦1, 035billion was directed to the mining and quarrying sector. 0.32% or ₦1, 090.8billion went to the manufacturing and processing sector while agriculture, forestry and fisheries made use of only 0.026% or ₦86.13billion. Within the same period, transport and communication sector benefitted to the tune of 0.013% or ₦45.08billion, building and construction sectors attracted 0.064% or ₦215.33billion while trading and business made use of 0.2036% or ₦685.01billion and

the balance of ₦207.15billion directed to the provision of miscellaneous services. This period, capacity utilisation rate raged between 71.8% and 78.7%, export volume rose from ₦349.8billion to 670.0billion while growth rate of gross domestic product fluctuated between 7.32% and 24.66%.

The year 1980 to 1984 witnessed a significant reduction in the inflow of foreign direct investment to the mining and quarrying sector as a total of ₦6, 623.6billion foreign direct investment flowed into Nigeria. Out of this, the mining and quarrying sectors used an average of 0.141% or ₦931.3billion while manufacturing and processing used 0.472% or ₦3, 123.69billion. The third beneficiary sector was trading and business attracting an average of 0.292% or ₦1, 936.74billion foreign direct investment. This was followed by building and construction sectors attracting an average of 0.079% or ₦520.61billion of foreign direct investment. Agriculture, forestry and fisheries attracted only 0.026% or ₦169.56billion foreign direct investment while transport and communication attracted an average of 0.0148% or only ₦98.03billion fdi in this period. Here, capacity reduced from 73.1% to 43%, export volume reduced from ₦553.7billion to ₦247.4billion while GDP<sub>r</sub> fluctuated between 2.36% and 40.29%.

From the years 1985 to 1989, significant increase in foreign direct investment inflows was witnessed in the manufacturing and processing sector of the Nigerian economy. This was evident in the fact that out of ₦21,487.7billion inflows of foreign direct investment to Nigeria within this period, manufacturing and processing sectors attracted an average of 0.3534% or ₦7,593.75billion of it, trading and business attracted an average of 0.326% or ₦7,004.99billion, mining and quarrying attracted an average of 0.1386% or ₦2,9978.20billion, building and construction attracted an average of 0.051% or ₦1,091.58billion foreign direct investment, agriculture, forestry and fisheries attracted only 0.0136% or ₦292.233billion while in transport and communication, only 0.0118% or ₦253.55billion of foreign direct invest was directed to this sector. Within this period, capacity utilisation rate rose from 38.3% to 43.8%, export volume increased from ₦247, 4billion to ₦2,954.4 billion while GDP<sub>r</sub> fluctuated between 0.97% to 54%. However, as observed by Imoudu, 2012:125, this work also observed that despite the recent increase and improvement in the communication sector in Nigeria today, this is yet to be translated to other sectors of Nigerian economy. The forgone analyses supports the views of Imoudu, 2012:125 again which states that inflows of foreign direct investment in Nigeria are concentrated at the mining, quarrying, manufacturing, processing and partially on trading and business but these are not linked to or directed to the domestic market which would have improved the standard of living and lifestyle of the populace. The remaining part

(₦2, 273.397billion) of the fdi for that period was also directed at miscellaneous services.

The data shows that between the years 1990 and 1994, the direction of the inflows of foreign direct investment to Nigeria had significantly shifted from mining and quarrying to manufacturing and processing and marginally to trading and business. Within this period, a total of ₦78, 244.5billion of foreign direct investment inflows was recorded in the real sector in Nigeria. Out of this, the manufacturing and processing sectors attracted an average of 0.437% or ₦34, 177.20billion, trading and business attracted 0.083% or ₦6, 462.996billion, mining and quarrying attracted an average of 0.23% or ₦17, 824.1billion, building and construction used an average of 0.057% of ₦4, 459.94billion, agriculture, forestry and fisheries attracted an average of 2.34% or ₦183,092.13billion while transport and communication attracted only 0.0234% or ₦1,830.92billion for the period. Also, capacity utilisation rate reduced from 40.5% to 30.4%, export volume increased from ₦3, 259.6billion to ₦5, 349.0billion while GDP<sub>r</sub> dangled from 69.69% to 31.25%.

From 1995 to 2004, concentration of fdi inflows was directed at the mining & quarrying, followed by manufacturing and processing and then trading and business. Agriculture, forestry and fisheries, transport and communication attracted very insignificant inflows of foreign direct investment. Out of a total of ₦172,120.9billion foreign direct investment inflows, an average of 0.404% or ₦69,467.1billion was directed to the mining and quarrying sector, 0.2413% or ₦41,53.56billion was directed at manufacturing and processing while trading and business attracted only 0.0618% or ₦10,637.1billion. In this period, the growth rate of gross domestic product reduced from 116.46% to 7.10%, export volume reduced from ₦29, 102.8billion to ₦113.3billion while capacity utilisation rate increased from 29.29% to 55.7%.

From the year 2005 to 2013, the inflow of foreign direct investment concentrated in the manufacturing and processing subsectors with highly fluctuating percentages, trading and business and transport and communication. Other subsectors witnessed very minute inflows. Of the total of ₦7, 923,099.3billion inflows of foreign direct investment, manufacturing and processing enjoyed an average of 2.30% or ₦18,236,961.68billion, trading and business attracted an average of 4.05% or ₦32, 114.963billion while transport and communication utilized 3.492% or ₦27, 669.22billion. During this time, growth in the economic variables were very slow as capacity utilisation rate rose from 54.8% to 56.22%, export volume, rose from ₦106.0billion to ₦708.9billion and growth rate of gross domestic product, from 6.20% to 6.5% respectively.

c) *Hypothesis Testing*

This hypothesis sought to establish the relationship that exist among the inflows of foreign direct

investment (fdi) to the earlier mentioned subsectors and capacity utilization rate in Nigeria from 1970 to 2013. The regression equation was given as:

$$Cut = a_0 + b_1 FDI_{mq} + b_2 FDI_{mp} + b_3 FDI_{af} + b_4 FDI_{tc} + b_5 FDI_{bc} + b_6 FDI_{tb} + e$$

The regression result is stated below:

$$Cut = 4.272 + .195 FDI_{mq} - .467 FDI_{mp} + .137 FDI_{af} + .427 FDI_{tc} + .081 FDI_{bc} + .147 FDI_{tb} + e$$

t values = (2.772) (1.351) (-1.338) (1.215) (2.763) (0.949) (1.618)

$$Adj R = 43.7\%, R^2 = 55.8\%, F_{cal} = 4.627, F_{tab} = 3.76, t_{tab} = 2.048$$

From the regression result above, it was observed that within the period under review, average capacity utilization rate stood at 4.272%. Considering the independent variables, a one naira increase in the inflow of fdi to mining/quarrying subsector increases capacity utilization by ₦195million, as a one naira increase in the flow of fdi to manufacturing/processing reduces capacity utilization by - ₦467 million. A one naira increase in the flow of fdi to agriculture and forestry increases capacity utilization by ₦137million, a one naira increase in the flow of fdi to transport/communication, building/construction and trading/business increase capacity utilization by ₦427million, ₦081million and N147million respectively.

$R^2$  of 55.8% means that the inflows of fdi to these subsectors can only explain 55.8% of the variations in capacity utilization. The remaining 44.2% are explained by other variables not included in the

model. Comparing the t values of the independent variables, only inflows of fdi to transport and communication was statistically significant as its  $t_{cal}$  values of 2.762 was higher than the  $t_{tab}$  of 2.048. Since  $F_{cal}$  of 4.627 is higher than  $F_{tab}$  of 3.76, we reject the null hypothesis and accept the alternative hypothesis. In other words, a significant relationship exist between the inflows of foreign direct investment to mining/quarrying, manufacturing/processing, agriculture/forestry, transport/communication, building/construction, trading/business and capacity utilization rate in Nigeria.

The second hypothesis examined the relationship that exist among the inflows of fdi to mining/quarrying, manufacturing/processing, agriculture/forestry, transport/communication, building/construction, trading/business and export volume in Nigeria from 1970 to 2013.

The regression equation was given as:

$$ExV = a_0 + b_1 FDI_{mq} + b_2 FDI_{mp} + b_3 FDI_{af} + b_4 FDI_{tc} + b_5 FDI_{bc} + b_6 FDI_{tb} + e$$

The regression result is as presented below

$$ExV = 11.862 - 1.157 FDI_{mq} + 1.462 FDI_{mp} - 1.622 FDI_{af} - .823 FDI_{tc} + 262 FDI_{bc} - 2.022 FDI_{tb} + e$$

t values = (1.665) (-1.762) (0.899) (-2.935) (-1.109) (0.663) (-4.924)

$$Adj R = 57.8\%, R^2 = 65.4\%, F_{cal} = 8.521, F_{tab} = 3.56, t_{tab} = 1.960$$

Based on the regression result above, average export volume in Nigeria between the years 1970 and 2013 stood at ₦11.862billion. A one naira increase in the flow of fdi to mining/quarrying reduced export volume by -₦1.157billion while the flow to manufacturing/processing increased the export volume by ₦1.462billion. The flow to agriculture and forestry reduced export volume by ₦1.622billion. In other words, inflow of fdi to these subsectors are minute, thus very little or nothing from the subsectors have been exported. The same thing is applicable to transport and communication and trading and business. Inflows of fdi into these subsectors are minute, thus their contribution to export volume is negative. In other words, a one naira increase in the flow of fdi to these subsectors reduced export volume by ₦823billion and - ₦2.022billion respectively. However, the flow of fdi to building and construction increases export volume by ₦262billion.

However, the inflows of fdi into these subsectors have been able to explain 65.4% of variations in export volume in Nigeria as indicated by  $R^2$ . The remaining 34.6% of variations in export volume are explained by variables not included in the model. None of the independent variables had significant impact on export volume as their statistical values were below the critical value of t (tab) of 1.960. With  $f_{cal}$  of 8.521 higher than  $f_{tab}$  of 3.56, we reject the null hypothesis and accept the alternative hypothesis which states that a significant relationship exist between the inflows of foreign direct investment to mining & quarrying, manufacturing & processing, agriculture and fisheries, transport & communication, building and construction, trading & business and export volume in Nigeria. The third hypothesis sought to establish the relationship that exist among the inflows of fdi to mining & quarrying, manufacturing & processing, agriculture & fisheries,

transport & communication, trading & business and the growth rate of gross domestic product (gdp<sub>r</sub>). The regression is stated as follows:

$$Gdpr = a_0 + b_1 FDI_{mq} + 2 FDI_{mp} + b_3 FDI_{af} + b_4 FDI_{tc} + b_5 FDI_{bc} + b_6 FDI_{tb}$$

The regression result is as shown below:

$$Gdpr = 0.549 + .022 FDI_{mq} + .044 FDI_{mp} + .234 FDI_{af} - .011 FDI_{tc} - .141 FDI_{bc} + .020 FDI_{tb} + e$$

t values = (0.719) (2.246) (1.838) (0.883) (-0.144) -1.038 (1.034)

Adj R<sup>2</sup> = .058, R<sup>2</sup> = .196 = 19.6%, f<sub>cal</sub> = 1.424, f<sub>tab</sub> = 1.960.

From the regression result, a one naira increase in the inflow of fdi to mining & quarrying increases the growth rate of gross domestic product by ₦0.022billion naira, fdi inflow to manufacturing & processing increases gdpr by ₦0.044billion, that of agriculture& fisheries increases gdpr by ₦.234billion and fdi inflow to trading& business recorded improvements in air travels, rail transportation, MTN, Airtel, Glo, Etisalat and Visafone communication businesses to the tune of ₦0.020 billion An inverse relationship also exists among the inflows of fdi to transport & communication, building & construction and growth rate of gross domestic product. The implication here is that the inflows were not directed at improving the growth rate of gross domestic product (gdpr) in the economy (i.e. the domestic market). In any case, inflows of fdi to mining & quarrying, manufacturing & processing, agriculture & forestry, trading & business boosted the gdpr because they were positively and directly related. Only the inflow of fdi to mining & quarrying impacted significantly on gdpr.

## V. SUMMARY, RECOMMENDATIONS AND CONCLUSION

This study is focused on the distribution effects of fdi on the performance of the Nigerian economy with emphasis on the real sector. Literature had been reviewed after the introduction and research, methodology presented. From the analysis and discoveries made, the following recommendations were made that:

- i. The inflows of fdi to the real subsectors of the economy should be directed at productive purposes.
- ii. When productive machineries are efficiently utilized, end products should be channelled to end users so that the impact could be felt in the entire economy. Otherwise, production capacity would be high, higher volumes of export recorded and high gross domestic product recorded, but the poor become poorer and poorer on daily basis.
- iii. Inflows of fdi to manufacturing & processing should be encouraged as this would lead to efficient and effective utilization of productive machineries and

subsequent rise in goods and services produced for domestic and international consumptions.

- iv. Also, very little fdi are directed at agriculture & fishery, trading business, that of mining & quarrying are diminishing, that is the reason for the inverse relationship among them and export volume. Foreign direct investors should be encouraged to explore these areas because for instance, Nigeria is blessed with substantial mineral ores and agricultural products apart from crude products.
- v. Foreign investment in transport & communication should be directed at productive purposes to boost the growth rate of gross domestic products, in Nigeria.
- vi. Since mining & quarrying are beginning to witness diminishing returns especially on crude products, fdi should be redirected to building & construction, transport & communication, agriculture & fisheries, trading & business among other less attractive subsectors.

Foreign investments have promoted the growth and development of many recipient economies that have put such investment to efficient and productive purpose. If the foreign direct investment is not directed at sectors that are in need and even when directed, the end products are not put to productive usage or directed at end users or domestic market, the impact of such investments would not be felt in the economy. But if recipient economies direct fdi into efficient and effective productive usage, the growth and development of the real sector and the economy at large would be sporadic.

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## APPENDIX A

Regression Result for FDI inflows and Capacity Utilization rate in Nigeria, 1970-2013 Variables Entered/Removed

Model	Variables	Variables	Method
1	LogFDltb, LogFDlaf, LogFDltc, LogFDlbc, LogFDlmo, LogFDlmp <sup>a</sup>		Enter

a. All Requested variables entered.

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of The Estimate
1	.747 <sup>a</sup>	.558	.437	.24414

a. Predictors: (Constant), LogFDltb, LogFDlaf, LogFDltc, LogFDlbc, LogFDlmo, LogFDlmp

### ANOVA<sup>b</sup>

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	1.655	6	.276	4.627	.003 <sup>a</sup>
Residual	1.311	22	.060		
Total	2.966	28			

a. Predictors: (constant), LogFDltb, LogFDlaf, LogFDltc, LogFDlbc, LogFDlmo, LogFDlmp

b. Dependent Variable: LogCur

### Coefficients<sup>a</sup>

Model	Unstandardized Coefficient		Standardized Coefficient		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	4.272	1.541		2.772	.011
LogFDlmc	.195	.145	.378	1.351	.190
LogFDlmp	-.467	.349	.449	-1.338	.195
LogFDlaf	.137	.113	.243	1.215	.237
LogFDltc	.425	.154	.674	2.763	.011
LogFDlbc	.081	.086	.229	.949	.353
LogFDl	.147	.091	.407	1.618	.120

a. *Dependent Variable: LogCur*

## APPENDIX B

### Regression Result for FDI inflows and Exports Volumes in Nigeria, 1970 – 2013 Variables Entered/Removed

Model	Variables	Variables	Method
1	LogFDltb, LogFDlaf, LogFDltc, LogFDlbc, LogFDlmo, LogFDlmp <sup>a</sup>		Enter

a. All Requested variables entered.

## Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of The Estimate
1	.809 <sup>a</sup>	.654	.578	1.27865

Predictors: (Constant), LogFDltb, LogFDlaf,  
LogFDltc, LogFDlbc, LogFDlmo, LogFDlmp

## ANOVA<sup>b</sup>

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	83.587	6	13.931	8.521	.000 <sup>a</sup>
Residual	44.143	27	1.635		
Total	127.730	33			

a. Predictors: (constant),  $\text{LogFDltb}$ ,  $\text{LogFDlaf}$ ,  $\text{LogFDltc}$ ,  $\text{LogFDlbc}$ ,  $\text{LogFDlmo}$ ,  $\text{LogFDlmp}$

b. *Dependent Variable: LogExV*

### Coefficients<sup>a</sup>

Model	Unstandardized Coefficient		Standardized Coefficient		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	11.862	7.126		1.665	.108
LogFDlmc	-1.157	.657	-.379	-1.762	.089
LogFDlmp	1.462	1.627	.227	.899	.377
LogFDlaf	-1.622	.553	-.494	-2.935	.007
LogFDltc	-.823	.742	-.204	-1.109	.277
LogFDlbc	.262	.395	.117	.663	.513
LogFDlt	-2.022	.411	.861	-4.924	.000

a. *Dependent Variable: LogExV*

## APPENDIX C

Regression Result for FDI inflows and Growth rate of Gross Domestic Product (GDPr) in Nigeria, 1970 – 2013  
Variables Entered/Removed

Model	Variables	Variables	Method
1	LogFDltb, LogFDlaf, LogFDltc, LogFDlbc <sup>a</sup> , LogFDlmo, LogFDlmp <sup>a</sup>		Enter

a. All Requested variables entered.

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of The Estimate
1	.443 <sup>a</sup>	.196	.058	1.00702

a. Predictors: (Constant), FDltb, FDlaf, FDltc, FDlbc, FDlmo, FDlmp

### ANOVA<sup>b</sup>

Model	Sum of Squares	Df	Mean Square	F	Sig.
1. Regression	8.665	6	1.444	1.424	.233 <sup>a</sup>
Residual	35.493	35	1.014		
Total	44.159	41			

a. Predictors: (constant), FDltb, FDlaf, FDltc, FDlbc, FDlmo, FDlmp

b. Dependent Variable: LogGDPr

### Coefficients<sup>a</sup>

Model	Unstandardized Coefficient		Standardized Coefficients			
	B	Std. Error		Beta	t	Sig.
1 (Constant)	.549	.764			.719	.477
FDlmo	.022	.010	.403		2.246	.031
FDlmp	.044	.024	.549		1.838	.075
FDlaf	.234	.265	.252		.883	.383
FDltc	-.011	.078	-.034		-.144	.886
FDlbc	-.141	.136	-.422		-.1.038	.307
FDlt	.020	.019	.221		1.034	.308

a. Dependent Variable: LogGDPr

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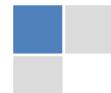
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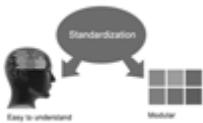




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3. Submission of Manuscripts,
4. Manuscript's Category,
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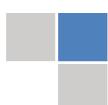
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**20. Use good quality grammar:** Always use a good quality grammar and use words that will throw positive impact on evaluator. Use of good quality grammar does not mean to use tough words, that for each word the evaluator has to go through dictionary. Do not start sentence with a conjunction. Do not fragment sentences. Eliminate one-word sentences. Ignore passive voice. Do not ever use a big word when a diminutive one would suffice. Verbs have to be in agreement with their subjects. Prepositions are not expressions to finish sentences with. It is incorrect to ever divide an infinitive. Avoid clichés like the disease. Also, always shun irritating alliteration. Use language that is simple and straight forward. put together a neat summary.

**21. 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 to your topic. You may also maintain your arguments with records.

**22. Never start in last minute:** Always start at right time and give enough time to research work. Leaving everything to the last minute will degrade your paper and spoil your work.

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

**24. Never copy others' work:** Never copy others' work and give it your name because if evaluator has seen it anywhere you will be in trouble.

**25. Take proper rest and food:** No matter how many hours you spend for your research activity, if you are not taking care of your health then all your efforts will be in vain. For a quality research, study is must, and this can be done by taking proper rest and food.

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



**27. Refresh your mind after intervals:** Try to give rest to your mind by listening to soft music or by sleeping in intervals. This will also improve your memory.

**28. Make colleagues:** Always try to make colleagues. No matter how sharper or intelligent you are, if you make colleagues you can have several ideas, which will be helpful for your research.

**29. Think technically:** Always think technically. If anything happens, then search its reasons, its benefits, and demerits.

**30. Think and then print:** When you will go to print your paper, notice that tables are not be split, headings are not detached from their descriptions, and page sequence is maintained.

**31. Adding unnecessary information:** Do not add unnecessary information, like, I have used MS Excel to draw graph. Do not add irrelevant and inappropriate material. These all will create superfluous. Foreign terminology and phrases are not apropos. One should NEVER take a broad view. Analogy in script is like feathers on a snake. Not at all use a large word when a very small one would be sufficient. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Amplification is a billion times of inferior quality than sarcasm.

**32. Never oversimplify everything:** To add material in your research paper, never go for oversimplification. This will definitely irritate the evaluator. Be more or less specific. Also too, by no means, ever use rhythmic redundancies. Contractions aren't essential and shouldn't be there used. Comparisons are as terrible as clichés. Give up ampersands and abbreviations, and so on. Remove commas, that are, not necessary. Parenthetical words however should be together with this in commas. Understatement is all the time the complete best way to put onward earth-shaking thoughts. Give a detailed literary review.

**33. Report concluded results:** Use concluded results. From raw data, filter the results and then conclude your studies based on measurements and observations taken. Significant figures and appropriate number of decimal places should be used. Parenthetical remarks are prohibitive. Proofread carefully at final stage. In the end give outline to your arguments. Spot out perspectives of further study of this subject. Justify your conclusion by at the bottom of them with sufficient justifications and examples.

**34. After 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 to 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 in 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 criterion for grading the final paper by peer-reviewers.

### Final Points:

A purpose of organizing a research paper is to let people to interpret your effort selectively. The journal requires the following sections, submitted in the order listed, each section to start on a new page.

The introduction will be compiled from reference matter and will reflect the design processes or outline of basis that direct you to make study. As you will carry out the process of study, the method and process section will be constructed as like that. The result segment will show related statistics in nearly sequential order and will direct the reviewers next to the similar intellectual paths throughout the data that you took to carry out your study. The discussion section will provide understanding of the data and projections as to the implication of the results. The use of good quality references all through the paper will give the effort trustworthiness by representing an alertness of 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 the 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 evade

- Insertion a title at the foot of a page with the subsequent text on the next page
- Separating a table/chart or figure - impound each figure/table to a single page
- Submitting a manuscript with pages out of sequence

In every sections of your document

- Use standard writing style including articles ("a", "the," etc.)
- Keep on paying attention on the research topic of the paper
- Use paragraphs to split each significant point (excluding for the abstract)
- Align the primary line of each section
- Present your points in sound order
- Use present tense to report well accepted
- Use past tense to describe specific results
- Shun familiar wording, don't address the reviewer directly, and don't use slang, slang language, or superlatives
- Shun use of extra pictures - include only those figures essential to presenting results

#### **Title Page:**

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



**Abstract:**

The summary should be two hundred words or less. It should briefly and clearly explain the key findings reported in the manuscript--must have precise statistics. It should not have abnormal acronyms or abbreviations. It should be logical in itself. Shun citing 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 approach 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. Yet, use comprehensive sentences and do not let go readability for briefness. You can maintain it succinct by phrasing sentences so that they provide more than 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 maintain the initial two items to no more than one ruling each.

- Reason of the study - 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 quantitative data; results of any numerical analysis should be reported
- Significant conclusions or questions that track from the research(es)

**Approach:**

- Single section, and succinct
- As a outline of job done, it is always written in past tense
- A conceptual should situate on its own, and not submit to any other part of the paper such as a form or table
- Center on shortening results - bound background information to a verdict or two, if completely necessary
- What you account in an conceptual must be regular with what you reported in the manuscript
- Exact spelling, clearness 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 to comprehend and calculate the purpose of your study without having to submit to other works. The basis for the study should be offered. Give most important references but shun difficult to make a comprehensive appraisal of the topic. In the introduction, describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will have no attention in your result. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here. Following approach can create a valuable beginning:

- Explain the value (significance) of the study
- Shield the model - why did you employ this particular system or method? What is its compensation? You strength remark on its appropriateness from a abstract point of vision as well as point out sensible reasons for using it.
- Present a justification. Status your particular theory (es) or aim(s), and describe the logic that led you to choose them.
- Very for a short time explain the tentative propose and how it skilled the declared objectives.

**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 with every section. If you make the four points listed above, you will need a least of four paragraphs.



- Present surroundings information only as desirable in order hold up a situation. The reviewer does not desire to read the whole thing you know about a topic.
- Shape the theory/purpose specifically - do not take a broad view.
- As always, give awareness to spelling, simplicity and correctness of sentences and phrases.

#### **Procedures (Methods and Materials):**

This part is supposed to be the easiest to carve if you have good skills. A sound written Procedures segment allows a capable scientist to replacement your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt for the least amount of information that would permit another capable scientist to spare your outcome but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section. When a technique is used that has been well described in another object, mention the specific item describing a way but draw the basic principle while stating the situation. The purpose is to text all particular resources and broad procedures, so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step by step report of the whole thing you did, nor is a methods section a set of orders.

#### Materials:

- Explain materials individually only if the study is so complex that it saves liberty this way.
- Embrace particular materials, and any tools or provisions that are not frequently found in laboratories.
- Do not take in frequently found.
- If use of a definite type of tools.
- Materials may be reported in a part section or else they may be recognized along with your measures.

#### Methods:

- Report the method (not 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 - details how procedures were completed not how they were exclusively performed on a particular day.
- If well known procedures were used, account the procedure by name, possibly with reference, and that's all.

#### Approach:

- It is embarrassed or not possible to use vigorous voice when documenting methods with no using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result when script up the methods most authors use third person passive voice.
- Use standard style in this and in every other part of the paper - avoid familiar lists, and use full sentences.

#### What to keep away from

- 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.

#### **Results:**

The principle of a results segment is to present and demonstrate your conclusion. Create this part a 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. Carry on to be to the point, by means of statistics and tables, if suitable, to present consequences most efficiently. You must obviously differentiate material that would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matter should not be submitted at all except requested by the instructor.



## Content

- Sum up your conclusion in text and demonstrate them, if suitable, with figures and tables.
- In manuscript, explain each of your consequences, point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation an exacting study.
- Explain results of control experiments and comprise remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or in manuscript form.

### What to stay away from

- Do not discuss or infer your outcome, report surroundings information, or try to explain anything.
- Not at all, take in raw data or intermediate calculations in a research manuscript.
- Do not present the similar data more than once.
- Manuscript should complement any figures or tables, not duplicate the identical information.
- Never confuse figures with tables - there is a difference.

### Approach

- As forever, use past tense when you submit to your results, and put the whole thing in a reasonable order.
- 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 part.

### Figures and tables

- If you put figures and tables at the end of the details, make certain that they are visibly distinguished from any attach appendix materials, such as raw facts
- Despite of position, each figure must be numbered one after the other and complete with subtitle
- In spite of position, each table must be titled, numbered one after the other and complete with heading
- All figure and table must be adequately complete that it could situate on its own, divide from text

### Discussion:

The Discussion is expected the trickiest segment to write and describe. A lot of papers submitted for journal are discarded based on problems with the Discussion. There is no head of state for how long a argument should be. Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implication of the study. The purpose here is to offer an understanding of your results and hold up for all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of result should be visibly described. 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 with prospect, and let it drop at that.

- Make a decision if each premise is supported, discarded, or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."
- Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work
- You may propose future guidelines, such as how the experiment might be personalized to accomplish a new idea.
- Give details all of your remarks as much as possible, focus on mechanisms.
- Make a decision if the tentative design sufficiently addressed the theory, and whether or not it was correctly restricted.
- Try to present substitute explanations if sensible alternatives be present.
- One 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 available information
- Submit to work done by specific persons (including you) in past tense.
- Submit to generally acknowledged facts and main beliefs in present tense.



## THE ADMINISTRATION RULES

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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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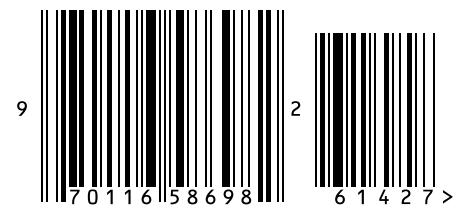


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ISSN 9755853

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