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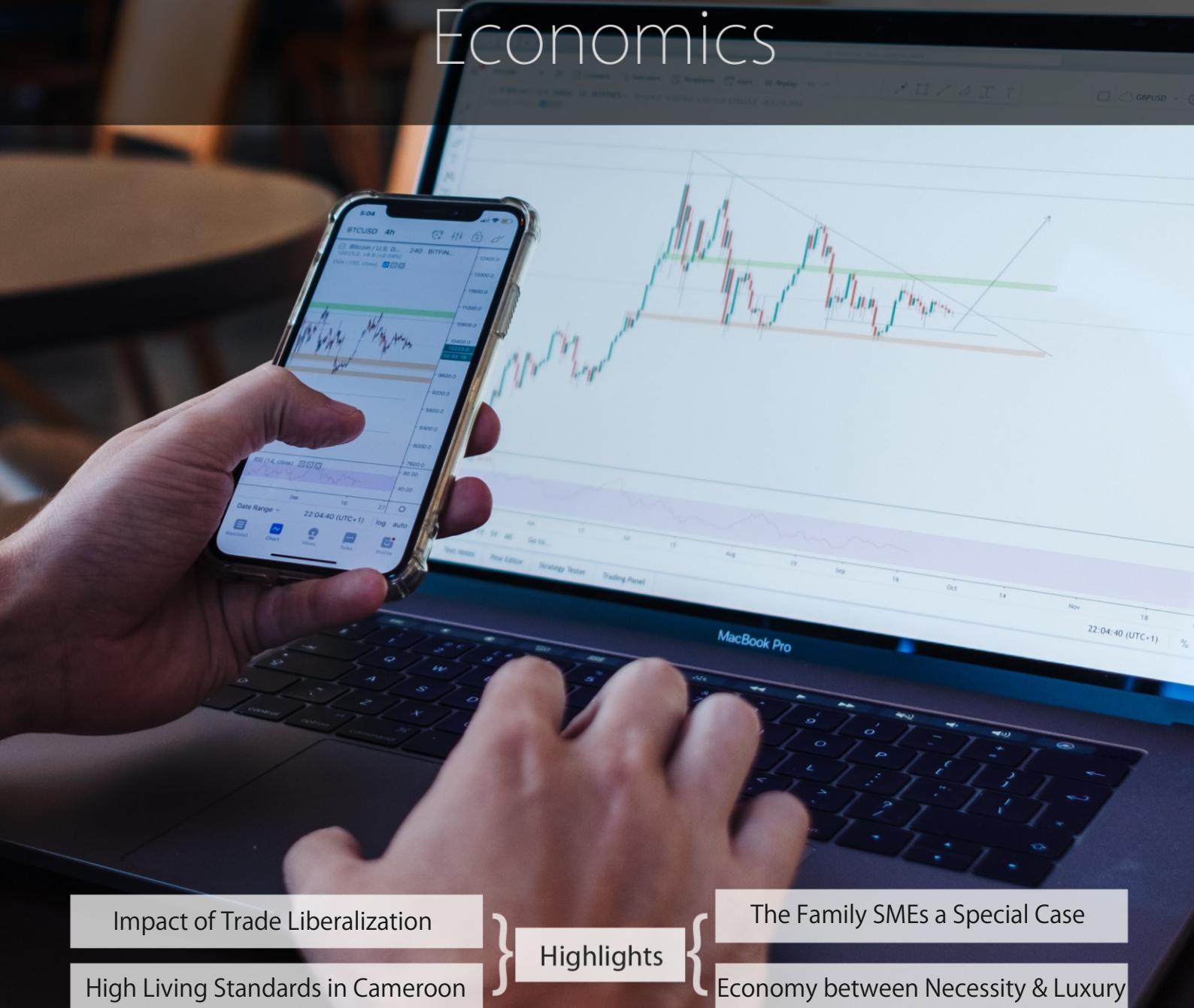
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Corporate Governance and Financial Performance: The Family SMEs a Special Case

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Abstract- This paper aims to present the results of a survey on the impact of internal governance, particularly ownership structure on financial performance. Using a multiple regression analysis on data collected from 190 Moroccan family-owned SMEs, we will study this relationship under different aspects, namely: the ownership of the manager, the concentration of capital and the nature of the shareholding. After conducting tests on the relationship between ownership structure variables and the financial performance of family SMEs, we were able to raise some results that underlie this research. The first is that managerial ownership has a positive effect on financial performance, which confirms the convergence of interests thesis supported by Jensen and Meckling. Similarly, we find the effective existence of a non-linear relationship between managerial ownership and financial performance. The second result is consistent with the neutrality thesis of Demsetz and Lehn who showed that ownership concentration has no effect on firm value. And as for the nature of the shareholding, a positive and non-significant association between the percentage of capital held by members outside the family and financial performance was clearly demonstrated.

Keywords: « family business »; « SME »; « ownership structure »; « financial performance ».

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Corporate Governance and Financial Performance: The Family SMEs a Special Case

Gouvernance D'entreprise Et Performance Financière: La PME Familiale Un Cas Particulier

Abdellah Tajer [α], Sanae Benyaich [σ], Hiba El Majhed [ρ] & Sidi Mohamed Rigar [ω]

Résumé- Ce papier vise à présenter les résultats d'une enquête sur l'impact de la gouvernance interne, notamment la structure de propriété sur la performance financière. En utilisant une analyse de régression multiple sur des données recueillies auprès de 190 PME familiales marocaines, nous étudierons cette relation sous différents aspects à savoir : la propriété du dirigeant, la concentration du capital et la nature de l'actionnariat. Après avoir effectué les tests relatifs à la relation entre les variables de la structure de propriété et la performance financière des PME familiales, nous avons pu soulever des résultats qui sous-tendent cette recherche. Le premier importe que la propriété managériale a un effet positif sur la performance financière, ce qui confirme la thèse de convergence d'intérêts soutenue par Jensen et Meckling. De même, nous constatons l'existence effective d'une relation non linéaire entre la propriété managériale et la performance financière. Le deuxième résultat rejoint la thèse de neutralité de Demsetz et Lehn qui ont montré que la concentration de l'actionnariat n'a aucun effet sur la valeur de l'entreprise. Et quant à la nature de l'actionnariat, une association positive et non significative a été clairement démontré entre le pourcentage du capital détenu par les membres externes à la famille et la performance financière.

Motsclés : «entreprise familiale » ; « PME » ; «structure de propriété » ; « performance financière ».

Abstract- This paper aims to present the results of a survey on the impact of internal governance, particularly ownership structure on financial performance. Using a multiple regression analysis on data collected from 190 Moroccan family-owned SMEs, we will study this relationship under different aspects, namely: the ownership of the manager, the concentration of capital and the nature of the shareholding. After conducting tests on the relationship between ownership structure variables and the financial performance of family SMEs, we were able to raise some results that underlie this research. The first is that managerial ownership has a positive effect on financial performance, which confirms the convergence of interests thesis supported by Jensen and Meckling. Similarly, we find the effective existence of a non-linear relationship between managerial ownership and financial performance. The second result is consistent with the neutrality thesis of Demsetz and Lehn who showed that ownership concentration has no effect on firm value. And as for the nature of the shareholding, a positive and non-significant association between the percentage of capital held by members outside the family and financial performance was clearly demonstrated.

Keywords: « family business »; « SME »; « ownership structure »; «financial performance ».

Introduction

L a gouvernance d'entreprise *(corporate governance)* est apparue au cours des années quatre-vingt en raison de plusieurs scandales financiers survenus dans les pays développés. En effet, l'objectif attribué à la gouvernance d'entreprise est d'étudier les systèmes qui stabilisent les pouvoirs décisionnels des managers et la relation de ces derniers avec les différentes parties prenantes de l'entreprise « *stakeholders* » (Charreaux, 1998).

Également, plusieurs travaux de recherche ont examiné la relation entre les facteurs de gouvernance et la performance de l'entreprise visant à reformuler des recommandations en la matière, afin d'établir des mécanismes de gouvernance qui permettent d'assurer la pérennité et la performance de l'entreprise (Kenyon-Rouvinez et Ward, 2004 ; Miguel et *al*., 2004 ; Black et Kim, 2006, Siebels, 2012 ; Godfred, 2015 ; Bauman, 2016 ; Loulid et El khou, 2020).

Au sens de Johnson et *al.,* (2000), la faiblesse du système de gouvernance a aggravé la crise asiatique de 1997, ce qui justifie le rôle crucial du gouvernement d'entreprise pour la performance des entreprises (Godfred, 2015). Dans le même ordre d'idée, Spanos (2005) suggère que la gouvernance d'entreprise a des implications importantes sur les perspectives de croissance d'une économie, en raison des pratiques appropriées qui affaiblissent les risques pour les investisseurs, attirent les capitaux d'investissement et améliorent la performance des entreprises (Spanos, 2005).

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Par conséquent, en dépit de l'importance de la gouvernance pour la performance des entreprises, les travaux qui traitent la question menée au contexte des PME reste peu exploré (familiales et /ou non familiales) (Handler, 1989). Or, une minorité ont examiné la relation entre les facteurs de gouvernance et la performance des petites et moyennes entreprises (PME), et représentent en effet, empiriquement la grande majorité des entreprises familiales (Laporta, 1999 ; Faccio et Lasfer, 2000 ; Anderson et Reeb, 2003 ; Corbetta et *al.,* 2004 ; Salloum et *al.,* 2019).

Le nombre limité des études sur l'effet des facteurs de gouvernance d'entreprise sur la performance des PME familiales est surprenant, étant donné que ces entreprises sont le pilier du développement économique dans la plupart des pays du monde. Elles occupent un rôle crucial dans le développement et la croissance, en matière de création de la richesse et d'emplois (Kenyon-Rouvinez et Ward, 2004 ; Spanos, 2005 ; Kim, 2015 ; Aku Valtakoski, Lars Witell, 2018).

A cet égard, les recherches sur les PME familiales ont soulevé l'intérêt de plusieurs chercheurs de différents horizons, notamment les ressources humaines, l'économie, la sociologie et la gestion (Duncan et Moores, 2014 ; Bentebbaa, 2014 ; Colot et Croquet, 2015; Samara et Berbegal-Mirabent, 2018 ; Glowka et *al.,* 2020 ; Sadqi et Berbou, 2020). Selon Anderson et Reeb (2003), les entreprises familiales sont des entités gérées et contrôlées par des familles fondatrices. Elles sont largement diversifiées et représentent la forme la plus répandue dans la plupart des pays du monde (Salloum et *al.,* 2019).

De plus, la relation entre la gouvernance d'entreprise et la performance peut différer entre les grandes entreprises et les PME familiales. Ceci dit que, la structure de l'actionnariat renvoie au fait qu'elles ne bénéficient aucunement d'un système détaillé de gouvernance d'entreprise. Chose que l'on trouve généralement dans les grandes entreprises (Dasilas et Papasyriopoulos, 2015). Pour fin de protéger les intérêts des actionnaires contre les détournements de la direction. Selon Uhlaner et *al.,* (2007) les problèmes d'agence dans les PME familiales sont minimes, étant donné que leur gestion est principalement entre les mains des actionnaires.

En effet, traiter la question d'une séparation entre la fonction de contrôle et de propriété sera un atout dans les PME familiales. Les acteurs qui exercent le contrôle de l'organisation détiennent généralement des actions de la firme. De cette manière, en dépit de la place qu'occupe les actionnaires, ils assurent un contrôle sur l'entreprise puisqu'ils détiennent une partie importante du capital. Selon Denis et McConnell (2003), « *la structure de propriété (l'identité des actionnaires et* les parts détenues par ces derniers) est un élément important de la gouvernance d'entreprise* ».

Par conséquent, la littérature actuelle exerce une pression sur les entreprises familiales afin d'adopter une structure de gouvernance caractérisée par une séparation rigoureuse des pouvoirs et qui met l'accent sur le contrôle et l'autonomie du conseil d'administration (Dasilas et Papasyriopoulos, 2015). De nombreux chercheurs affirment qu'une telle structure permettrait à ces entreprises d'assurer une gouvernance efficace tout en réduisant les coûts d'agences (Argandona, 2014; Bauman, 2016).

A notre sens, la gouvernance des PME familiales mérite toute notre réflexion, en raison de ce qu'elle offre comme potentiel d'étude. D'ailleurs, Depret et Hamdouch (2005), «*la question de la gouvernance des petites et moyennes entreprises (PME) ne doit pas être mise de côté* ». Ainsi, la rareté des études qui ont examiné la relation entre les facteurs de gouvernance et la performance des PME familiales nous a incités à relancer le débat sur cette problématique. De plus, ce type d'entreprise est le plus dominant sur le marché marocain et pourtant peu étudié (Messaoudi, 2012 ; Bedouk, 2013 ; Bentebbaa, 2014 ; Lkhoyaali, 2015, Tajer et *al.,* 2021). Ce constat nous a permis de formuler notre problématique pour ce travail de recherche ainsi : «*Quelle relation entre la structure de propriété et la performance financière des PME familiales ?* »

Nous rappelons de prime à bord, que l'objectif de ce travail de recherche est celui d'examiner empiriquement l'effet de la structure de propriété sur la performance financière dans un contexte particulier ; celui des PME familiales, en se basant sur un échantillon de 190 PME familiale. Nous contrôlons dans un deuxième temps, les caractéristiques spécifiques de l'entreprise y compris l'âge, la taille, le chiffre d'affaires.

Afin de réponde à notre problématique, nous avons structuré notre article en trois parties. Après une introduction du contexte générale et l'objectif de l'étude, la revue de littérature et les hypothèses de recherche seront par la suite exposées, elles traitent en effet la relation entre la structure de propriété et la performance de l'entreprise. Ensuite, nous présentons la méthodologie de recherche adoptée, la méthode de collecte des données, ainsi que la description de l'échantillon de notre étude. En définitive, nous exposons les résultats et les conclusions de ce travail de recherche.

I. Cadre Théorique

L'étude adopte un cadre théorique multithéorique afin d'expliquer l'impact de la structure de propriété sur la performance financière des PME familiales. En effet, la théorie de l'agence (Jensen et Meckling, 1976) et la théorie de l'intendance (Davis et

al., 1997) fournissent un aperçu sur la relation entre la gouvernance et la performance au sein des entreprises familiales (Shukla, Carney et Gedajlovic, 2014 ; Hiebl, 2019).

Cependant, la théorie de l'agence a été introduite pour la première fois par Berle et Means (1932) ; cette théorie explique la nécessité de séparer la fonction de propriété et de contrôle au sein de l'entreprise. De ce fait, la gouvernance de l'entreprise offre comme potentiel, une solution pour résoudre les conflits d'intérêts entre les dirigeants et les actionnaires. De ce, plusieurs chercheurs suggèrent que les mécanismes de gouvernance, notamment, le conseil d'administration, la rémunération incitative et des activités de contrôle peuvent servir leurs objectifs théoriques au sein des entreprises familiales (Anderson et Reeb, 2004 ; Moores, 2009 ; Block, 2012).

Les travaux des chercheurs sur les entreprises familiales ont donné un aperçu sur le comportement, la gouvernance et le rendement des entreprises familiales à la lumière des théories de l'agence et de l'intendance, et ont élargi les limites théoriques grâce à des examens dans ce contexte spécifique (Schulze et *al.,* 2003; Corbetta et Salvato, 2004 ; Villalonga et Amit, 2006; Shukla et *al.,* 2014).

À l'origine, les problèmes d'agence résultant de la séparation du droit de propriété et du pouvoir de contrôle n'étaient pas prévus dans les entreprises familiales en raison de l'interaction entre les intérêts de la famille et ceux de l'entreprise, ainsi que l'implication des membres de la famille dans les fonctions de gestion et de contrôle ; ce qui a donné lieu à un environnement présumé dont les intérêts sont alignés et la surveillance est inutile (Zahra, 2005 ; Madison et *al.,* 2015 ; Chrisman et *al.,* 2018).

Depuis cette réflexion, les spécialistes des entreprises familiales ont élargi les limites théoriques en mettant en évidence de nouveaux problèmes d'agence, notamment, ceux liés à l'absence de la séparation entre les fonctions de propriété et de décision, ou ceux qui découlent de la relation entre la famille et les actionnaires minoritaires non familiaux. En outre, d'autres travaux ont négligés d'autre limites, y compris les problèmes d'agence non traditionnels, tels que l'altruisme asymétrique et l'enracinement opportuniste ou illégitime (Schulze et *al.,* 2003a ; Schulze, Lubatkin, et Dino, 2003b ; Moores, 2009 ; Block, 2012).

De ce sens, Braun et Sharma (2007) considèrent à leur tour que « *dans les entreprises familiales, les coûts d'agence ne surviennent pas de l'opportunisme des dirigeants, résultat de l'absence de séparation du droit de propriété et du pouvoir de contrôle* ».

D'autres recherches ont introduit de nouveaux conflits d'intérêts, notamment ceux qui ont découlé de la relation entre la famille et les actionnaires minoritaires non familiaux. Ce type de coûts d'agence se produit souvent lorsque les actionnaires majoritaires abusent de leur pouvoir pour profiter des activités de l'entreprise au détriment des intérêts des actionnaires minoritaires (Villalonga et Amit, 2006 ; Ali et *al.,* 2007 ; Chrisman et *al.,* 2018). En somme, ces travaux de recherche ont permis de repousser les limites traditionnelles, afin d'introduire la théorie de l'agence comme un cadre pertinent d'analyse dans le contexte des entreprises familiales (Madison et *al.,* 2015).

La théorie de l'intendance quant à elle, a été développée dans sa version originelle pour étudier les situations dans lesquelles les dirigeants ne sont pas motivés par leurs objectifs personnels, mais plutôt par la maximisation de la valeur de l'entreprise. Également, cette théorie suggère que les agents considèrent que l'utilité qu'ils peuvent tirer d'un comportement pro-organisationnel est plus grande que leur utilité individuelle (Davis et *al.,* 1997).

Plus particulièrement, la théorie de l'intendance montre que la satisfaction des actionnaires à l'égard de la réalisation de bonnes performances conduira par la suite à des niveaux de satisfaction plus élevés envers ses dirigeants. Par conséquent, une bonne performance de l'entreprise est considérée comme un moyen d'atteindre la satisfaction des actionnaires et des dirigeants, car les intérêts des gérants et des actionnaires sont simultanément maximisés (Davis et *al.,* 1997).

De plus, le comportement de l'intendant permet de réduire les conflits relationnels au sein de l'entreprise familiale et augmenter par conséquent le niveau de collaboration, d'harmonie et de partage des connaissances entre les employés et les membres de la famille. Ces pratiques permettent aux entreprises familiales de développer une importante source d'avantage concurrentielle par rapport à leurs homologues non familiales (Corbetta et Salvato, 2004 ; Eddleston et Kellermanns, 2007).

Ainsi, l'application de la théorie de l'intendance permet de conclure que les relations au sein de l'entreprise familiale sont dominées par un altruisme réciproque et une stratégie participative (Corbetta et Salvato, 2004). En raison de leur attachement émotionnel et social à l'entreprise, les membres de la famille pratiquent l'autocontrôle et examinent attentivement les conséquences de leurs actions sur l'entreprise (Eddleston et Kellermanns 2007).

Par ailleurs, certaines recherches démontrent que les deux théories diffèrent au niveau de l'ordre de causalité entre la relation de l'agence et de l'intendance. Notamment, Jaskiewicz et Klein (2007) suggèrent à ce propos que l'alignement des objectifs déclenche la gouvernance de l'intendance et qu'un mauvais alignement des objectifs donne lieu à la gouvernance des agences. Pourtant, la gouvernance de l'intendance déclenche le comportement d'intendance du dirigeant et donc que les objectifs s'alignent naturellement; la

gouvernance de l'agence permet de freiner le comportement opportuniste du dirigeant afin de créer un alignement des objectifs entre les parties prenantes (Madison et *al.,* 2015).

En somme, la théorie de l'intendance apporte un nouveau éclairage quant à la manière d'aborder et de gérer les relations dans les organisations. Elle permet d'enrichir la façon d'appréhender les modes de gouvernance dans les entreprises familiales, en abordant différemment le rapport aux risques et en mettant en exergue d'autres enjeux dans les rapports entre individus, en allant bien au-delà des simples considérations économiques. Plus particulièrement, cette vision de l'entreprise familiale suppose que les intérêts des actionnaires devraient être alignés avec ceux du dirigeant, réduisant ainsi les problèmes de divergence d'intérêts, dans la mesure où l'agent va agir dans le sens du principal (Madison et *al.,* 2015).

L'analyse des deux théories montre que la gouvernance des agences et de l'intendance servent leur objectif théorique ; celui de permettre un comportement pro-organisationnel et d'améliorer les performances des entreprises familiales (Shukla, Carney et Gedajlovic, 2014 ; Hiebl, 2019). Bessire et *al.* (2007), considèrent la théorie de l'intendance « *comme une pièce supplémentaire dans le puzzle que constitue le corpus théorique sur la gouvernance des entreprises, une approche qui complète plutôt qu'elle ne contredit la théorie de l'agence* » (cité par Yota R., 2016).

Bien que la littérature traite la gouvernance de l'agence et la gouvernance de l'intendance en opposition, nous constatons que les mécanismes de gouvernances des deux théories remplissent leur fonction en terme de performance des entreprises familiales. De même, l'implication de la famille a le potentiel de créer des environnements de gouvernance d'agence et d'intendance, souvent caractérisés comme étant uniques aux entreprises familiales.

II. Revue de Littérature et Elaboration Des Hypothèses

Les liens existants entre la structure de propriété et la performance étant un thème émergent plus ancien. Historiquement, Adam Smith a considéré que les entreprises à capital diffus se démarquent par le fait qu'elles sont moins performantes par rapport aux entreprises détenues par leurs propriétaires. Tandis que Karl Marx affirmait que les entreprises à capital dispersé se comportent comme les autres ou les dirigeants agissent en tant que fonctionnaires du capital (Louizi, 2013).

Également, la structure de propriété est l'un des mécanismes de gouvernance pouvant affecter la performance de l'entreprise. Elle est dédiée a résoudre les conflits d'intérêts entre les dirigeants et les actionnaires et réduire par la même les coûts d'agence

associés à ce genre de conflits (Ayadi, 2013 ; Bousetta, 2019).

Selon Charreaux (1998), il existe de nos jours trois conceptions principales qui semblent s'affronter quant à la relation entre la structure de propriété et la performance ; « *la convergence d'intérêt, l'enracinement et la neutralité »*. De ce fait, nous examinons dans les prochaines grandes lignes, les différents résultats issus de la revue de littérature relative à la relation entre la structure de propriété *(la propriété managériale, la concentration du capital et la nature de l'actionnariat)* et la performance financière.

a) La propriété managériale

Dans les entreprises managériales, la création de la valeur et l'amélioration de la performance constituent le défi majeur pour tous les dirigeants. Plusieurs recherches ont traité la nature de la relation qui existe entre la propriété managériale et la performance de l'entreprise (Jensen et Meckling, 1976 ; Brailsford, 2002 ; Kim et *al.*, 2004 ; Bousetta, 2019). En effet, les résultats de ces études sont contrariés. Certaines études ont montré que la détention d'une grande partie du capital par le dirigeant améliore la performance de l'entreprise et soutiennent donc la thèse de *convergence des intérêts* de Jensen et Meckling (1976).

En défendant leurs intérêts personnels, les dirigeants iront forcément à l'encontre de l'objectif traditionnel, notamment la maximisation de la richesse des actionnaires. Cela constitue l'une des raisons laquelle Jensen et Meckling (1976) soutiennent l'idée d'accorder au dirigeant une part importante des actions de l'entreprise afin de résoudre les conflits d'intérêts entre les actionnaires et le dirigeant.

Dans la même optique, Kim et *al.* (2004), affirment l'importance particulière de la propriété managériale dans les économies émergentes en prenant en considération le degré élevé d'asymétrie de l'information entre les parties prenantes internes et externes. Ces auteurs ont constaté une relation positive entre les deux variables lorsque le dirigeant possède une part en dessous de 31 % et au-delà de 71 %. Cependant, la relation entre la propriété du dirigeant et la performance est négative lorsque les dirigeants détiennent entre 31 % et 71 %.

D'autres études ont soulevé l'hypothèse d'alignements des intérêts (Denis et Mcconnell, 2003 ; Berger et *al*., 1997 ; Brailsford, 2002 ; Tran Thi, Que Giang, 2005). Le dirigeant qui détient une propriété managériale trop importante devient enraciné et risque d'échapper aux systèmes de contrôle en poursuivant ses propres objectifs au détriment de ceux des actionnaires. Ce genre de relation a forcément un effet négatif sur la performance des entreprises (Shleifer et Vishny, 1998). Dans ce sens, la détention d'actions par les dirigeants peut avoir un impact négatif sur la

performance des entreprises. En effet, une augmentation de la part actionnariale des dirigeants leur donne la possibilité de renforcer leur pouvoir de contrôle, ainsi que défendre leurs propres intérêts au détriment de ceux des actionnaires (Shleifer et Vishny, 1998).

De même, la disposition des dirigeants d'une fraction du capital de l'entreprise peut avoir un effet négatif sur la valeur de la firme ; il s'agit de l'hypothèse de l'enracinement. Par conséquent, Denis et Mcconnell (2003) montrent que *« l'effet de la propriété managériale sur la valeur de la firme dépend de l'arbitrage entre les effets d'alignements et d'enracinement »*.

D'un autre côté, Demsetz (1983) développe un autre courant qui soutient la neutralité. Selon cet auteur, il n'existe aucune relation significative entre la structure de propriété et la performance. En revanche, d'autres chercheurs (Morck et *al.,* 1988 ; Mc Connell et Servaes, 1990) affirment une relation non linéaire entre la propriété managériale et la performance de l'entreprise.

Aux États-Unis le débat concernant le lien entre la propriété managériale et la performance reste encore non résolu. En effet, diverses recherches comme celles de Himmelberg et *al.,* (1999) et Demsetz & Villalonga (2001) affirment quant à eux la propriété du dirigeant est déterminée par la valeur de l'entreprise et non pas le contraire. Également, une étude menée par Krivorsky (2006) sur 87 entreprises européennes au cours de la période 2000 à 2001 montre l'absence de relation significative entre le niveau de la propriété managériale et la rentabilité, mesurée par le rendement des actifs (ROA) et le rendement des capitaux propres (ROE).

Or, Miguel et *al.,* (2004) ont affirmé sur la base d'une étude portée sur un échantillon de 135 entreprises cotées non financières durant la période 1990 à 1999 une relation non linéaire entre la propriété managériale et la performance de l'entreprise en Espagne. Ces chercheurs ont conclus que l'expropriation est de 35 à 70 %, ce qui explique que la propriété est plus concentrée dans les entreprises espagnoles et que le conseil d'administration n'exerce pas exactement sa fonction de contrôle (Miguel, A., Pindado, J., & Torre, C., 2004).

Quant à Huimin et Mak (2002), ont étudié la relation entre la propriété managériale et la performance des sociétés cotées à la bourse (bourse de NEW YORK, AMEX et le NASDAQ) et qui ont des dépenses plus importantes. Ces auteurs ont conclu ; d'une part, le lien entre le Q de Tobin et la propriété managériale est une fonction en W, le Q diminue. D'autre part, l'industrie semble avoir un effet sur la relation entre les deux variables analysées.

Par ailleurs, Chen (2005) a analysé l'effet de la propriété managériale sur la performance de l'entreprise selon le postulat de la théorie d'agence, en se basant sur un modèle à équations simultanées et à la méthode

des moindres carrés. Les résultats de cette étude montrent une relation non linéaire entre la propriété du dirigeant et la performance de la firme.

En se référant à diverses recherches antérieures relatives à la relation entre la propriété managériale et la performance financière, nous pouvons avancer les deux hypothèses suivantes :

H1: la propriété managériale aurait un effet positif sur la performance financière des PME familiales.

H2: Il existe une relation non linéaire entre la propriété managériale et la performance financière des PME familiales.

b) *La concentration de l'actionnariat*

La concentration du capital est un élément indispensable pour que les actionnaires exercent un contrôle pertinent et efficace sur leur dirigeant (Jensen, 1990 ; Bethel, 1993 ; Agrawal, et Knoeber 1996 ; Bethel et *al.,* 1998 ; Gorton et Schmid, 2000 ; Boubaker et El Houcine, 2013).

Pour résoudre les conflits d'intérêts entre les différentes parties prenantes dans une organisation et principalement entre les actionnaires et les managers, Shleifer et Vishny (1997) proposent deux sortes de solutions. La première consiste à faire recours aux textes juridiques pour protéger les actionnaires et les dirigeants, alors que la deuxième réside dans la concentration de l'actionnariat dans une seule main (une seule famille). Cependant, les auteurs recommandent la seconde solution puisque la première est insuffisante pour protéger les investisseurs.

La concentration de l'actionnariat permet donc de soutenir le contrôle exercé par les actionnaires sur les dirigeants dans le cas où l'entreprise réalise de faibles performances. En plus, les actionnaires majoritaires ont le pouvoir de contrôler les dirigeants afin qu'ils prennent de bonnes décisions et par conséquent augmenter la valeur de l'entreprise. Cette situation illustre alors les avantages de l'actionnariat concentré (Tajer et *al.,* 2021). Et comme Denis et Mcconnell (2003) l'avaient montré, la concentration de l'actionnariat constitue une meilleure solution pour résoudre les problèmes de divergences d'intérêts entre les dirigeants et les actionnaires, principalement dans un système où la protection des actionnaires minoritaires est faible (Estley et Megginson, 2003, Tajer et *al.,* 2021).

Les résultats des études empiriques menées sur la relation entre la concentration du capital et la performance (Shleifer et Vishny 1986; Anderson et Jayaraman, 1992 ; Shivdasani, 1993; Bethel et Liebeskind, 1993; Kang et Shivdasani, 1999 ; Agrawal et Knoeber, 1996; Denis et *al,* 1997 ; Nickil et *al.,* 1997; Gorton et Schmid, 2000) expriment une corrélation positive. De Ces études montrent tout de même que, lorsque le capital est détenu par un seul actionnaire

majoritaire, la possibilité de rotation des dirigeants est très élevée lorsque l'entreprise réalise de faibles performances.

De même, Johannisson et Huse (2000) suggèrent que dans les entreprises familiales, les familles propriétaires mettent souvent en valeur leur indépendance et refusent de partager leurs pouvoirs avec les externes. De ce fait, la concentration de la propriété permet à la famille d'exercer leur pouvoir sur l'organisation (Johannisson et Huse, 2000).

Chen (2005) corrobore ces résultats empiriques en examinant ainsi la relation entre la structure de propriété et la performance pour les entreprises chinoises. Les résultats de leur recherche montrent une forte relation positive entre la propriété concentrée et la performance de l'entreprise. Alors qu'en Thaïlande, Wiwattanakantung (2001) examine l'effet de la structure de propriété sur la valeur de la firme pour les entreprises non financières cotées en bourses. Son étude montre que les firmes à actionnariat concentré ont une rentabilité plus élevée par rapport à celle dont l'actionnariat est dispersé.

Toutefois, les actionnaires majoritaires peuvent avoir des actions qui leur permettent de protéger leurs intérêts personnels sans affecter les autres actionnaires. Les actionnaires majoritaires ont une capacité d'avoir une relation étroite avec le manager (Denis et Mcconell, 2003). Ces actionnaires peuvent utiliser leur aptitude en vue de dégager des profits qui font diminuer la performance de l'entreprise.

Selon Denis et Mcconell (2003), *« l'effet de la propriété des actionnaires majoritaires sur la valeur de la firme dépend de l'arbitrage entre la proportion du capital détenue par ces actionnaires et les rentes extraites par ces derniers »*. Également, la concentration de la structure du capital peut engendrer des coûts d'agence supplémentaire à cause de la divergence d'intérêts entre les actionnaires majoritaires et les investisseurs minoritaires (Shleifer & Vishny, 1998).

Aussi, Holderness (2003), a montré l'existence d'une relation négative entre la concentration du capital et la performance de l'entreprise. De ce fait, la propriété concentrée peut nuire les investisseurs minoritaires susceptible de recourir à l'expropriation de leurs fortunes, à travers des alliances stratégiques entre les investisseurs et les dirigeants, et par conséquent maintenir la divergence d'intérêt entre ces derniers (Holderness, 2003 ; Tajer et *al.,* 2021).

Beiner et *al.,* (2004) quant à eux, avançaient des résultats similaires, selon lesquels ils déclarent que la concentration du capital impacte négativement la performance des entreprises suisses. En Europe continentale, Thomsen (2000) a tout de même constaté dans son étude que la concentration de la propriété a un effet négatif sur la performance des entreprises, ce qui n'est pas totalement le cas pour les firmes américaines (Thomsen, 2000).

L'ensemble de ces résultats mettent en évidence l'existence d'un lien significatif (positif ou négatif) entre la concentration de l'actionnariat et la performance des entreprises. Selon Denis et McconelL (2003), *« les études ayant traité de la relation entre la propriété des actionnaires majoritaires et la valeur de la firme montrent qu'une telle relation est parfois négative, dans d'autres cas elle est positive, mais jamais concluante »*. Cependant, d'autres études (Holderness, 2003 ; Agrawal et Knoeber, 1996 ; Gadhoum et Zeghal ; 2000) ont montré l'absence de cette relation entre ces deux variables étudiées. En effet, Demsetz et Lehn (1985) examinent l'effet de la présence d'un actionnaire majoritaire sur la performance. Les résultats montrent que la concentration de l'actionnariat n'exerce aucune influence sur la valeur de l'entreprise.

Gadhoum et Zeghal (2000) ont constaté une faible relation entre la concentration de la propriété et la valeur de la firme. Dans ce sens, Schmid (2003) a mené une étude sur un échantillon de firme suisse, en utilisant une approche basée sur les équations simultanées. Les résultats de cette étude montrent l'absence de relation significative entre la concentration de propriété et la performance des entreprises (Schmid, 2003 ; Bhagat et *al*., 2004).

Aussi, Thomsen et *al.* (2006) ont travaillé sur un échantillon composé de 489 entreprises américaines durant la période 1990 et 1998 afin d'analyser l'effet de la concentration de la propriété sur la valeur de la firme mesurée par le Q de Tobin et le rendement des actifs (ROA). Les chercheurs n'ont déduits aucune relation significative entre la concentration de la propriété et la performance de l'entreprise (Thomsen et *al.,* 2006 ; Rogers et *al.,* 2007).

Toutefois, Vera et Udego (2007), ont mené une étude sur un échantillon composé de 95 entreprises non financières espagnoles cotées en la bourse durant la période 1998 à 2000. Les auteurs ont eu recours au Q de Tobin pour mesurer la performance de la firme. Les résultats empiriques affirment une relation non significative entre la concentration du capital et la performance de l'entreprise.

Par la suite, ils ont mené un deuxième test en utilisant la méthode des doubles moindres carrés. Les résultats confirment que la concentration de la propriété à un effet positif sur la valeur de la firme, alors que la relation inverse n'est pas significative. De même pour les entreprises grecques, Lazarides et *al.* (2009), ont trouvé que la concentration du capital n'a aucun effet significatif sur la valeur de l'entreprise mesurée par le rendement des actifs (ROA) et le Q de Tobin.

D'après les résultats empiriques de l'ensemble de ces études, on ne peut pas conclure que les entreprises à capital concentré sont plus performantes par rapport aux entreprises à capital dispersé. Selon ces auteurs (Holderness, 2003 ; Agrawal et Knoeber, 1996 ; Gadhoum et Zeghal, 2000 ; Bhagat et *al.*, 2004 ;

Thomsen et *al.*, 2006, Rogers et *al.*, 2007; Vera et Udego; 2007) toutes les structures de propriété (concentré ou diffus) sont équivalentes.

En se référant à ces résultats, nous nous permettons de formuler notre troisième hypothèse ainsi :

H3: la concentration du capital aurait un impact négatif sur la performance financière des PME familiales.

c) La nature de l'actionnariat

La question relative à la relation entre la nature de l'actionnariat et la performance de l'entreprise reste à ce jour sans réponse tranchée. Selon la théorie de l'agence, la présence des salariés dans le capital de l'entreprise permet d'aligner les intérêts des différentes parties prenantes. En effet, l'existence de l'actionnariat salarié dans une entreprise permet de réduire les coûts d'agence et favorise la collaboration entre les salariées et les actionnaires (Gamble et *al.,* 2002).

L'actionnariat salarié présente un outil pour répondre aux attentes des salariés comme étant un moyen de motivation au travail et aussi un complément de rémunération, tout en les intégrant dans l'organisation de leur l'entreprise. L'actionnariat salarié constitue tout de même, un moyen d'épargne pour l'entreprise. En distribuant une partie, de la valeur créée sous forme d'action pour leurs salariés. Plusieurs chercheurs (Kruse et Blasi, 2000; Sesil et al., 2001; Kruse ; 2002 ; Nicolas et *al.,* 2016), montrent l'existence d'un lien positif et significatif entre l'existence de l'actionnariat salarié et la performance de l'entreprise.

Selon Autenne (2005), « *l'octroi de rémunération liée à la performance de l'entreprise va inciter les travailleurs à adopter des comportements ayant un impact positif sur cette performance et donc sur le niveau de rémunération* ». Cette possibilité d'offrir aux salariés une part du capital de leur entreprise constitue une reconnaissance du rôle et une compétence exercée. En devenant propriétaires (actionnaires), les salariés prouvent leur degré de confiance sur l'avenir de l'organisation.

Par ailleurs, d'autres recherches se sont intéressées à l'étude de l'impact de la présence des investisseurs institutionnels et financiers sur la performance de l'entreprise (Smith, 1996 ; Morck et *al.,* 1998 ; Sahut et Gharbi, 2010 ; Frederec Hanin, 2012 ; Bughin et Monaco, 2015). En effet, Smith (1996), montre que la présence des actionnaires financiers et institutionnels impacte favorablement la valeur de la firme. Ces actionnaires particuliers peuvent investir dans le contrôle de l'organisation afin de maintenir la rentabilité de leurs investissements. Dans ce sens, Kang et Shivdasani (1999) ont montré que les entreprises affiliées à une banque commerciale ont plus davantage à recruter de nouveaux dirigeants pour remplacer les dirigeants moins performants.

De la part de Duggal et Millar (1999), ces auteurs suggèrent que la présence des institutions financières non bancaire impacte positivement la performance des entreprises. Aussi, Bianco et Casavola (1999) ont affirmé que la fraction du capital détenue par les institutions financières dans les petites entreprises contrôlées par des actionnaires individuels impacte positivement le rendement des investissements.

En revanche, Mcconnell et Servaes (1990) amènent une étude sur un échantillon des entreprises américaines. Ces auteurs ont constaté l'existence d'une relation positive entre la présence des institutions financières et la performance des entreprises. De même, Morck et *al.,* (1998) constatent que dans les firmes non performantes, les banques détiennent une fraction du capital faible. Ce résultat est dû au nombre important des banques qui sont à la fois créanciers et actionnaires (Morck et *al.,* 1998).

Cependant, les actionnaires institutionnels ou financiers disposent des ressources distinctives, leur permettant de contrôler l'entreprise à un coût plus faible par rapport aux autres propriétaires de l'entreprise. Ils détiennent une meilleure connaissance de l'information grâce aux nombres importants des investissements qu'ils réalisent, ce qui implique une maîtrise des performances des entreprises du marché. De plus, une concentration de propriété dans la main des investisseurs étrangers augmente la performance de l'entreprise (Christiane Bughin et Carole Monaco, 2015).

En raison de leur structure spécifique du capital, caractérisée par la faible participation d'autres formes d'actionnariat. Nous nous sommes intéressés dans cette étude à montrer l'effet de la proportion des actionnaires externes à la famille sur la performance financière des PME familiales. Et comme Yermack (1996) l'avait déjà montré, « *la nature simple des activités des PME familiales suggère que leur performance peut impacter par la proportion des actionnaires* ». Notre quatrième hypothèse est donc la suivante :

H4: la présence des actionnaires externes à la famille aurait un effet positif sur la performance financière des PME familiales.

En somme, le modèle suivant résume les différentes hypothèses issues de notre revue de littérature:
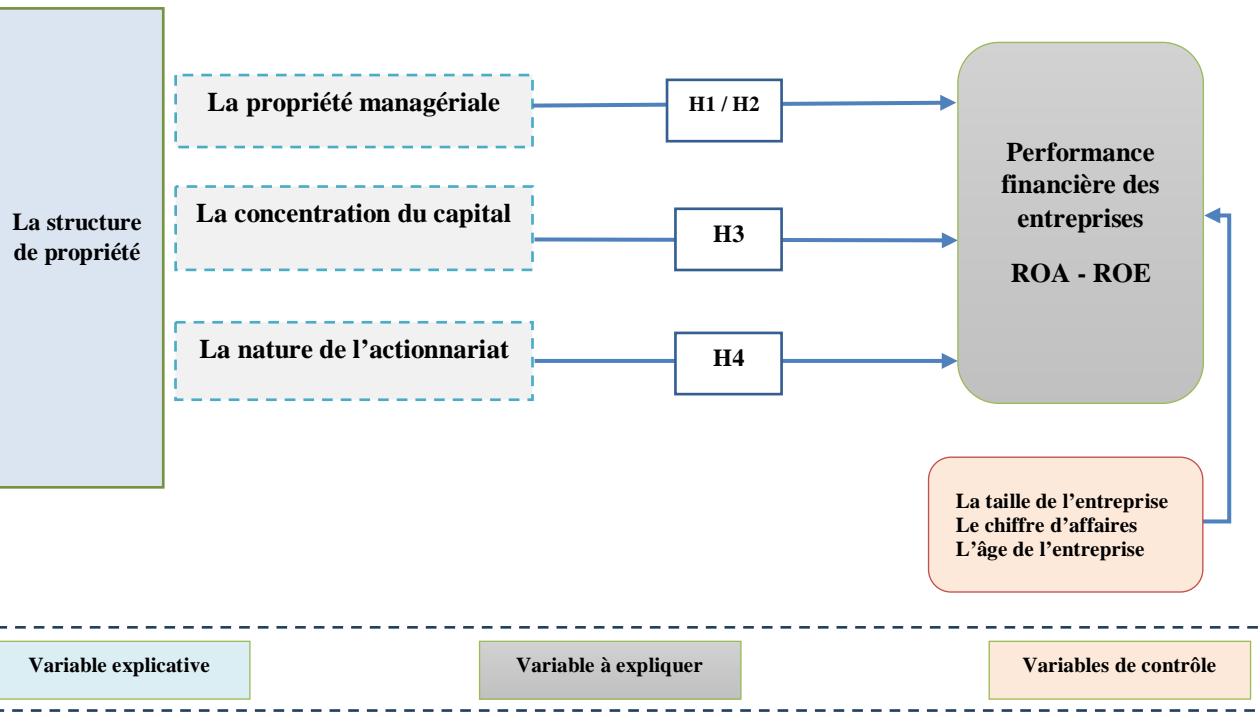
Source: les auteurs

Figure N° 1: le modèle de recherche

III. MÉTHODOLOGIE ET TERRAIN DE RECHERCHE

Afin de répondre empiriquement à notre problématique de recherche, nous nous inscrivons essentiellement dans la tradition philosophique positiviste en suivant une démarche hypothético-déductive. Cette démarche permet de soutenir un jugement sur la pertinence des hypothèses de recherche. La problématique de la recherche quant à elle, est de nature explicative causale, de ce fait, la méthode quantitative s'avère la plus appropriée. Effectivement, les recherches quantitatives déductives permettent d'établir des corrélations de mesure et de confirmer ou d'infirmer les hypothèses du modèle de recherche fixé préalablement, à partir de calcul des faits et d'observations fiables avec une faible marge d'erreur (Hlady Rispal, 2002).

Pour ce faire, une enquête par questionnaire a été menée auprès des PME familiales qui feront l'objet de notre recherche. Ce qui nous a permis de construire un échantillon de 190 observations. Les données recueillies auprès de nos répondants seront traitées par la méthode des moindres carrée ordinaire (régression multiple) à l'aide du logiciel SPSS, afin de tester les hypothèses de notre modèle de recherche.

a) La sélection des PME familiales : objet de notre recherche

Dans le contexte marocain, jusqu'à présent, il n'existe pas de statistiques officielles sur les entreprises familiales. Une majorité des études mondiales dans le domaine n'incluent pas le Maroc (Bentebbaa S., Abdoune R., Louitri A. et Pacitto J., 2014). Ceci peut s'expliqué par l'absence d'une implantation soit d'une grande association ou d'un réseau des entreprises familiales dans le royaume.

De ce fait, nous avons collecté toute une base de données qui contient un ensemble d'informations, notamment les adresses électroniques et les numéros de téléphone, sur la base des données publiées par la société Inforisk[1] sur le site www.charika.ma. Les données recueillies nous ont permis de conduire notre enquête par questionnaire administré électroniquement (par email) aux PME qui feront partie de notre base de données.

De même, nous avons utilisé notre réseau de contacts, afin de sélectionner les participants à note enquête. Compte tenu du critère familial, nous avons mis des questions de filtrage au niveau du questionnaire afin de distinguer les PME familiales et non familiales, pour écarter ces dernières (PME non familiales) par la suite. À cet égard, « *La PME familiale est toute entreprise dont le capital est détenu majoritairement ou intégralement par la famille, avec la participation active des membres de la famille dans l'équipe dirigeante. Et qui réalise également un chiffre d'affaires annuel entre 3*

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[1] La société INFORISK est le spécialiste du renseignement commercial sur les sociétés marocaines. Créer en 2007, son métier est la collecte et la commercialisation d'informations légales, financières, judiciaires...

et 175 millions de Dhs et un effectif permanent de 10 à 200 salariés » (Maroc PME, HCP, 2019).

b) Spécificité du modèle de régression

Afin d'évaluer la relation entre les variables relatives aux pratiques de la gouvernance et la performance financière des PME familiales marocaines, nous utiliserons la méthode des moindres carrés ordinaires (MCO). À cet égard, nous avons procédé à des régressions de la performance financière sur les variables relatives au fonctionnement du conseil d'administration. Nous utilisrons comme variables de contrôle la taille, le chiffre d'affaires et l'âge de l'entreprise. Également, l'absence du facteur temps nous montre que notre modèle à effet fixe est le plus approprié pour notre cas (test d'Hausman). En effet, ce modèle suppose que les erreurs de mesure au niveau des entreprises sont fixes dans le temps (Himmelberg et *al*., 1999). Notre modèle prend donc la forme suivante :

$$\text{Perf} = \text{Cte} + \beta_1 \text{STR} + \beta_2 \text{Cont} + \mu$$

Avec :

Perf : la performance financière mesurée par ROA et ROE

STR : les variables relatives à la structure de propriété

Contr : les variables de contrôle.

Cte : la constate du modèle.

β_1 et β_2 : les paramètres inconnus (à estimer) du modèle.

μ : terme aléatoire (terme résiduel).

c) Choix des indicateurs de mesure

- La structure de propriété

Dans le cadre de ce travail de recherche, nous avons retenu les variables suivantes pour la structure de propriété des PME familiales. De ce fait, nous avons sélectionné 3 variables. D'abord, nous avons retenu la variable (DIR-K) afin de mesurer le pourcentage du capital détenu par le dirigeant. Ensuite, nous avons retenu 5 items pour définir la concentration du capital, à savoir (ACT1), (ACT2) et (ACT3) qui mesurent le pourcentage du capital détenu par le premier, le deuxième et le troisième actionnaire. (ACT123) et (ACT-T) mesurent respectivement le pourcentage du capital détenu par les trois premiers actionnaires et le nombre total des actionnaires de l'entreprise. En dernier lieu, nous avons retenu la variable (NAT-ACT) qui mesure le pourcentage du capital détenu par les membres externes à la famille.

- La performance financière

En raison du caractère non cotée (non boursier) de notre échantillon, nous avons retenu les indicateurs comptables classique pour mesurer la performance financière, notamment le rendement des actifs (ROA) et le rendement des capitaux propres (ROE). En effet, ces indicateurs nous ont permis de mesurer clairement comment une entreprise utilise ces capitaux (Florentine, 2019).

ROA: mesure l'efficacité de la direction dans l'utilisation des actifs.

$$\text{ROA} = \text{bénéfice net / actif total}$$

ROE: mesure l'efficacité avec laquelle l'entreprise utilise les fonds investis par les actionnaires

$$\text{ROE} = \text{bénéfice net / capitaux propres}$$

- Les variables de contrôle

Afin de réduire la probabilité de biais de variables omises, nous incluons un certain nombre de variables de contrôle. Selon Bartov et *al.* (2007), l'absence de contrôle des variables pourrait conduire à un rejet erroné d'une hypothèse alors qu'elle devrait en fait être acceptée. Plus précisément, nous avons retenu les variables de contrôles utilisées dans des travaux empiriques antérieurs (Sahut et Gharbi, 2010 ; Bughin et Monaco, 2015 ; Romdhane, 2015 ; Bousetta, 2019) notamment, la taille (TAILL) de l'entreprise, (CA) le chiffre d'affaires et (AGE-ESE) l'âge de l'entreprise.

d) Statistiques descriptives

Tableau N°1: La description de notre échantillon

Les variables	Minimum	Maximum	Moyenne	Médiane	Écart type	Variance
DIR-K	1	5	3,69	4,00	1,346	1,811
ACT-T	1	5	2,39	2,00	1,446	2,091
ACT1	1	5	3,65	4,00	1,224	1,498
ACT2	1	3	1,77	2,00	,695	,483
ACT3	1	3	1,39	1,00	,511	,261
NAT-ACT	1	4	1,27	1,00	,560	,314

ROE	1	5	2,24	2,00	1,105	1,221
ROA	1	5	1,92	2,00	,914	,835
N valide (liste)	190					

Le tableau 1 présente des statistiques descriptives pour les variables de la performance financière et de la structure de propriété pour notre échantillon de l'étude. En effet, la performance moyenne mesurée par le rendement des actifs pour l'ensemble des PME familiales étudié est de 1,92 %. De même, pour le rendement des capitaux propres qui s'élève en moyen à 2,24 %. Ces résultats soutiennent l'argument selon lequel les entreprises familiales sont plus rentables (Burkart, 2003 ; Maury, 2006).

Quant à la structure de propriété, les résultats montrent que les dirigeants des PME familiales de notre échantillon détiennent en moyenne plus de 50 % du capital de leur entreprise. Aussi, nous remarquons que la structure de l'actionnariat des PME familial contient en moyenne 3 actionnaires, dont le principal actionnaire détient en moyenne plus de 60 % du capital, ce qui confirme la forte concentration de l'actionnariat des PME familiales. Également, nous constatons la présence des actionnaires externes à la famille avec une participation qui s'élève en moyenne à moins de 20 %.

les variables incluses dans l'étude et indiquent une corrélation positive et fortement significative entre la proportion du capital détenu par le premier actionnaire et la propriété managériale au sein de 1 %. Ils indiquent également une corrélation négative et significative entre la proportion du capital détenu par le deuxième et le troisième actionnaire et la propriété managériale. Ensuite, la corrélation entre la présence des actionnaires externes à la famille et la propriété managériale est négative et fortement significative, tandis qu'elle est positive et significative avec la proportion du capital détenue par le deuxième et le troisième actionnaire au seuil de 1 %. En dernier lieu, les corrélations entre les variables de contrôle suggèrent également que la multicolinéarité ne devrait pas causer de problème dans l'analyse de la régression multiple, car les valeurs des coefficients de corrélation sont faibles. Selon Kervin (1992), des problèmes sérieux de multicolinéarité commencent généralement à s'observer dans le cas où le coefficient de corrélation dépasse la limite de 0,70.

IV. Analyse Empirique et Discussion des Résultats

a) Analyse de corrélation

Les résultats des coefficients de corrélation de Pearson sont présentés dans le tableau 2 pour toutes

Tableau N° 2: Les coefficients de corrélations de Pearson

		DIR-K	ACT1	ACT2	ACT3	NAT-ACT	CA	TAILL-ESE	AGE-ESE
DIR-K	Corrélation de Pearson	1							
	Sig. (bilatérale)								
ACT1	Corrélation de Pearson	,496**	1						
	Sig. (bilatérale)	,000							
ACT2	Corrélation de Pearson	-,377**	-,485**	1					
	Sig. (bilatérale)	,000	,000						
ACT3	Corrélation de Pearson	-,295**	-,414**	,327**	1				
	Sig. (bilatérale)	,000	,000	,000					
NAT-ACT	Corrélation de Pearson	-,302**	-,342**	,279**	,533**	1			
	Sig. (bilatérale)	,000	,000	,000	,000				
CA	Corrélation de Pearson	,060	-,101	,068	,105	,114	1		
	Sig. (bilatérale)	,409	,166	,350	,150	,117			
TAILL-ESE	Corrélation de Pearson	,069	-,030	,088	,142	,169*	,569**	1	
	Sig. (bilatérale)	,347	,678	,228	,050	,020	,000		
AGE-ESE	Corrélation de Pearson	,115	-,077	-,064	,142	,159*	,354**	,482**	1
	Sig. (bilatérale)	,114	,294	,379	,050	,028	,000	,000	
	N	190	190	190	190	190	190	190	190

**. La corrélation est significative au niveau 0,01 (bilatéral).
*. La corrélation est significative au niveau 0,05 (bilatéral).

b) Analyse de régression et discussion des résultats

Pour cette première phase, nous allons tester l'effet de la structure de propriété sur la performance financière de190 PME familiales marocaines. Pour ce faire, nous allons commencer celui de l'impact de la propriété managériale, la concentration du capital et l'actionnariat externe à la famille sur la performance financière mesuré par le ROA et ROE. À travers la MCO, les résultats des régressions sont donnés dans le tableau suivant:

Tableau N° 3: Les résultats de la régression relative à la structure de propriété

Les variables du modèle	ROA		ROE	
	Les coefficients	T-stat	Les coefficients	T- stat
Constante	-,105	-,257	,172	,474
DIR-K	,132	2,750	,120	2,843
ACT1	,062	1,086	-,046	-,908
ACT2	-,071	-,785	-,114	-1,413
ACT3	-,027	-,205	,061	,526
NAT-ACT	,144	1,234	,074	,721
CA	,590	9,520	,472	8,615
TAILL-ESE	,226	3,410	,130	2,222
AGE-ESE	,076	1,389	,038	,797
R^2	0,575		0,513	
R^2 Ajusté	0,556		0,492	
F value	30,607		23,958	
N : 190 Signification au seuil de 5 %				

Source: les auteurs

D'après le tableau de régression par la méthode des moindres carrés ordinaires, R^2 ajusté = 55,60 % au seuil de 5 %, indiquent l'existence d'une relation statistiquement significative entre la structure de propriété et la performance financière des PME familiales. Donc, le modèle apparait globalement pertinent.

Pour ce qui est de la significativité individuelle des variables, la propriété managériale mesurée par la part du capital détenu par le dirigeant a un effet positif et significatif sur la performance financière au seuil de 5%. Ce résultat corrobore la thèse de la convergence d'intérêts soutenue par Jensen et Meckling (1976). Selon ces auteurs, la détention d'une part importante des actions par le dirigeant permet de résoudre les conflits d'intérêts entre les dirigeants et les actionnaires. De même ce résultat confirme le constat de Anderson et Reeb (2003) qui stipule que les coûts d'agence dans les entreprises familiales résultant de la séparation du droit de propriété et du pouvoir de contrôle sont réduits.

Dans le même ordre d'idée, ce résultat a été confirmé par Kim et *al.,* (2004), en constatant l'existence d'une relation positive et significative entre la fraction du capital détenu par le dirigeant et la performance financière. Cette stratégie de détention d'une part importante du capital permet au dirigeant d'exercer une influence sur la gouvernance de l'entreprise. Il peut aussi adopter une stratégie d'enracinement en anesthésiant les mécanismes de gouvernance et le contrôle afin de répondre à ses propres objectifs au détriment de l'intérêt général de la famille (ou les actionnaires) ; cette stratégie d'enracinement traduit la volonté du dirigeant à conserver le pouvoir et le contrôle sur l'entreprise dans ses propres mains.

La nature de la relation entre la propriété managériale et la performance financière des PME familiales marocaines quant à elle, a été adapté au modèle de forme cubique de Short H. & Keasey K. (1999) :

$$PERF = Cte + \beta_1 \, DIR\text{-}K + \beta_2 \, DIR\text{-}K^2 + \beta_3 \, DIR\text{-}K^3 + \beta_4 \, Contr + \mu$$

Les variables DIR-K, DIR-K^2 et DIR-K^3 représentent respectivement, la fraction des actions carrée, et le cube détenu par le dirigeant. Short H. & Keasey K. (1999), estiment que les variables DIR-K, DIR-K^2 et DIR-K^3 doivent avoir respectivement les signes ; positif, négatif et positif. Les résultats sont présentés dans le tableau suivant:

Tableau N° 4: Les résultats relatifs à la propriété managériale

Les variables du modèle	ROA		ROE	
	Les coefficients	T-stat	Les coefficients	T-stat
Constante	-,997	-1,230	-,240	-,331
DIR-K	1,577	1,585	,376	,423
DIR-K^2	-,615	-1,710	-,088	-,275
DIR-K^3	,070	1,799	,009	,249
CA	,583	9,455	,475	8,630

TAILL-ESE	,215	3,299	,123	2,114
AGE-ESE	,096	1,800	,060	1,265
R^2	0,575		0,504	
R^2 Ajusté	0,561		0,488	
F value	41,472		31,140	
N : 190 Signification au seuil de 5 %				

Comme cela a été prévu dans la littérature, les résultats dans le tableau 4 montrent que les coefficients de DIR-K, DIR-K^2 et DIR-K^3 ont des signes respectivement ; positif, négatif et positif. Ce qui nous confirme l'existence d'une relation non linéaire entre la propriété managériale et la performance financière des PME familiales de notre échantillon. Ce résultat rejoint les travaux de plusieurs auteurs, qui ont confirmé l'existence d'une relation non linéaire entre la propriété managériale et la performance financière dans différents contextes (Short et Keasey, 1999 ; Kang & Shivdasani, 1999, Sheu et Yang, 2005 ; Louizi A., 2011). Au regard de ces résultats, nous pouvons confirmer nos hypothèses de départ *H1* et *H2.*

Ensuite, les résultats obtenus montrent l'association positive et non significative entre le pourcentage du capital détenu par le principal actionnaire (ACT1) et la performance financière des PME familiales. Tandis que, la fraction du capital détenu par le deuxième et le troisième actionnaire semble avoir un impact négatif et non significatif sur la performance financière. Contrairement à plusieurs études qui avancent que la concentration du capital entre les mains d'un seul actionnaire majoritaire impacte positivement la performance financière des PME familiales (Shleifer et Vishny 1986; Agrawal et Knoeber, 1996 ; Denis et *al*, 1997 ; Gorton et Schmid, 2000). Notre étude montre l'absence de relation significative entre la concentration du capital entre les mains d'un seul actionnaire et la performance financière ce résultat est conforme à celui de Agrawal et Knoeber (1996), Gadhoum et Zeghal (2000) et Holderness (2003).

Également nous avons procédé à une autre régression entre le nombre total des actionnaires, et la performance financière. Les résultats sont présentés dans le tableau suivant:

Tableau N°5: La régression liant le nombre d'actionnaires et la performance financière

Les variables du modèle	ROA		ROE	
	Les coefficients	T-stat	Les coefficients	T-stat
Constante	,219	1,380	,387	2,696
ACT-T	-,060	-1,543	-,040	-1,125
CA	,589	9,583	,484	8,710
TAILL-ESE	,236	3,645	,128	2,181
AGE-ESE	,102	1,890	,084	1,727
R^2 R^2 Ajusté F value	0,570 0,561 61,607		0,484 0,473 43,645	
N : 190 Signification au seuil de 5 %				

Le coefficient de régression de l'équation semble être négatif, et témoigne une association négative et non significative au seuil de 5%, entre la dispersion du capital entre les mains de plusieurs actionnaires et la performance financière des PME familiales. Ce résultat rejoint notre constat de départ sur l'absence de relation entre la dispersion du capital et la performance financière.

En somme, les résultats de notre étude concernant l'effet de la concentration du capital sur la performance financière montrent la complexité, voire même l'absence d'une relation significative entre la dispersion du capital et la performance financière des PME familiales. Ce qui est consistant avec les travaux de Denis et Mcconnell (2003), selon les auteurs, l'actionnariat concentré permet de diminuer les coûts d'agence engendrés par les conflits d'intérêts entre les dirigeants et leurs actionnaires, et par conséquent l'amélioration de la performance des entreprises (Ducassy et Montandreau, 2015).

De plus, ce résultat montre que la concentration de l'actionnariat entre les mains de la famille, permet

aux membres de la famille propriétaire d'occuper les postes clés de l'entreprise. De ce fait, les problèmes d'agence relative à la séparation de la fonction de propriété et de décision sont quasiment nuls. Il s'est avéré aussi que la concentration du capital permet à la famille d'exercer leur pouvoir sur l'organisation. Ce qui confirme également le constat de Johannisson et Huse (2000) qui ont constaté que les familles propriétaires mettent en valeur leur indépendance et ne veulent pas partager leurs pouvoirs avec les externes. Donc notre hypothèse *H3* se trouve alors non validée.

En ce qui concerne la nature de l'actionnariat, nous avons régressé la performance financière sur la fraction du capital détenu par les actionnaires externes à la famille. Les résultats montrent une association positive et non significative entre le pourcentage du capital détenu par les membres externes à la famille et la performance financière des PME familiales. Ce résultat infirme le constat de plusieurs chercheurs qui ont montré l'existence d'une relation positive et significative entre la présence d'autres formes d'actionnariat et la performance (Gamble et *al.,* 2002 ; Sahut et Gharbi, 2011 ; Frederec Hanin, 2012 ; Bughin et Monaco, 2015).

Contrairement à nos résultats, cette relation positive a été confirmée antérieurement pour le cas de l'actionnariat salarial ou institutionnel et financier. En effet, l'existence des actionnaires de type salarié dans une entreprise permet de réduire les coûts d'agence et favorise la collaboration entre les salariées et les actionnaires (Desbrières, 2002 ; Gamble et *al*., 2002 ; Kruse, 2002 ; Autenne, 2005). De même, plusieurs auteurs constatent que la présence des actionnaires externes constitue une autre alternative pour limiter les risques d'expropriation des profits des actionnaires minoritaires et éviterait la diminution des profits de l'entreprise (Mcconnell et Servaes, 1990 ; Morck et *al.,* 1998 ; Duggal et Millar, 1999 ; Anderson et Reeb, 2004). Notre hypothèse *H4* se trouve alors non validée.

V. Conclusion

L'objectif de ce travail de recherche est d'examiner la contribution de certaines variables de gouvernance interne, plus précisément la structure de propriété sur la performance financière des PME familiales. L'étude est basée sur une analyse de régression multiple sur les données recueillies auprès de 190 PME familiales marocaines. Les résultats de nos deux modèles de régressions linéaires multiples ont montré l'absence de relation significative entre la structure de propriété et la performance financière des PME familiales. Ce résultat corrobore la thèse de la neutralité développée par Demsetz (1983), qui affirme l'absence de relation significative entre la structure de propriété d'une entreprise et ses performances.

Cette étude a produit un certain nombre de résultats et contributions au flux de recherche en cours

sur la gouvernance et l'entreprise familiale. Les résultats renforcent et complètent les études antérieures et créent les bases de la recherche future sur la gouvernance des entreprises familiales. De ce fait, les résultats de ce travail de recherche nous ont fourni des preuves solides sur la relation entre les différentes composantes de la structure de propriété et la performance financière des PME familiales.

D'abord, la propriété managériale a un effet positif et significatif sur la performance financière. Ce résultat rejoint les conclusions de la thèse de convergence d'intérêts soutenue par Jensen et Meckling (1976). Selon ces auteurs, la détention d'une part importante des actions par le dirigeant permet de résoudre les conflits d'intérêts entre les dirigeants et les actionnaires. Également, nous avons confirmé l'existence d'une relation non linéaire entre la propriété managériale et la performance financière des PME familiales de notre échantillon. Ce résultat a été prouvé antérieurement par plusieurs auteurs tels que Hermalin et Weisbach, 1991 ; Short et Keasey, 1999 ; kan et Shivdasani 1999 ; Taiwan, Sheu et Yang, 2005 ; Louizi A., 2011).

Ensuite, les résultats de notre étude concernant l'effet de la concentration du capital sur la performance financière des PME familiales montrent l'absence d'une relation significative entre la dispersion du capital et la performance financière. Ce résultat corrobore avec celui de Johannisson et Huse (2000) qui à leur tour, ont constaté que les familles propriétaires mettent en valeur leur indépendance et ne veulent pas partager leurs pouvoirs avec les externes. De ce fait, la concentration du capital offre pour la famille la possibilité d'exercer leurs pouvoirs sur l'organisation. Et par conséquent, les problèmes d'agence relatifs à la séparation de la fonction de propriété et de décision sont réduits. Donc, la famille exerce son pouvoir sur l'organisation. Ce qui impacte la performance financière de la PME familiale.

Enfin, l'analyse de la régression montre l'existence d'une relation positive, mais non significative entre la présence des actionnaires externes à la famille et la performance financière des PME familiales. En effet, ce résultat infirme celui des travaux de Frederec Hanin (2012) ; Bughin et Monaco (2015), qui ont montré l'existence d'un lien positif entre la présence d'autres formes d'actionnariat (actionnariat salarial) et la performance des entreprises.

Dans une autre perspective, notre contribution présente quelques limites en raison du contexte spécifique de l'entreprise familiale. D'abord, le modèle conceptuel proposé néglige d'autres mécanismes qui sont liés à la fois aux caractéristiques de l'entreprise, notamment le fonctionnement, la confiance et la culture de l'entreprise familiale du conseil d'administration et aux caractéristiques du dirigeant, tel que l'âge, la formation, l'expérience et l'ancienneté. Ces différentes caractéristiques peuvent avoir un effet sur la

performance de l'entreprise familiale. Également, l'utilisation des ratios comptables classiques ignore certaines variables clés de performance, telle que la satisfaction des employés ou des clients et qui peuvent être très importantes pour déterminer la performance future d'une entreprise.

Comme tout travail de recherche, le nôtre aussi est confronté aux problèmes potentiels d'endogénéité qui peuvent affecter de manière significative les résultats empiriques. Ces problèmes se présentent généralement en trois manières à savoir; la corrélation avec le terme d'erreur, le biais de la variable omise et la simultanéité. En effet, le problème d'endogénéité de la simultanéité est le plus courant dans la recherche sur la gouvernance d'entreprise (Mina et *al.,* 2013).

À l'issue de ses limites, notre travail de recherche ouvre la voie vers des recherches futures. Notre travail de recherche peut être complété par un enrichissement du modèle conceptuel des mécanismes de gouvernance en introduisant d'autres spécificités contextuelles de l'entreprise familiales marocaines et à sa structure de l'actionnariat. D'autres recherches ultérieures peuvent accroître l'étude sur l'effet des mécanismes de gouvernance sur la performance en introduisant d'autres variables telles que la satisfaction des actionnaires et des clients. Finalement, nous proposons dans les recherches futures de s'intéresser à d'autres mécanismes de gouvernance permettant à la foi de limiter la dénaturation du caractère familiale et de protéger les intérêts de la famille.

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Poverty Penalty: A Market-Based Review

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Summery- The poverty penalty is the price that the poor pay more than the rich to obtain the same or similar goods. To be consistent with the way this concept is presented in the author who originally deals with it (Caplovitz) and in the author who originally calls it (Prahalad), the understanding of means "similar" concerns a quality standard imposed on the consumer as a condition of its functioning in society. The sociological relationships that determine this pattern, shape, through the institutions participating in the market, the economic ecosystem (so called by Prahalad). In view of this, the fight against that penalty is of questionable success in the absence of interventions to treat the sociological bases from which it is generated, which, in turn, implies that the measurements that lend themselves to identifying the penalty of poverty, need to include the effects of those sociological determinants, in the absence of which, they are useful as an exploratory data analysis, which only suggests the existence of the poverty penalty but does not actually verify it. In order to be consistent with the pioneering authors in the treatment of the penalization of poverty, the concept needs to be understood in the context of markets, or market-based. In this sense, related concepts are presented in the literature, such as "catastrophic expenses", "out-of-pocket" expenses, "uncompensated expenses", "consumer detriment" and "double jeopardy". Taken together as market-based, these concepts point to two different ways of interpreting the penalization of poverty.

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Poverty Penalty: A Market-Based Review

Wagner Nóbrega[1]

Summary- The poverty penalty is the price that the poor pay more than the rich to obtain the same or similar goods. To be consistent with the way this concept is presented in the author who originally deals with it (Caplovitz) and in the author who originally calls it (Prahalad), the understanding of means "similar" concerns a quality standard imposed on the consumer as a condition of its functioning in society. The sociological relationships that determine this pattern, shape, through the institutions participating in the market, the economic ecosystem (so called by Prahalad). In view of this, the fight against that penalty is of questionable success in the absence of interventions to treat the sociological bases from which it is generated, which, in turn, implies that the measurements that lend themselves to identifying the penalty of poverty, need to include the effects of those sociological determinants, in the absence of which, they are useful as an exploratory data analysis, which only suggests the existence of the poverty penalty but does not actually verify it. In order to be consistent with the pioneering authors in the treatment of the penalization of poverty, the concept needs to be understood in the context of markets, or market-based. In this sense, related concepts are presented in the literature, such as "catastrophic expenses", "out-of-pocket" expenses, "uncompensated expenses", "consumer detriment" and "double jeopardy". Taken together as market-based, these concepts point to two different ways of interpreting the penalization of poverty. One, when this last concept is obtained from the analysis of a single market and another, when it relates different markets. This article revisits the poverty penalty concept making it coherent with the approach with which it is originally presented in terms of a single market, leaving the treatment of the concept in terms of the relationship between two or more markets for another article. Emphasis is given to the work of Attanasio and Frayne (2006), as a promising example to measure and test the existence of the poverty penalty *latu sensu*, as discussed in this article.

I. Introduction

The definition of the penalization of poverty as a greater expense of the poor than of the rich with the same or similar goods is presented with words similar to those originally by Prahalad (2005)[2], but it can also be inferred with the same meaning from reading Caplovitz (1963), Goodman (1968), or Kunreuther (1973), among the first authors to address the same theme, from similar perspectives.

Mendoza (2011), in turn, deals with it in relation to the market, highlighting the role that it occupies as a place where the penalization of poverty takes place[3], based on what he reinterprets as "forms of exclusion and marginalization faced by the poor within the context of the market system"[4].

Dalsace et al (2012, p. 22), finally, attributes the penalization of poverty to the market, or in their words, "[q]uite naturally, without any particular ill will on the part of the actors in the commercial sector, the market sometimes penalizes the poor."

This article is based on the view that the penalization of poverty stems from the market context. From this, depending on whether markets are considered in a related way or not, the poverty penalty concept is treated from two different perspectives.

To this end, it is argued that some concepts can be gathered under the name of poverty penalty, like Mendoza (2011), who considers so-called "catastrophic expenses" as such. In the latter, we include the concepts of "out-of-pocket" and "uncompensated" expenses. We also defend that the concepts of "consumer detriment" and "double jeopardy" be understood as poverty penalty.

The concepts of "out-of-pocket" and "uncompensated expenses", which are, under the name of catastrophic expenditures, require an analysis of the relationship between different markets to define them. The two previous ones, in turn, are treated in the literature on each independent market.

The part of the literature that derives the poverty penalty concept from isolated markets, aims to explain how the poor are penalized in each one and, perhaps from the understanding of the market mechanisms of this punishment, point out ways of reducing or solving the penalty dealt with. This is not to say that works along these lines dispense with the application of the poverty penalty concept in a more comprehensive manner. For example, Caplovitz (1963) considers that the fight against the penalization of poverty would be part of a greater fight against poverty [5], while Prahalad (2005), defends the dissemination of combating the penalization of poverty, in the markets where it is detected, as an economic development project.

The part of the literature identified with catastrophic expenditures deals with the penalization of poverty not based on each market in isolation, but on the relationship between some of them. Thus, this literature expands the relativity characterizing the concept, making the comparison between poor and rich involve more than one market. Among these different markets, one is always considered to be of more necessary goods than the other(s), so this line of analysis anchors the poverty penalty in a market in

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relation to which the (s) other(s) analyzed imputes damages to the poor.

As each of these two approaches serves different objectives, the poverty penalty concept receives contributions from both.

By bringing together different concepts under the same name – of penalization of poverty – and systematizing them according to the way they treat what brings them together – that is, the market – this article tries to contribute to the expansion of the meaning of the concept of poverty penalty. As a result, in the respective problematic contexts and different objectives with which the concept is constructed, the operational potential of the concept is delimited and, in line with each aspect, the alternative ways of measuring it.

The discussion about the penalization of poverty has only recently been established and disseminated. It was driven by the initiatives of the Inter-American Bank (IDB) and the United States Agency for International Development (USAID). On June 12, 2006, the IDB launches the Building Opportunity for the Majority initiative, based on the poverty penalty concept. This initiative would increasingly guide IDB lending. Less than a year later, on May 25, 2007, USAID's Voluntary Foreign Aid Advisory Committee advises that projects adopt approaches based on the poverty penalty concept.

It is understood that the contribution given in this article is still small, given how much the theoretical treatment of the concept will advance and, consequently, the application of the concept.

II. Penalization of Poverty: What does it Mean and What Instruments can be used to Identify it?

a) Presentation

The poverty penalty concept is described, for the first time, in Prahalad (2005) and is the difference in costs between the poor and rich payments for the same or similar goods.

From the analysis of the way the concept is presented in Prahalad (2005), it is possible not only to identify the essential components of its most widespread version, but also characteristics from which we can gather other aspects and related concepts, which support and deepen the meaning of the concept and were presented by authors who preceded or are after Prahalad (2005). To do both, we will first deal with the concept as it is presented in Prahalad (2005) and then with related aspects and concepts dispersed in the literature.

b) Delimitation of the original concept

After considering that the different ways of fighting poverty, such as those experienced in India for 45 years since its independence from Great Britain,

have not given significant results, Prahalad (2005) proposes a new approach. In it, the development of inclusive and oriented markets for the poor would both provide them with better and cheaper products, as well as guarantee them respect and dignity.

Predominant around the world and, mainly, in developing countries, the first approach, called by the cited author as traditional, is characterized by the use of fiscal instruments, by taxing higher incomes to redistribute it as subsidies to the poor, or through large infrastructure projects or even in the form of public spending on education and health. In this approach, small and large companies, as well as the rest of society and even the poor, are not involved in the fight against poverty, because the dominant logic between them, based on the assumption that "the poor have no purshasing power and therefore do not represent a viable market" (Prahalad, 2005, 4th paragraph, p. 10), would lead them to reject the market that is the focus of the fight against poverty, or, in the words of the cited author "[m]arket-based solutions cannot lead to poverty reduction" (Prahalad, 2005, last paragraph, p. 9).

Described only once, but illustrated with several comparisons between the prices paid in the Dharavi slum outside Mumbai, India and in the high-income B. Desai Road neighborhood of Mumbai, the poverty penalty concept is presented as evidence of the existence of markets for the poor, which makes it possible to identify the author's work as belonging to the alternative approach to the traditional one, which he calls "market-based"[6].

Despite being briefly presented and illustrated, the poverty penalty concept plays a central role in the author's contribution to the "market-based" approach, as it manifests the problems that the author focuses on and for which he offers solutions. The following passage illustrates what has been said in this paragraph and in the previous one (respectively the description of the concept and the problems that cause it):

"These cost disparities between BOP consumers and the rich in the same economy can be explained only by the fact that the poverty penalty at the BOP is a result of inefficiencies in access to distribution and the role of the local intermediaries. These problems can easily be cured if the organized private sector decides to serve the BOP. The organized sector brings with it the scale, scope of operations, and management know-how that can lead to efficiencies for itself and its potential consumers". (Prahalad, 2005, p. 12)

From the quote above it is possible to identify a first characteristic of the penalization of poverty. Their configuration is given according to the characterization of the problems that cause them in each place, that is, it is spatially determined. This space has, in Prahalad, a double character. It is geographic, as high costs occur in different physical areas than where low costs are observed, but it is also a market space. To the market

characteristics that occur in a geographic area, the author assigns the name of economic ecosystem. The economic ecosystem is made up of companies of different sizes and shapes, both legal and non-legal, as well as non-governmental organizations. The interaction between those civil and governmental organizations also makes up the economic ecosystem, which, depending on technology, institutional and legal basis, takes place in a particular way.

"We use the concept of the ecosystem because each constituent in the system has a role to play. They are dependent on each other. The system adapts and evolves and can be resilient and flexible", (Prahalad, 2005, p. 65)

His proposal is to promote, or in his words, build, economic ecosystems that exploit the market potential and entrepreneurial capacity of the poor, with the help of large companies and the government, which he says as follows:

"I believe that the debate must shift towards building market-based ecosystems for broad based wealth creation. Only then can we tap into the vast, dormant, and trapped resources, purchasing power, and entrepreneurial drive at the BOP. This will allow for new growth opportunities for the large corporations and a better quality of life for those at the BOP". (Prahalad, 2005, p. 66)

From this characteristic we obtain another, which is not explicit in the work of Prahalad (2005) with which the definition of the poverty penalty gains in meaning. When the poor pay higher prices than the non-poor for similar products, the poor are penalized by the economic ecosystem, and changes in that ecosystem can end poverty.

"The ecosystem can provide the tools for the poor and the disadvantaged to be seamlessly connected with the rest of the world in a mutually beneficial and non-exploitative way. It provides them with skills and opportunities that are often denied by the informal sector". (Prahalad, 2005, p. 69)

In the sections that follow the previous quote, the author deals, respectively, with reducing inequities in contracts and building governance among the poor. The latter would result in the fight against corruption. Such concerns reveal what for the author characterizes a market in which the poor pay more than the rich for the same things, or the economic ecosystem in which the poverty penalty is generated. These markets, considered by him to be underdeveloped, as they use inferior technology to that available in the production of goods and apply worse conditions of access to goods (manifested in more severe contractual conditions, including greater restrictions on credit and higher credit costs), offer products of worse quality, or at more expensive prices, as in the example given by the author of the company ITC's International Business Division, in India: "[t]he real sources of inefficiency are the price and quality distortions caused by the agents' stranglehold on the market". (Prahalad, 2005, p. 229). This bottleneck in the market, in conditions that are not of mutual benefit,

or are abusive, as mentioned above, from the perspective of the poor – actual or potential consumers, which they are – characterize the economic ecosystem of the penalization of poverty, so that the market understood in it represents the composition of fundamental sociological forces, which depress the quality and increase the price relatively. This leads us to the broad concept of the poverty penalty, which comes to mean the penalization of the poor by the markets, manifested through a higher price relative to quality, or greater costs than benefits, than those assumed by the rich, in the acquisition of similar goods.

Thus, although the fight against the poverty penalty involves market conditions directly, it requires fighting the sociological conditions that lead to poverty, in what the author calls development. In his words,

"[W]e must recognize that the conversion of the BOP into an active market is essentially a developmental activity. It is not about serving an existing market more efficiently" (Prahalad, 2005, p. xiii)

The social development resulting from the change, in the economic ecosystem, of the market inefficiency conditions that perpetuate poverty, would depend, according to the author, on the aspirations to social ascension, or, in the author's words,

"[m]ore important, social transformation is about the number of people who believe they can aspire to a middle-class lifestyle. It is the growing evidence of opportunity, role models, and real signals of change that allow people to change their aspirations". (Prahalad, 2005, p. 109)

Understanding and confronting the penalization of poverty would depend, therefore, in Prahalad (2005) on the knowledge of the particularities of the economic ecosystem that make up each market, which he develops throughout his book.

This confrontation for Prahalad (2005) has the potential to end poverty itself, which is said by the cited author:

"Given bold and responsible leadership from the private sector and civil society organizations, I have no doubt that the elimination of poverty and deprivation is possible by 2020. We can build a humane and just Society". (Prahalad, 2005, p. 112)

From this it can be understood that the author's approach is not only market-based, but also market-oriented.

The epistemological reference of the penalization of poverty, in the case of Prahalad (2005), is the discussion of market-based and market-oriented development, but it could be, for example, meeting needs, or a discussion about well-being.

Another important aspect of the poverty penalty concept is its measurement. In Prahalad (2005), the penalty of poverty is measured in the form of a proportion between the price paid in two economic ecosystems. Repeating one of the examples given by Prahalad (2005, p. 11), the interest rate on credit paid in

the Dharavi slum would be 53 times higher than that paid in the wealthy B. Desai Road (formerly Warden Road), in same year.

This measurement refers to the need for measurement standards and units, as well as defining against which they are measured.

In the example given, the proportion is a measure that makes comparable the differences between the prices paid by the poor and the rich between different pairs of similar goods. Stated in this way, the penalty of poverty is useful for Prahalad (2005) to demonstrate the viability of markets for the poor in terms of the revenue potential it represents for companies, since it uses the ratio between the price paid by the poor and the rich, as an indicator of the premium over the prices paid by the latter. From the unfolding of this proposition, the cited author bases his proposal of development based on markets aimed at the poor.

This allows us to understand that the measurement and indicator of the poverty penalty used depends on the objective of the work. Thus, when comparisons are to be made, the concept must be measured and indicated in the same way, and the works compared must have the same objectives.

If, however, the proportion as a unit of measurement of the poverty penalty serves as a sufficient indicator for the objective of Prahalad (2005), it also reveals a number of issues that are important for the concept of the poverty penalty.

In the form of proportion, the penalty does not allow considering price variations that penalize the poor. The dilution, or increase in the penalty if measured in *per capita terms*, is another question that remains open with the proportion as an indicator of the poverty penalty, as well as the role of other expenses in obtaining the good, in addition to price, as well as the penalty being measured by proportion, does not reflect how much the expenditure represents in relation to the budget.

Another order of problem stems from the very way in which in Prahalad (2005), markets are considered separately.

Involving more than one market at the same time, poverty penalty concept would raise questions about reallocation of resources, or the impact it would have on the budget. There would also be a need to rethink the concept, to treat it, perhaps, as a net effect of the different penalties and benefits resulting from the comparisons of different markets.

Thus, although Prahalad (2005) has given a name to the market's penalization of poverty, not only is the measurement he uses limited by the objective of his work, but also the meaning of the term he named is.

We will open the perspective to consider different works by Prahalad (2005), from now on, that

contribute with other aspects, concepts and ways of measuring the poverty penalty. This will be done from the main characterizing aspects of the concept, within each approach that involves it.

Therefore, we review the characterizing aspects of the poverty penalty, which, in light of the limitations of the concept as presented in Prahalad (2005), will be used as criteria to identify contributions in the sense of what was said above.

In order for poverty to be penalized, it must first be distinguished between two groups of consumers, namely: the poor and the non-poor, or rich. Then, similar products in the consumption of both must be taken for analysis and the market must be segmented between poor and rich, while different economic ecosystems, generally located in different geographic spaces. Next, the penalization of the poor due to that segmentation must be verified, in the form of worse conditions in the acquisition of the same compared goods and this must be expressed monetarily, or measured in relation to expenditures, although its measurements can be transformed into proportions, or other units of measurement to indicate the occurrence of poverty penalty.

c) *Contextualization of the concept in the literature and expansion of its meaning*
   i. *The origin of the meaning of poverty penalty and its treatment from the perspective of each market separately*

There is a certain consensus in the literature that the poverty penalty concept has its origins in the work of Caplovitz (1963). In fact, the term does not appear once in Caplovitz (1963), because it was only defined, as we saw later, in Prahalad (2005). What probably justifies that consensus is that Caplovitz's own work can be understood as being around the penalization of poverty, as is the case with the content of the definition of the poverty penalty, which appears in the title of that work and is sometimes textually described in the body of the text, such as the following passage:

"the poor credit potential of most low-income families combined with their lack of shopping sophistication often results in the irony that they pay much more for a given quality of durables than consumers in higher income brackets. This does not mean that they spend more, although even this may sometimes be the case, but that they obtain considerably less value for their dollar". (Caplovitz, 1963, p. 81)

This passage also presents an important aspect for the understanding and evolution of the concept of poverty penalty already discussed above, that is, a quality parameter in relation to which the superiority of the prices paid by the poor, or cost-benefit, is identified. In addition to this aspect, others also reveal the precedence of Caplovitz (1963) in the

treatment of the poverty penalty and the configuration of an approach to it since his work.

As for Prahalad (2005), the centrality of the market system, or the market-based analysis for the poverty penalty concept, is present in Caplovitz (1963). In the same way, it is from the specificity of the market for the poor that Caplovitz (1963) discusses the penalties for the poor, treating, therefore, pioneering these issues and in this sequence.

The existence of private markets for the poor can be seen in the following quote:

"In sum, a fairly intricate system of sales-and-credit has evolved in response to the distinctive situation of the low-income consumer and the local merchant. It is a system heavily slanted in the direction of a traditional economy in which informal, personalties play a major part in the transaction. At the same time it is connected to impersonal bureaucratic agencies through the instrument of the installment contract. Should the informal system break down, credit companies, courts of law, and agencies of law enforcement come to play a part". (Caplovitz, 1963, p. 29-30)

The poverty penalty as a penalization of the poor by the market, highlighted by Dalsace et al (2012), in turn, can be seen in the following passage:

"The problem of low-income consumers stems from the same set of forces that have created that special system of sales-and-credit [...] catering to their wants. Any program of action must therefore take into account the conditions that have brought this system into being. [...] this marketing system is in many respects a deviant one, in which unethical and illegal practices abound. Nevertheless, it can persist because it fulfills social function that are presently not fulfilled by more legitimate institutions". (Dalsace et al, p. 179-180)

Like Prahalad (2005), Caplovitz (1963) deals with the penalization of the poor by the market by analyzing each market separately, like the durable goods market, which is his object of analysis.

"This book examines such consumer practices among low-income families in New York City. It describes the major durables they own, how they went about getting them, and the difficulties they encountered along this way. It also tells how these families are buffeted by high-powered advertising, exploitative salesmen, and debt entanglement." (Caplovitz, 1963, p. 2)

The similarities described above serve to indicate that, although the term penalization of poverty was not named by Caplovitz (1963), there are enough elements in his work to consider him not only a pioneer in terms of that definition, but, mainly, the one that inaugurates a market-based, single-market and personalized approach to poverty for the poor, which also penalizes them.

The differences between the treatment given to the concept by Caplovitz (1963) in relation to Prahalad (2005), in turn, help to identify the potential for development of the concept, as well as the limitations that are imposed on its use.

In terms of measurement, while in Prahalad (2005) the proportion between the prices paid by the poor and the rich indicates the poverty penalty, Caplovitz lists all the prices paid by the various ways he considers the poverty penalty in his interviews.

Although not directly measuring the poverty penalty, by relating insolvency to the necessary expenditures on health, food and clothing, as part of his task in describing the consumption of the poor, Caplovitz (1963) ends up pointing to what will later become a line of research and will contribute to the poverty penalty concept, called catastrophic expenditures. Measurements in this sense are found in Table 9.15 of that book and an example that summarizes it, in the words of the aforementioned author, is the following: "the proportion of families who have had to put off medical care is generally quite small, but still is more than twice as large in the insolvent group." (Caplovitz, 1963, p. 130)

The concept of penalization of poverty also receives in Caplovitz (1963) a broad foundation in terms of its justification, and clear delimitation, as to what is proposed, or potentiality of the results of its application. The solution to poverty given in Prahalad (2005) by transforming the market characteristics, or the characteristics of the economic ecosystem, is justified in Caplovitz (1963), based on the sociological determinants from which the economic ecosystem originates. In your words,

"[C]onsumption in our society, as in many others, is more than a matter of getting and having material conveniences. Equally important, Americans in all walks of life are trained to consume in order to win the respect of others and to maintain their self-respect. These social pressures to consume are perhaps inevitable in a society characterized by a rising standard of living. Compounding the force of a rising standard of living is the fact that most low-income families (many of which belong to minority racial and ethnic groups) have little opportunity to base their self-respect and the respect granted them by others on occupational, educational, or other accomplishments. And this poverty of opportunity may only reinforce the significance of consumption in that pattern which we have called 'compensatory consumption'". (Caplovitz, 1963, p. 180-181)

This compensatory consumption, however, would not be a way to solve the problem of poverty. In this sense, just like Prahalad (2005), who sees combating the penalization of poverty in the form of social transformation of the economic ecosystem as sufficient to solve the sociological problems that determine poverty, Caplovitz (1963) considers any solution to the consumer problem, even as a compensation, as something limited, if poverty is not eradicated, or in his words:

"Until society can find ways of raising their educational level, improving their occupational opportunities, increasing their income, and reducing the discrimination against them — in short, until poverty itself is eradicated — only limited solutions to their problems as consumers can be found". (Caplovitz, 1963, p. 192)

Since it was inaugurated by Caplovitz (1963), until Prahalad (2005), at least 8 articles in scientific journals were written with the expression "the poor pay more" in the title[7], under the same approach – characterized by the analysis of each market separately – of what the latter author would call the term "poverty penalty".

Contributions in this line of analysis have multiplied from the work of Prahalad (2005), especially after June 12, 2006, when the Inter-American Development Bank (IDB) launched the Building Opportunity for the Majority initiative, based on the concept of poverty penalty. This initiative would increasingly guide IDB lending.

Another great incentive to increase the discussion on the penalization of poverty came less than a year later, when on May 25, 2007, the Advisory Committee on Voluntary Foreign Aid of the United States Agency for International Development (USAID) guided that the projects adopt approaches based on the poverty penalty concept.

Many technical publications and not just peer-reviewed scientific articles have been published since then. Considering, however, only peer-reviewed scientific articles, in a search carried out in the CAPES database, five articles were found with the term "the poor pay more" as part of the title and five articles with the term "poverty penalty" were found published in a more recent period, equivalent to almost a third of the period between the publications of Caplovitz (1963) and Prahalad (2005) and after the latter.

These publications, different from those of Caplovitz (1963) and Prahalad (2005), but of the same line of analysis as these (considering each market separately), contributed to the poverty penalty concept.

ii. *Completing the concept and focusing on the issues that concern them*

Among the works prior to Prahalad (2005) and the IDB and USAID initiatives mentioned above, Williams (1977), based on what has already been indicated as being said by Caplovitz (1963) distinguishes between two problems that together form what was defined earlier in this article as the poverty penalty concept. In your words,

"This book is about one of the rents in the threadbare coat that covers poverty: the fact that our systems - in private commerce, in the creation of wealth, even in the provision of public services - often seem to conspire to visit a further disadvantage on poor people. Not only do they have less money to spend than richer ones, they also get worse value

for their money (or for money spent on them)". (Williams: 1977, p. 1)

This double penalty, called by the National Consumer Council "consumer detriment", can also be understood, more broadly, under the term "double jeopardy", which involves several issues, including those not directly linked to poverty. Both terms appear in scientific publications.

In line with the concept hitherto seen as a broad penalization of poverty – which associates the higher price paid by the poor with a worse quality of similar goods consumed by the rich – the idea of "consumer detriment", or "double jeopardy" reveals a central aspect of the concept of the penalty of poverty not addressed so far, that is, the fact that the poor have less money to spend on goods for which they will also suffer the poverty penalty. The precedence of those two concepts in relation to the poverty penalty and the way in which they contain it requires that, in order for them to be understood under the same concept – as proposed here, the penalization of poverty – this concept now means what those first ones represent.

Williams (1977) also highlights the possible determinants of the penalization of poverty, some of which are found in the literature, classifying them.

Such classification allows, at the same time, to differentiate and treat separately the ways in which the penalty of poverty presents itself, from its determinants. Mendoza (2011), for example, makes this distinction in the excerpt reproduced below.

"Conceptualising the poverty penalty in this way offers a more nuanced interpretation of both the subtle (eg quality- and price-related poverty penalties) as well as more direct (eg non-access, non-usage and catastrophic spending burdens) forms of exclusion and marginalization faced by the poor within the context of the market system. The literature offers a number of potential explanations for the poverty penalty, and this paper discusses several which seem especially salient for developing countries: (a) factors related to size and store effects; and (b) factors related to market failures, notably imperfect information, missing markets and switching costs". (Mendoza, 2011, p. 2)

Since Williams (1997), other classifications have been published in scientific works. Each classifies the penalty of poverty, sometimes in terms of its forms, sometimes in terms of its causes. They are made according to the objective of each work, so that each classification is different from the others and, alone, do not cover all aspects, characteristics, or even causes and forms of the concept. They, however, have the merit of systematizing the contents of the state of the art related to the criteria with which the concept is classified.

In this sense, in line with the market-based characteristic of the poverty penalty concept raised in this article, Hirsch (2019) interprets the poverty penalty

concept – which he calls, as Prahalad (2005) does, the poverty premium – from the as follows:

"The premium is not a single phenomenon, but the interaction of a variety of factors, both in the ways in which services are supplied and the position of low income households as consumers". (Hirsch, 2019, p. 34).

From this perspective, which we can understand as merely from the market, Hirsch (2019) classifies the poverty fine into four types and causes.

As for the type, the poverty penalty can be understood from what Hirsch (2019) says, in the following ways:

a. Higher prices paid by the poor;
b. Higher payouts due to lower quantities purchased;
c. Higher prices paid for the way the transaction is carried out;
d. Paying higher interest rates, or indebtedness.

As for the causes of poverty penalty, Hirsh (2019), interpreting Europe Economics and the New Policy Institute (2010), classifies them into two main groups, each with four causes and another group that results from the combination of the initials, to which that author associates three more causes. This is how the causes of the poverty penalty are classified, according to Hirsch (2019):

1) Supply side factors:
   a. Competitiveness of pricing.
   b. Complexity of products and transparency of product information.
   c. Targeting of products.
   d. Cost reflexivity or cross subsidy of product types.

2) Demand side factors (low income households):
   a. Limited capacity for informed switching.
   b. Requirement for 'no frills' product.
   c. Limited access to 'enabling' products.
   d. Risk aversion and behavioral traits.

3) Interaction of supply and demand:
   a. General market failures.
   b. Specific market failures.
   c. Additional premiums.

Other authors classify the penalization of poverty in relation to the market, according to the ways in which it manifests itself and/or according to its determinants. Dalsace et al (2012), for example, classify the determinants of poverty penalty as follows:

"The paper sheds light on the various underlying mechanisms that contribute to the creation of the poverty penalty. These 'undesirable side-effects' of the market are of five types:

- An unfavorable cost structure
- An unfavorable price structure
- The law of supply and demand
- A lack of equipment or an unfavorable risk profile

- Insufficient objectivity to deal with scarce, imperfect or missing information".

(Dalsace et al, 2012, p. 22)

From the same market perspective, Davies, Finney & Hartfree (2016, p. 5), classify the determinants of poverty penalty as follows:

"Demand-side factors which reflect low-income households' preferences, needs and circumstances such as having constrained finances, the need for close budgeting control, low usage and risk aversion to actions that might upset tight budgeting control.

Supply-side factors which reflect how markets shape the choices available to consumers and impose additional costs on them. They include higher prices that reflect the additional cost of supplying low-income consumers, specific market failures where products do not meet the needs of low-income groups and general market practices where uncompetitive or unfair practices hit low-income consumers hardest.

Compounding factors that do not sit clearly on either the demand or the supply side, but mediate or compound the relationship between them, such as financial and digital exclusion and geography".

Based on this classification of determinants, these same authors also classify the forms of poverty penalty into eight groups, in which they list 29 types.

Among the forms and causes presented in the various classifications, some have gained prominence in the literature. This is the case of the so-called store and size effects. Related to the first one, a so-called distance effect is involved.

Kunreuther (1972), based on Alcaly and Klevorick (1971), defines store and size effects. The first inversely relates the size of the store to the price of the same merchandise. The second inversely relates the package size of the same commodity to its price. In the author's words:

"The store effect refers to price differentials between stores for the same-sized item. If the price per ounce for any given package size varies inversely with the size of store, then individuals who shop in chains would pay less for identical items than those who patronize smaller grocers. The size effect refers to differences in price per ounce for various sizes of a particular branded item within any given store". (Kunreuther, 1972, p. 661)

This author attributes the store effect to the distance between the buyer and the supplier and the size effect to consumption habits and storage costs. In your words:

"The store effect provides a measure of the importance of a consumer's location and his mobility on purchasing decisions. (...)

The size effect measures the role which budget, storage constraints and costs of holding inventory play in purchasing decisions. (...) Low consumption rates will discourage large size purchases due to the cost of holding inventory". (Kunreuther, 1972, p. 661)

d) Measurement and identification instruments

More dependent on the objective of the work than classification, the indication and measurement of the poverty penalty also takes place in different ways. Likewise, the measures used to indicate the aspects discussed in the different ways of classifying it.

We saw above that Caplovitz (1963) measures in money the superior expenditures made by the poor for the same goods purchased by the rich and in a (greater) proportion the insolvent families who stopped paying for medical care. We have also seen that Prahalad (2005) measures the proportion that the price paid by the poor is greater than that paid by the rich for the same good. In addition to these forms, the example cited by Dalsace (2012) is representative of those most common in the specialized literature.

The 2011 report by the Paris office of the Boston Consulting Group, cited by Dalsace (2012), presents the penalty of poverty measured in terms of the percentage of price paid more by the poor family, for expenses that occupy larger portions of their budgets, except food and transport [8]. Following the example of what was discussed about the classification of the penalty of poverty, the report cited by Dalsace (2012) also points out, for each type of expenditure, the possible cause of that penalty.

As it only involves price, measurements such as those of the Boston Consulting Group hide possible effects of other variables involved in poverty penalty, in the broad sense of the concept, as discussed above, in addition to, in the example given, the market-based origin of the measurement is not clear, although the latter does not detract from the measurement made. Quality, the reference for price in the broad concept of that penalty, as well as the characteristics of the sociological context of each economic ecosystem, are hidden, or inaccessible, when the poverty penalty is measured only in terms of prices. In the case of quality, mainly, this was a criterion very clearly present in the basic understandings of the concept in Caplovitz (1963) and Prahalad (2005). There is no problem in starting to indicate the fine of poverty, only in terms of prices, but the quality variable with reference to which these are compared between the poor and the rich is a criterion for the origin of the concept. Thus, in order to identify the possibility of poverty penalty, one can consider what almost all the papers on the subject do, which is to deal with the difference between the prices paid by the poor and the non-poor for a similar commodity, but to verify its existence or not, it is necessary to have at least one quality parameter common to the goods being compared, although the ideal would be to compare the sociological parameters that influence the compared consumptions, such as the utilities for each consumer involved in the comparison.

There are works, however, that approach the measurement of the poverty penalty in its broad sense and, thus, can be used to identify it in all aspects that need to be addressed in the fight against it. Attanasio & Frayne (2006), for example, test the existence of a poverty penalty controlled by the size effect and, for that purpose, consider the market as the environment of its origin, in terms of what their equations represent and do so as a function of price, quality, and package and distance effects. Three component aspects of the broad concept of the poverty penalty are therefore covered as well as two themes related to that concept.

The authors' treatises assume that quality can be indicated by income level, which does not explain the sociological determinants of poverty penalty, which shape the economic ecosystem where poverty penalty takes place.

It is imagined that the model of Attanasio & Frayne (2006) can be adapted to measure and identify the penalty of poverty.

Attanasio & Frayne (2006), based on Deaton's (1988, 1997) theoretical framework generalized by Crawford et al (2003) write the following equation

$$lnv_{ic} = lnp_{ic} + ln\pi_{ic} + \varepsilon_{ic} \qquad (1)$$

Where p is the price paid in cluster ic, π is the quality measure, ε represents the measurement error and v_{ic} is the unobservable utility value to be maximized by the consumer for a good.

These authors rewrite equation (1) as follows

$$\ln v_{ic} = \alpha_0 + \ln p_{ic} + \chi_q z_{ic}^q + \gamma \ln q_{ic} + u_{ic}^q \qquad (2)$$

Where α_0 is an autonomous and exogenous determinant, different from the main effects considered; the terms z_{ic}^q e $\ln q_{ic}$ capture the demand for quality, being z_{ic}^q a vector of taste shifters and quantities.

Then, a price schedule equation, determined by the supply side, is represented

$$\ln p_{ic} = \chi_S z_{ic}^S + \theta \ln q_{ic} + u_{ic}^S \qquad (3)$$

Where z_{ic}^S includes effects of costs and retail competitiveness and the coefficient of θ is expected to be negative, to show the size effect. It should be noted that cost and competitiveness effects are institutional components that shape the poverty penalty concept in its broad sense, as discussed above.

Although equation (2) is not the demand curve, nor is equation (3) the supply curve, and in fact they were written to represent the possibilities of different price scales due to the size effect, when combining them, through a common variable, as those authors do later, we can interpret the market equilibrium curve under these conditions as the result of this.

From the substitution of (3) in (2) Attanasio & Frayne (2006) arrive at the equation that can be understood as the one that represents the market equilibrium for different price levels

$$\ln v_{\text{ic}} = \alpha_0 + \chi_S z_{ic}^S + \chi_q z_{ic}^q + (\theta + \gamma) \ln q_{ic} + u_{ic}^q + u_{ic}^S \quad (4)$$

The mentioned authors take the equation (4) as a reference for their analysis. From the equations that make up this adaptation, they estimate, by at least squares method, the effects of some of those that for us can be understood as the conceptual components of the poverty penalty. Thus, equation (4) is used to measure the poverty penalty, controlled for the quantity effect.

With data from 11,497 households interviewed about the "Familias en Acción" Program, in 122 municipalities in rural Colombia, from June to October 2002, the authors run their equations and from its conclusions we highlight the following as a teaching piece of measurements made from the poverty penalty as discussed in this article: controlled for quality, the coefficient that indicates the quantity effect increases, relative to when the control is not performed, but remains negative and significant. From this it can be inferred that the quantity effect is affected by quality standards, so that for a given "level" of quality, poverty is penalized for buying smaller quantities of similar goods.

Considering that this result was obtained for a basket of food (rice, carrots and beans) and that the same result was only confirmed individually for rice, one can think that the way it was applied, the test can actually serve to the verification of the presence or absence of the penalty of poverty.

The theoretical framework of Attanasio & Frayne (2006) can serve to test the poverty penalty not only in terms of the quantity effect, but if controlled for price and institutional characteristics, if the equations are combined in the equilibrium condition through not the price, but quantity, for example.

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[2] "Cost disparities between BOP consumers and the rich in the same economy" (Prahalad, 2005, p. 12)
[3] "The poverty penalty could be simply defined as relatively higher cost shouldered by the poor, when compared to the rich, in their participation in certain markets". (Mendoza, 2011, p. 2).
[4] Mendoza, op. cit, p. two.
[5] As we will see later, the term "poverty penalty" is only coined in Prahalad (2005), long after, therefore, Caplovitz's best-known work, which dates from 1963, even so, according to the characteristics that make up that concept, we can consider the work of Caplovitz (1963) in the same perspective.
[6] The author himself makes clear his adherence to that approach, citing it several times and also for dealing with it as his object of study.
[7] Consultation made in January 2022 in the database of the Coordination for the Improvement of Higher Education Personnel (CAPES), in Brazil. Capes is a

public foundation responsible, among other things, for the access and dissemination of scientific production, which includes publications from a large part of the world. The query was performed with access to all content of peer-reviewed journals that had the exact term in the title.

[8] The methodology of the cited group is also presented by Dalsace (2012).

Institutional Analysis of the Determinants of Economic Non-Take-Off and High Living Standards in Cameroon between 1990 and 2019

By Engonga Mepolia Dévy Dimitri, Ekamena Ntsama Sabine Nadine, Tchakounte Njoda Mathurin & Dawe Daniel

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Abstract- The current economic situation in Cameroon is characterized by a persistent increase trend in the pricing of basic necessities, which is spreading to all other sorts of goods, eroding household purchasing power. The high cost of living is exacerbated because wages, particularly salaries, do not follow the same rising trend as the cost of commodities. Consequently, it is critical to address the dual problem of rising prices and low wealth creation. The goal of this research is to produce a diagnostic that will allow us to recommend a set of economic policy solutions to help Cameroon escape the abyss into which it is currently sinking. We provide an institutional explanation for the return of Cameroon's high living cost, in addition to the existing theories.

Keywords: institutions, high living costs, economic growth, inflation, cameroon.

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Strictly as per the compliance and regulations of:

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I. Introduction

The economic climate in Cameroon is currently characterized by the depreciation of the household basket due to a rise in the general price level, as well as the difficulty in achieving the level of enrichment intended in the 2009 economic strategy (DSCE, 2009). Inflation in Cameroon is also a significant issue of concern, having climbed from 0.17 percent in 2015 to 2.52 percent in 2019. The general price level has increased by roughly 1 382.35 percent since 2015. (WDI, 2019). Furthermore, the growth rate, which was 5.65 percent in 2015, has dropped to 4.2 percent in 2019, a loss of 25.66 percent from 2015. (WDI, 2019).

These observations prompt us to consider the specific factors that can explain the roadblocks to a country's economic development. In terms of the determinants capable of presenting a country's economic status, the economic literature has advanced significantly. Throughout the centuries, many authors have worked hard to provide the forerunners of economic thinking, such as explaining a country's level of enrichment in terms of declining returns from land and population expansion (Ricardo, 1817; Malthus, 1798). It is crucial to highlight, however, that there are now a variety of additional causes for economic growth.

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Foreign Direct Investment is thus presented as a recent factor that significantly promotes a country's enrichment, owing to the technology transfer it induces in the receiving country (Bouiyour et al., 2009), the effects of the resulting opening of markets to international trade (Salaet Trivin, 2014), and the capital accumulation it allows (Hermes et Lensink, 2003). Berg et al. (2012) and Rodrik (2018), for example, put macroeconomic stability, financial development, the quality of public policies, and the institutional environment at the center of their analyses.

Cameroon appears to be following the theories mentioned above since 2009 when the Growth and Employment Strategy Paper (GESP) was developed. As such, this paper illustrates the aims of capital accumulation through structural investments (roads and highways, dams, etc.), promotion of foreign investor entry, reduction of unemployment, and so on. So, Cameroon might become a developing economy by 2035. Cameroon, however, does not appear to be out of the woods at the end of the first phase of implementation of the said strategy, which was completed in 2020, and during the second phase, which began in 2020 with the elaboration of a compass known as the National Strategy for Development to 2030 (NSD-30). In fact, the growth rate in 2020 was 4.96 percent, much below the DSCE's forecast of 5%, and the state's job creation is diminishing, as evidenced by the increase in the unemployment rate to 6.1 percent in 2021 compared to 2020. (According to the National Institute of Statistics report on development indicators in 2021). In addition, a research published in 2018 by the "Laboratoire de Recherche en Economie Mathématique" revealed that Cameroon had received roughly CFAF 9,350 billion in illicit remittances over the past 17 years. In its 21 January 2021 issue, the journal "Quotidien l'émergence" reported that Cameroon had suffered financial losses to the tune of 18 billion FCFA. Furthermore, a request for the departure abroad of 86 civil officials (usually trained in professional establishments), including 60 teachers, was reported in Cameroon's Western region, according to the daily "Actu Cameroun" in its 23 May 2018 issue.

According to these observations, it is essential to note that another indicator of wealth must be sought

in Cameroon, and it is helpful to pay attention to the country's organization and management, such as the quality of its institutions, as presented by Rodrik (2018) following the pioneering analysis of North (1990). These researchers put institutions at the center of economic analysis, claiming that, bad institutions are to blame for a country's economic stagnation.

Institutional analysts' theoretical conclusions found a helpful application in particular empirical work done in Cameroon, which showed institutions as an explanatory factor for specific variables of the country's economic environment. Institutions are thus emphasized as a significant driver of innovation (Eloundou, 2014) or as a determinant in the attraction of Foreign Direct Investment (FDI) (Djaowé et Bouba, 2018). Following this, we provide an institutional explanation for the rising rate of inflation and Cameroon's failure to meet its growth targets as outlined in the DSCE.

Rather than using existing methodologies, we develop a composite proxy that groups the variables of the institutional system to achieve our purpose more effectively. Following that, we build econometric models based on this proxy that explain inflation and growth rate by institutions in order to develop a diagnosis that will allow us to propose accurate and efficient institutional regulations. These regulations will be capable of controlling the galloping evolution of prices and bringing the country firmly towards the path of an emerging nation.

II. Theoretical Framework of the Analysis

a) Effect of institutions on wealth formation

The link between institutions and wealth production is a trend that North (1990) has popularized. Since then, the area of institutional economics has grown significantly, with a diverse spectrum of perspectives. The significantity of ideas on the relationship between institutions and growth have been established to determine how institutions affects economic growth. There are many points of view, and presenting them all would be pretentious; instead, we show the most essential ones.

i. The Evolutionary Approach

The evolutionary approach is a relatively new theoretical approach to institutions that has revolutionized the economic approach to them. It was created in opposition to the functionalist approach, which focuses on the economic functions of institutions. The functionalist view posits that institutions improve economic performance by performing specific functions such as lowering transaction costs, coordinating markets, and reducing market fraud (Coase, 1937; Demsetz, 1957). Institutions are treated as a static fact in this perspective, and their roles in the economy are the only thing that matters.

For evolutionary analysts, this constraint is the beginning point. Institutions evolve according to this paradigm, and it is this evolution that defines a country's economic performance. According to Acémoglu et al. (2006), institutional transformation is influenced by the country's economic development. Thus, the wealthier a country becomes, the better its institutions become, which has a positive impact on growth. According to Amable et Palombarini (2005), institutional transformation is fuelled by social conflict. Low growth rates, high prices, and high unemployment encourage political conflicts, which lead to the formation of new institutions: institutions are thus viewed as a tool for maintaining political equilibrium. Although institutions are changing, it is essential to remember that they are not universal, as they do not yield the same affects in various economies (Lechevalier, 2012; Piketti, 2015).

A method based on learning effect, on the other hand, is being developed. Economic performance, according to this viewpoint, is a product of institutional change, which is achieved through trial and error. Past policies decisions that lead to wrong results have led to a re- evaluation of these decisions and the introduction of new economic regulations that are better than the old ones (Lechevalier, 2011).

ii. The Cultural Approach

Cultural differences or ideological convictions, according to proponents of the cultural approach to institutional analysis, would explain differences in economic growth between countries. Because of their differences in conceptions of "good social values", societies chose different economic systems. Not all societies would have the same view of what is beneficial for their people. This discrepancy is exacerbated by the uncertainty surrounding ex-ante knowledge of good institutions. Countries that prosper are those whose leaders' institutional choices prove to be correct ex-post, that is, those where the discrepancy between the institutions selected and those that maximize aggregate income is modest. Countries where political leaders get it wrong ex-post, on the other hand, tend to stagnate. The cultural approach, like the economic approach, indicates that there are factors at work that prevent countries from selecting institutions that are widely acknowledged to be inefficient for society as a whole (Acemoglu et al., 2005).

iii. The Historical Approach

The historical approach considers institutional quality as a result of historical events. In other words, historical events shape the nature of institutions at a certain point in time, and these institutions persist across time by creating various effects.

Several economists, sociologists, and political scientists have this ideological viewpoint. Authors such as La Porta et al. (1998, 1999), Djankov et al. (2003) have emphasized the impact of the legal origin of the

judicial system on the quality of protection of private property rights or the performance of governments, and they share the historical approach to some extent. In truth, the rules controlling the legal system in many countries are frequently the product of historical events.

b) Inflation: An Institutional Origin?

Daniel (2020) defines inflation as "the loss of money's purchasing power that results in a general and continuous increase in prices." Several economic theoretical investigations have attempted to explain the origins of inflation in a given country.

While there is a substantial body of economic literature on the causes of the general price increase, institutional factors have always been mentioned. They have become increasingly prominent in recent years.

Consequently, the forefathers of inflation analysis, such as Hume (1752), Ricardo (1817), and others, approach the problem via a monetarist lens. According to these scholars, the main reason for market price spikes is the amount of money in circulation in an economy. To this effect, Hume (1752) asserts that if an economy's money supply is doubled, the price of things will be twice as well.

Based on the theoretical observation of the monetary origin of inflation, Keynesians will argue that the government should pursue a monetary interventionist strategy to regulate and control the market's price evolution. However, only more recent research has revealed that the issue is not so much the quantity of money in circulation as it is the trustworthiness of the money handled by institutions. Institutional flaws, according to Huang et Wei (2006), Hefeker (2010) and Dimakou (2013), impair agents' confidence in the currency of the country in question and, consequently, the currency's credibility. Even if inflation has a monetary origin, the institutional imprint cannot be ignored; it is the primary source of the phenomena.

While theoretical theories are focused on explaining a presumed channel between institutions and inflation, there are nevertheless paradigms that highlight the existence of a bidirectional relationship, demonstrating that inflation affects the quality of institutions. According to Braun et Di-Tella (2004), an increase in the general price level leads to a rise in the market's price control expenses. Thus, governmental agents in charge of price control will be harassed or will harass enterprises to collect remuneration for turning a blind eye to specific frauds related to the non-observance of price ceilings in the context of Keynesian economic functioning. Thanks to the rise in corruption, institutions are deteriorating. This phenomena has several ramifications. As the level of corruption increases, the cost of investment rises, discouraging new entrants and reducing overall investment, which limits the number of enterprises in the market, stifling growth.

According to Huang et Wei (2006), a country's exchange rate system has impacts on inflation. The policy choice to adopt a fixed exchange rate system and, thus, a monetary peg has ramifications. In effect, the inking country has better institutions than countries that ink their currency on foreign currencies, causing the latter to look to the inking country as a model. This leads to a tendency to peg to the inking country's inflation rate: this is inflation targeting, which entails setting an inflation rate based on the inflation rate of a model country. Revenues from currency issues and foreign exchange gains are non-existent because the exchange rate is fixed. Accordingly, countries that ink their currency have no choice but to increase the general level of taxation, either through rate increases or by broadening the tax base, increasing the cost of production and, therefore, an increase in the selling price and, ultimately, a reduction in social welfare.

III. EMPIRICAL REVIEW OF THE LITERATURE

a) Some empirical work on the effect of institutions on economic growth

The empirical work that has assigned itself the purpose of evaluating the effect of institutions on economic growth adds to the theoretical arguments regarding the impact of institutions on economic growth. Inequalities in law are presented as the reason for differences in economic performance in the empirical approach that focuses on the legal origins of institutions. In this regard, some works have been developed, such as La porta (1998), Djankov et al. (2002), and Glaeser et al. (2004). The created concept states that differences in economic performance can be explained by the weight of law enacted in each country. Accordingly, the empirical analyses center on comparing the various legal systems around the world. Thus, La porta (1998) finds that in countries governed by the "common law," Anglo-Saxon legal system, the protection of investors' rights and the enforcement of contracts are more crutial, moderately essential in countries governed by the German civil code system, and weaker in countries governed by the French civil code.

Mahoney (2001) used econometric analysis to determine the impact of institutions on growth, concluding that common law nations grew faster than civil law countries between 1960 and 1992. These authors propose several explanations for this phenomenon. According to them, the ease of contracting, the procedural ease of settling conflicts and forming firms etc... are at the heart of the excellent economic performance seen in nations with Anglo-Saxon institutional inspiration, as opposed to countries that follow the civil code.

Along with empirical work that explains differences in economic performance by the legal origin

of institutions, there is an empirical study that points to the colonial imprint as the trustworthy source of institutions in ex-colonized nations in general and developing countries in particular. The core concept of this stream of empirical research is that economic differences are the product of colonial-era institutional differences. The authors of this paper argue that the quality of institutions in place, particularly in developing countries, is influenced by colonial policies.

Acémoglu et al. (2001) used empirical investigations to show that the quality of the laws and rules of the economic game is greatly influenced by the settler's goal. So, they concluded that settlements have superior institutions to exploiting colonies. Therefore, the colonists' desired settlement areas witnessed the construction of institutions similar to the city's. Investing in the establishment of solid institutions, on the other hand, was the last goal in terms of exploitative colonies. Acémoglu, Johnson et Robinson (2001) employed numerous proxies to approximate this reality: the colony's topography, diseases, colonists' life expectancy, and so on. Sachs et Waner (2001) looked at a group of countries from 1950 to 1995 and ran different regressions to determine the importance of geography in income. They began by performing a regression between malaria risk as indicated by its index and per capita income while adjusting for all other variables. The malaria index is inversely connected with growth rates, according to the regression results. After that, they used Rodrik's (2005) equation to refute the premise that location does not affect income in the absence of institutions. Thus, geographical variables such as distance to the sea, Malaria index, and economic variables were considered (trade openness).

Beck et al. (2003) found that ex-European developing nations that utilize French civil law as a template for the organization of their judicial systems are less protective of private property rights than their counterparts who use common law, based on a sample of 70 developing countries. They used the Fraser Institute and Heritage Fundation databases to compile a 1997 index of private property rights protection.

b) *Empirical relationships between institutions and inflation*

The relationship between institutions and inflation has been studied in some empirical research. These investigations revealed that a decline in institutional quality has a significant impact on price level control. Thus, Al-Marhubi (2000) uses the level of corruption as a proxy for the quality of institutions in his study of 41 countries, which includes both developed and developing countries, and finds a positive relationship between corruption and the general price level, implying that a rise in corruption leads to an increase in inflation.

In a related study, Ben et Sassi (2016) claim that a decline in the quality of institutions because of more significant of corruption leads to a fall in cash inflows and, consequently, a fiscal deficit, which will be financed by fiscal pressure, which would result in price increases. The inefficiency in collecting fiscal revenues owing to corruption and embezzlement of public funds is thus the channel via which the decline in the quality of institutions influences inflation (Blackburn et Powell, 2011; Tanzi et Davoodi, 2000).

Inflation, which is frequently associated with adverse effects on growth, can also positively affect the economy if certain institutional conditions are met. This conclusion is reinforced by Mehdi (2021), who recommends an increase in inflation-friendly institutional reforms in Morocco in order to profit from the debt-reduction effect of inflation. Furthermore, assuming that the level of debt remains unchanged, an increase in the general price level leads to an increase in supply and hence output, which leads to a rise in the value of Gross Domestic Product and thus tends to reduce the debt/GDP ratio. Morocco, which has an 80% debt-to-GDP ratio, has an interest in promoting inflation to reduce its debt without resorting to fiscal pressure.

Furthermore, Goel (2010) and Marackbi (2020) re-echoed the cyclical effect of inflation, institutional quality, and economic growth in their empirical investigations. In this regard, whenthe general price level rises, it becomes more challenging to supervise the behavior of economicagents, resulting in an increase in corruption and, so, a decline in the quality of institutions, raising institutional obstacles to investment (red tape, high costs of starting a business...).

IV. METHODOLOGICAL APPROACH

a) *Theoretical basis of the model*

The significantity of empirical studies on the effect of institutions on economic growth can be divided into two categories: those that use a sample of multiple nations and those that focus on a single country. Studies affecting groups of countries tend to formalize dynamic models estimated using the MMG approach and panel data (Kaufmann et Kraay, 2002; Idrissa et al., 2018), whereas studies affecting a single country employ time-iseries data and linear models to analyze the problem (Kaufmann et Kraay, 2002). These models are estimated using either the Ordinary Least Square method (OLS) with the implementation of a specific test (Mauro, 1995), or the VAR estimation method (Djoawe et Bouba, 2018), among other methods.

Due to the fact that this is an analysis of the case of Cameroon, we rely on the empirical framing of Mauro (1995), Abdoul (2010) and Knack et Keefer (1995) to formulate a linear model of institutional growth, a model that will be estimated using time series data and will be completed with a model stability test that assures

the model's non-volatility due to shocks or abrupt changes in institutional measures. Our methodological approach differs from previous studies in that it aims to analyze the institutional system as a whole in order to determine its contribution to wealth accumulation in Cameroon. Thus, our methodology is similar to that of the DEPF (2012), which was out to assess the Moroccan institutional system by developing a proxy that represents all institutional variables and that will be used in a linear model.

We formalize an empirical model inside this methodological framework, using the "systins" proxy, which is built by integrating a series of institutional variables, including:

– The freedom to invest Index;
– Corruption Perceptions Index

– The size of the Cameroonian government;
– The property rights protection Index;
– The index of state regulation of markets;
– The government expenditure Index;
– The freedom to trade Index;
– The financing freedom Index;
– The law enforcement index;
– The index of freedom to trade internationally...

We build a factor based on these institutional indicators that best combines all of these factors and thereby measures the quality of Cameroon's institutional structure. The following is the SPSS output from the development of the proxy representing the institutions in Cameroon:

Table 1: Construction of the proxy of the quality of the institutional system by the PCA method

Components	EXTRACTION OF THE SUM OF SQUARES OF THE SELECTED FACTORS			SELECTED FACTORS	
	TOTAL	OF VARIANCE	CUMULATED	FACTORS	OF VARIANCE
1	3,858	77,119	77,119	1	77,119
2	2,508	8,123	85,242		
2	1,842	4,342	89,584		
4	1,045	3,1234	92,7074		

Source: Authors Computation, using data from the Institutional data base

The Gross Domestic Product growth rate is used as a proxy for the degree of growth in the study sample in empirical studies examining the effect of institutions on growth.

In his comparative research of Anglo-Saxon versus Francophone institutions, Mahoney (2001) employed the Gross Domestic Product growth rate as an endogenous variable and institutions as explanatory variables in his regression model to examine the effect of institutions on economic growth. These studies were thus developed around the explanation of growth rate changes by institutional variances, as well as the incorporation of some control factors such as foreign trade, topography, and distance to the equator. In regard to our research hypotheses, it seems reasonable to keep the Gross Domestic Product growth rate (TxGDP) and the inflation rate (TxINF) as endogenous variables, as well as the indicator of the quality of the institutional system (systins) constructed using Principal Component Analysis (PCA) as an explanatory variable. To better capture the interplay between institutions and economic growth, we include some additional control

variables. In fact, according to New International Trade Theories, institutions stimulate investment however the rate fluctuates depending on the legal environment (Djankov et al., 2003). According to data from the CATO[1] Institute, the private sector makes the most of investments in Cameroon, primarily foreign investments, with public assets accounting for only 14% of overall investments. Accordingly, one of the control variables should be the rate of Foreign Direct Investment inflow (TxIDE) in Cameroon. TxICI, or the degree of integration into international trade, will also be considered.

We employ the "systins" proxy again since the other goal of our study is to look at the combined effect of institutional variables on inflation. This differs from Huang et Wei (2006)'s approach, which used the quality of monetary policies as a proxy for the quality of institutions. We use a number of control variables in addition to institutional quality, all of which are based on

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[1] The CATO Institute, located in Washington, D.C., is a free enterprise advocacy organization established in themid-1970s.

economic theory. So, monetarists believe that inflation has a purely monetary foundation. We keep the rate of change of the money supply (Txmassmo) and the interest rate on savings (Tdi) as control variables in this sense. The World Bank's inflation rate, which captures the evolution of consumer prices, will be used to estimate the inflation variable.

b) Mathematical formalization of the model

$$Txgdp = A.\, systins^{\beta_1}.\, Txici^{\beta_2}.\, Txide^{\beta_3}$$

With β_i the coefficients measuring the influence of the selected explanatory variables.

Because we want our model to be linear, we use the base 10 logarithm to change it into a log-linear model. Then, we have:

$$\log(Txgdp) = \log(A.\, systins^{\beta_1}.\, Txici^{\beta_2}.\, Txide^{\beta_3})$$

$$\Rightarrow \log(Txgdp) = logA + \log(systins^{\beta_1}) + \log(Txici^{\beta_2}) + \log(Txide^{\beta_3})$$

$$\Rightarrow \log(Txgdp) = logA + \beta_1 \log(systins) + \beta_2 \log(Txici) + \beta_3 \log(Txide)$$

A being any coefficient. By setting $log\,(A) = \beta_0$ and integrating the omitted variables noted ε the model can be rewritten as follows:

$$\log(Txgdp) = \beta_0 + \beta_1 \log(systins) + \beta_2 \log(Txici) + \beta_3 \log(Txide) + \varepsilon$$

After formalizing the model in this way, all that remains to be done, is to estimate it using the chosen OLS method and data from the World Bank (for macroeconomic variables) and the Institutional Profile Database (IPD) as described in the previous section, an estimate that will be followed by a CUSUM stability test.

To investigate the impact of institutions on inflation in Cameroon, we formulate a linear model based on Hefeker's (2010) and Huang et Wei's (2010) models. We can construct our empirical model can be constructed by defining inflation as a linear function of the quality of the institutional system and the selected control variables:

$$Txinf = a_0 + a_1 systins + a_2 Txmassmo + a_3 Tdi + \varepsilon$$

a_1, a_2 and a_3 represent the coefficients of each explanatory variable that only need to be calculated.

We put the GDP growth rate in a Cobb-Douglas form mathematical relationship with its selected explanatory variables based on Solow's growth model, which is known as a general model of growth and integrates the results of neoclassicals and Keynesians on growth. Consequently, we can determine the rigth relationship:

V. RESULTS AND INTERPRETATIONS

The Eviews 8.1 program and data from 1990 to 2019 were used to estimate the models that were acquired. Thus, it will be acceptable to show the various outcomes and analyze the discoveries that result from them.

a) Presentation of the results

i. *Relationship between institutions and economic performance in Cameroon*

Before beginning with the regression calculation of parameters, it is critical to ensure that the prerequisites for data fiability and the presence of a relationship between the variables in the study have been verified.

The first condition's verifiability prompts us to use a unit root test, in this case the augmented Dickey Fuller test. The following is the Eviews software's output:

Table 2: Augmented Dickey-Fuller unit root test

VARIABLES	INCREASED DICKEY-FULLER STATISTICS		
	AT LEVEL	IN FIRST DIFFERENCE	DECISION
Tx*gdp*	-3,025646	-4.933941***	I(1)
SYSTINS	-2,564614	-6,977453***	I(1)
TxICI	-2,356180	-6.216533***	I(1)
TxIDE	-1,519813	-8.984447***	I(1)

*, **, *** indicate significance at the 10%, 5% and 1% thresholds respectively

Source: Authors computation, using Eviews software and World Bank data

If the data have no unit root [they are said to be level stationary and denoted I(0)], or if they do, a differentiation is all that is required to make them stationary [they are said to be integrated at order one and marked I(1)]. We note that all of the data in our model are I(1), implying that they are high quality.

The second prerequisite leads us to use the Johansen (1988) cointegration test, which produces the following result in Eviews 8.1:

Table 3: Johansen cointegration test

Series: TxINF SYSTINS TxMASSMO TDI				
Lags interval (in first difference) 1 to 1 Unrestricted Cointegration Rank Test (TRACE)				
Hypothesized no. Of CE(s)	Eigenvalue	Trace statistic	0.05 Critical value	Prob.**
None *	0.856677	61.62443	40.17493	0.0001
At most 1	0.279107	13.05814	24.27596	0.0167
At most 2	0.164332	4.876509	12.32090	0.5849
At most 3	0.015417	0.388424	4.129906	0.0964
Trace test indicates no cointegration at the 0.05 level *denotes rejection of the hypothesis at the 0.05 level **MacKinnon-Haug-Michelis (1999) p-value				

Source: Authors computation, using Eviews software

Only the "none" hypothesis (no association between the variables) is marked with a star in the table above, and thus must be rejected: our variables have a long-term relationship.

We can now proceed with our model's regression after confirming the two conditions for estimation.

Table 4: Estimation by MCOs

| Dependent Variable: Log(Txgdp)Method: Least Squares				
Date: 03/08/21 Time: 06:14Sample: 1990 2019				
Included observations: 30				
Variable	Coefficient	Std.Error	t-statistic	Prob.
C	3, 359792	0,488038	6,884285	0,0000***
Log(SYSTINS)	-0,185110	0,232562	-0,795959	0,0370**
Log(TxICI)	0,055689	0,085495	0,651377	0,0042***
Log(TxIDE)	-0,249589	0,232562	-2,085935	0,0116**
R-squared	0,719210	Mean dependent var		0,524214
Adjusted R-squared	0,686811	S.D. dependent var		0,240694
S.E of regression	0,134700	Kaike info criterion		-1,047961
SumSquared resid	0,471749	Schwarz criterion		-0,861135
Log likelihood	19,71942	Hannan-Quinn		-0,988194
F-Statistic	22,19858	Durbin watson		1,393954
Prob(F-statistic)	0,000000			
Prob(Wald F-statistic)	0,000000			

*, **, *** indicate significance at the 10%, 5% and 1% thresholds respectively
Source: Authors computation, using Eviews software

We can see from the table above that all variables are individually significant because the p-values are all smaller than either 5% or 1%. Furthermore, the Fisher probability value is 0.0000, indicating that the model is overall significant at the 1% level. The adjusted coefficient of determination of the regression has a value of 0.6868, indicating that the selected variables explain 68.68 percent of the variability in the endogenous variable.

The model calculated exhibits statistical properties of fiability; thus, we conduct a CUSUM sensitivity test to ensure that it is stable over time. The following is the output of the Eviews 8.1 software:
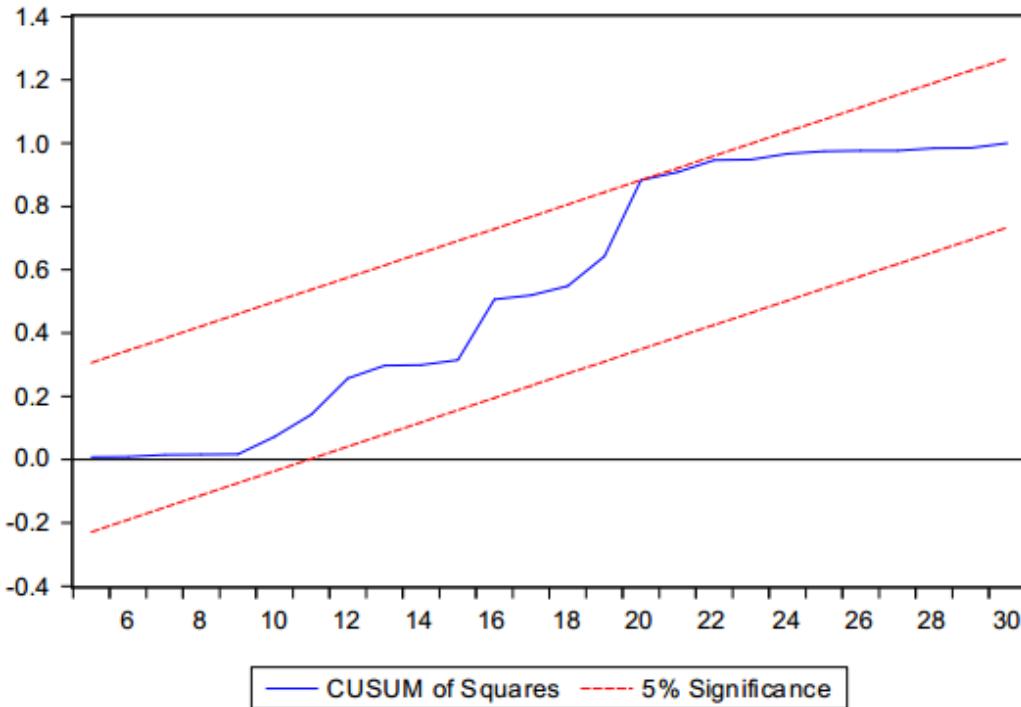
Source: Authors computation, using Eviews software

Figure 1: CUSUM stability test

The figure above indicates that the model's fluctuations curve (shown in blue) does not pass any of the two-tailed 5% test boundaries, indicating that the estimated model is stable. Then, the model's validity is no longer questioned.

ii. *Relationship between institutions and inflation in Cameroon*

Verifications before estimation enable us to conduct tests of data fiability (ADF stationarity test) and the existence of a long-term link between the variables picked, in accordance with econometric rigor (Johansen test). The following are the findings of these tests:

Table 5: ADF test

VARIABLES	INCREASED DICKEY-FULLER STATISTICS		DECISION
	AT LEVEL	IN FIRST DIFFERENCE	
SYSTINS	-2,564614	-6,977453***	I(1)
TxMASSMO	-3,454455	-4,517060***	I(1)
TxINF	-4,565466	-5.508423***	I(1)
TDI	-3,547365	-4,256880***	I(1)

Source: Computed by authors, using Eviews 8.1

Table 6: Johansen test

Hypothesized no. Of CE(s)	Eigenvalue	Trace statistic	0.05 Critical value	Prob.**
None *	0.856677	61.62443	40.17493	0.0001
At most 1	0.279107	13.05814	24.27596	0.0167
At most 2	0.164332	4.876509	12.32090	0.5849
At most 3	0.015417	0.388424	4.129906	0.0964

Series: TxINF SYSTINS TxMASSMO TDI
Lags interval (in first difference) 1 to 1 Unrestricted Cointegration Rank Test (TRACE)

Trace test indicates no cointegration at the 0.05 level
*denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-value

Source: Computed by authors, using Eviews 8.1

An examination of the above findings reveals that all of the data are stationary as integrated of order one (see Table 5). Also, because the assumptions about the existentiality of mathematical equations are accepted at the 5% threshold, the existence of a long-run link cannot be challenged(see Table 6).

We can then use the Eviews 8.1 software to estimate our empirical model using the OLS approach. The following are the outcomes:

Table 7: Model estimation

Dependent Variable: TXINFMethod: Least Squares
Date: 08/02/21 Time: 21:17Sample: 1990 2019
Included observations: 30

Variable	Coefficient	Std.Error	t-statistic	Prob.
C	43,5353	15,0478	2,8931	0,0084***
SYSTINS	0,3265	0,0162	3,2248	0,0037***
TxMASSMO	0,1731	0,0645	2,6830	0,0125**
TDI	0,0206	0,0012	2,5104	0,0140**

R-squared	0,6763	Mean dependent var	3.7840
Adjusted R-squared	0,5608	S.D. dependent var	7.2940
S.E of regression	631,0607	Akaike info criterion	6.4007
SumSquared resid	5,3557	Schwarz criterion	6.7307
Log likelihood	-85,8107	Hannan-Quinn	6.504105
F-Statistic	4,9889	Durbin watson	1.912648
Prob(F-statistic)	0.0023	Wald F-statistic	32,08122

*, **, *** indicate significance at the 10%, 5% and 1% thresholds respectively
Source: Computed by authors, using Eviews 8.1

The model calculated in this approach has significant p-values of either 1% or 5%, indicating the individual significance of each variable. Furthermore, the calculated Fisher attacha probability of 0.0023, making the model significative at 1%: the entire significativity of the model is thus an effectivity. Furthermore, the

corrected coefficient of determination is 0.5608, indicating that the explanatory factors selected account for 56.08 percent of the variability in the endogenous variable. Given these qualities, it is evident that the model's suitability as a foundation for economic analysis has been established, and we may now move to economic interpretations of the estimated model.

b) *Discussion of results*

i. *The effect of institutions on economic performance in Cameroon*

From the aforementioned analysis, -0.185110 is the value of the metric reflecting the impact of institutional quality on the GDP growth rate. As can be shown, the quality of Cameroon's institutions hurt the country's growth on a scale of 18.5110 percent. Accordingly, a 1% change in institutional measures corresponds to an 18.5110 percent drop in economic growth.This is in contrast to the findings of Mehdi (2021) in Morocco, we revealed that the quality of institutions has a favorable but limited impact on economic growth. What is the best way to comprehend this phenomenon? There are several possible explanations. First and foremost, Cameroon is ranked as one of the most corrupt countries in the world, as we previously stated, with serious economic effects, as evidenced by a research conducted at this time. In his analysis, Nabil (2017) shows how corruption hurts Cameroon's economic growth by reducing private investment, education levels, and government spending. An examination of the growth of corruption's influence over the previous five years reveals that much work has to be done in Cameroon to clean up the corruption problem:

Table 8: Evolution of corruption in Cameroon for the last five years

Years	Corruption Perception Index	
	Value in % of total	Variation
2015	25	14%
2016	27	8%
2017	17,4	-36%
2018	20,06	15%
2019	20,08	0%

Source: Computed by authors, using IPD data

Furthermore, embezzlement of public funds, which is a common occurrence in Cameroon, is a significant economic bottleneck because it significantly reduces the budgetary pot available for the development of public infrastructure, which, in Barro's opinion, is one of the conditions for economic development because it promotes industrialization. This result confirms Cameroon's ranking of 22nd out of 38 African countries examined by the World Bankin terms of institutional and governance quality.

The metric indicating the impact of international trade integration on GDP growth rate has a value of 0,055689. This contrasts with the results observed in the Democratic Republic of Congo, where a 1% change in commerce with the outside world causes a 1.249 percent change in GDP, and in Morocco, where commercial integration had a negative impact on growth of 0.3percent. This characteristic in Cameroon has a low value, with a 5 percent influence on growth. This could be because Cameroon's efforts to produce manufactured goods have yielded ineffective results, therefore it's comprehensible why the country's imports of goods and services are so high. Cameroon has a shallow level of high-tech exports, with only low-value-added products accounting for the significantity of exports, demonstrating once again the failure of Cameroon's industrialisation policy, which began with five-year plans and continued through industrial free zones (IFZs) and master plans for industrialisation.

The Foreign Direct Investment inflow (FDI) rate, on the other hand, is -0.249589, indicating that Cameroon's institutions have contributed to the slowdown of economic growth through an indirect channel: discouraging foreign investors, with a foreign capital inflow rate of 2.326 percent in 2017 falling to 2.017 percent in 2019, according to World Bank data. What is the best way to comprehend this reality? Several recent studies have identified institutions as a key determinant of growth through the promotion of FDI, which has a well-known impact on growth. In fact, according to Djaowé et Bouba (2018), political stability, the business climate, and good governance are among the factors of FDI in Central Africa, and in Cameroon in particular. Institutional quality's role as a determinant of FDI in Cameroon is thus no longer debatable, and it is now part of a theoretical framework that sees FDI as reliant on it. Furthermore, given the social environment, which is characterized by periodic security crises, how can we failto comprehend the outcome of the estimate? An examination of the evolution of FDI inflows to Cameroon over the previous five years reveals that the country still has work to do:

Table 9: Trends in corruption for the past five years

Years	FDI inflows	
	Value in % oftotal	Variation
2015	2,245	8%
2016	2,034	-9%
2017	2,326	14%
2018	1,977	-15%
2019	2,017	2%

Source: Authors computation, based on PDI data

The net variation in FDI from 2015 to 2019 ranged from 8% to 2%, with a peak of 14 percent in 2017, which might be ascribed to the rise in social insecurity with the extent of the security problem in the North-West and South-West Regions of the country, as shown in the table above. This situation has the unintended consequence of contributing to Cameroon's low level of investment when compared to similar countries, as illustrated in the graph below:
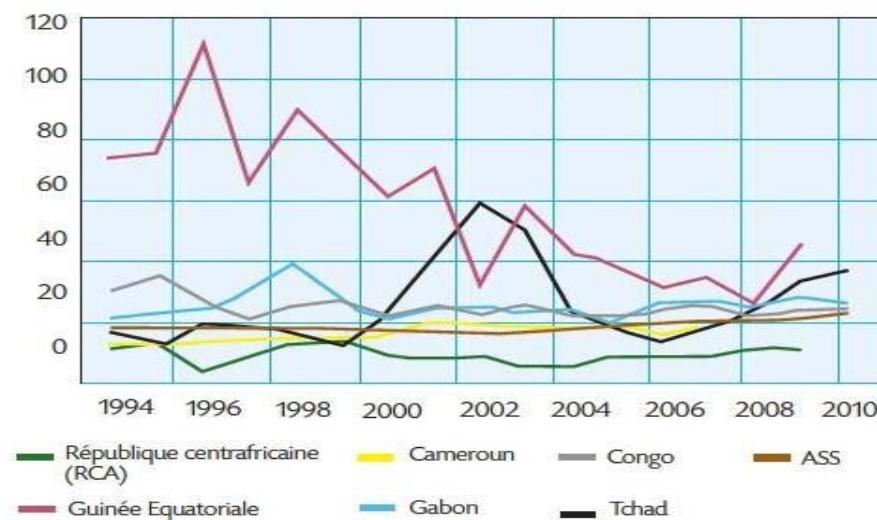
Source: World Bank, World Development Indicators (WDI, 2010)

Figure 2: Gross capital formation fixe of CEMAC countries

This low level of investment, along with an increasingly visible fall in private investment (of which a significant part is foreign investment), as seen in the graph below, is not conducive to the country's economic progress.
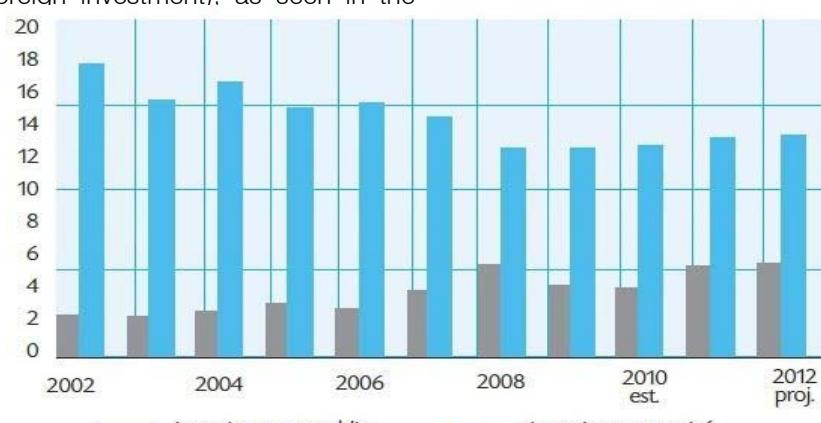
Source: World Bank, World Development Indicators (WDI, 2010)

Figure 3: Public investment/private investment

Thus, the results of our regression reflect the reality of Cameroon, where the industrial sector is struggling to take off.

ii. *The effect of institutions on inflation in Cameroon*

The metric quantifying the effect of institutions on inflation is +0.3265, which suggests that a change of 1% in institutional measures causes a 32.65% increase in inflation. This indicates that Cameroon's institutional framework is struggling to keep the market's pricing level under control. Insofar as there is an unprecedented price spike in the markets, this outcome corroborates empirical data. This phenomenon is illustrated in the table below:

Table 10: Evolution of inflation for the last five years

Years	Inflation Rate
2015	0,179
2016	1,094
2017	1,48
2018	1,59
2019	2,59

Source: Authors computation based on World Bank data

The following table depicts how the Cameroonian market is characterized by an upward tendency in the general level of consumer prices, indicating the difficulty of public authorities in controlling market pricing, despite several reforms made by the Ministry of Commerce.

The value of 17.21%, implies that the money supply in circulation in the economy favors price inflation. In the specific situation of Cameroon, the notion that inflation is caused by money is thus validated. Consequently, a 1% change in the money supply results in a 17.31% increase in the price level. This minimal influence of the money supply on prices (32.65%) can be explained by the fact that the choice to modify the money supply is an external factor becausethe country is in a monetary zone. The occurrence of uncertain events, such as foreign exchange gains on external claims, is thus reduced to the increase in the money supply. Cameroon's moneysupply expanded from 4.897,5 billion francs in 2019 to 5.598,7 billion francs in 2020, indicating a rise of 14%, thanks to counterparty upgrades (external claims) ("Investir au Cameroun," 17 June 2020 issue).

The interest rate coefficient is 0.0206, indicating that a change in the interest rate of 1%results in a price rise of 2.06 percent. In the example of Cameroon, the economic theory of price sensitivity to interest rate increases is confirmed. Then, an increase in the interest rate raises the cost of bank loans, which raises manufacturing expenses and, then, prices. Furthermore, rising credit costs cause a crowding out of bank credit, which reduces investment and, consequently, paralyzes supply. Because demand has remained constant and has grown to outnumber supply, price fluctuations are unavoidable.

But, beyond the theory, this result could also be explained by the situation of excess liquidity of Cameroonian banks, which do not finance enough investments, particularly SMEs, which are the most numerous and least eligible for any financing: with the cost of credit, the conditions of access to credit, among others being inaccessible to them. Therefore, investments low continued to remain due to high credit costs combined with difficult conditions for SMEs, thus, the most numerous enterprises in Cameroon (75 percent according to the 2009 General Census of Enterprises), are compounded by increasing fiscal pressure (with the new 2022 finance law that plans to tax money transfers by telephone money and income created by tontines), the prices charged are rising, allowing imports to flourish.

VI. CONCLUSION

Our analysis uncovered some significant areas that we should take into consideration in order to address the concerns of services and earnings in our daily lives. We can see that an institutional origin in Cameroon is the primary cause of household predicaments relating to the depreciation of the consumption basket, which is caused by an increase in prices and isexacerbated by income stagnation. So, it is critical to take remedial actions to clean up the institutional environment in order to ensure the population's well-being, which is the state's prerogative. The following aspects are developed through suitable solutions:

– Strengthening the fight against corruption

Despite the fact that government anti-corruption measures have been multiplied for nearly two decades, such as "Operation Sparrow Hawk," the establishment of the Anti-Corruption Commission, which has implemented a national anti-corruption strategy, and a

slew of other initiatives, one thing is clear: the problem persists. The phenomenon has grown to the point where it is difficult to know where to begin. It appears to have become the accepted practice among citizens. It is now common knowledge that you must motivate a cashier in order to receive your salary or any other payment (especially if the amount is significant), and that a file or letter that is not "followed up" is likely to be lost in the offices... Consequently, the phenomenon causes significant losses for both households (according to Transparency International, families spend an average of 102,500 francs per month on bribes, which is significantly more than the monthly salary of some senior civil servants) and the state (according to Samuel Ekoum, president of the Cameroonian Non-Governmental Organization named SOS Corruption, Cameroon loses an average of 400 billion francs per year due to corruption). Thus, stronger measures are needed to deter such behaviors, which are sometimes the result of bureaucratic red tape and procedural formalism, orchestrating the use of money to abbreviate these procedures.

– Strengthen efforts to consolidate public finances

It is confusing to attribute Cameroon's low investment budget to the country's financial woes, given the minimal amount allotted to public investments and the outrageous misappropriation of public funds. Given this, it becomes almost impossible not to infer that the significant issue is the quality of governance rather than the budget deficit. Few managers of Cameroon's public service have escaped being imprisoned because of the intractability of a few billion francs. Therefore, there is still a lot that can be done to improve the quality of public financial management. Beyond "Operation Sparrow Hawk," which focuses on catching "pickpockets," repressive and even deterrent measures should be implemented as soon as possible. In reality, rather than incarceration, which is an additional cost to the state, measures aimed at retrieving concealed sums of money must be established. It would also be necessary to establish legislation to deter future attempts at embezzlement. It is essential to create a public management audit system based on a strategy that is more focused on sticks than carrots.

Faced with a resurgence of high prices in Cameroon, the source of which, as our empirical study shows, is institutional, there is an urgent need to implement reforms that are firmly geared toward the control and regulation of market prices, rather than actions that are part of "institutional posturing." We recommend the following measures to achieve this goal:

– Promote "made in Cameroon good" in order to reduce imports and therefore imported inflation

Cameroon's trade balance is unstable due to a high gap between imports and exports, which has the effect of introducing inflation into the markets from across the border. So, it is critical boosting national manufacturing through funding projects led by qualified young people, as well as the establishment of local raw material transformation enterprises.

– Develop inflation control measures, including inflation targeting

The Cameroonian government must ensure that prices are stabilized to keep the currency's purchasing power at an adequate level to fulfil better the goal of improving the population's well-being. Then, it would be prudent to establish an inflation target rate that must be adhered to on the markets, as well as to ensure that this rate is applied effectively through market raids by control teams established for this reason.

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Economy between Necessity and Luxury. Business Ethics from Antiquity to Early Modern Times

By Strosetzki, Christoph

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Abstract- From ancient and modern writings instructing the great landowner on how to deal with agriculture and forestry, with his servants, vassals and slaves, the question is raised as to the relationship between the organization of the great house as an agricultural production facility and the modern economy. The hypothesis to be confirmed is that it is precisely its normative approaches that can be corrective of the current economy and thus support the claims of current ecology. This hypothesis has an implication: the environment as a world of objects is constituted by the subject, that is, by the values of the individual, by the knowledge with which he interprets the world and by his relationship with his fellows, who belong to his world and with whom he interprets it. If one wants to understand the environment as an object, then one must begin with the subject. The subject, but also his house, is the microcosm that corresponds to the macrocosm of the environment.

ECONOMYBETWEENNECESSITYANDLUXURYBUSINESSETHICSFROMANTIQUITYTOEARLYMODERNTIMES

Strictly as per the compliance and regulations of:

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Keywords: business ethics, economy, luxury, necessary, modesty, achievement, agriculture, decadence.

Introduction

Species extinction, agricultural monocultures, factory farming, plastic waste in the oceans, melting of the polar ice caps, glacier melting, rising sea levels, the ozone hole, global warming, acidification of the oceans, acid rain, forest dieback, deforestation for the extraction of fields, nuclear waste and overfishing show ecological sins that must be avoided. Unlimited economic growth no longer seems possible, because the necessary materials on earth are only available in limited quantities. While the *Club of Rome* had pointed out the limits of earthly resources in 1972, today we know about the finiteness of the supplies of oil, sand, metals and rare earths. This brief introductory reflection contains two important key concepts: sin and limit. Both are normative: the former because it forbids actions, the latter because it calls for thrift.

In this context, ecology, as introduced by Ernst Haeckel (1834-1919) in 1866, initially denoted a descriptive term: "By oecology we understand the whole science of the relations of the organism to the surrounding external world, whither, in a broader sense, we may reckon all 'conditions of existence.'"[1] This discipline underwent a transformation in the 1970s and 1980s when it became the leading science of the ecology movement. It acquired a goal and became normative, as "ecological" became synonymous with sustainable, environmentally sound, considerate, and good. And "eco" as in "organic," e.g., organic farmers or green electricity, became a mark of quality. Ecology is now understood as a task and as environmental protection, which serves the preservation of the living environment of humans and their health. Sustainability aims at the considerate and long-term use of resources, whose ecosystems are to be kept in natural balance.

Ecocriticism, which is the subject of our conference, has its origins in the Anglo-Saxon world, where, according to Cheryll Glotfelty and Richard Kerridge, it emerged in the eighties and nineties, and according to Ken Hiltner even in the sixties and seventies of the last century. It is defined by Cheryll Glotfelty as the "study of the relationship between literature and the physical environment"[2]. "Ecocriticism explores the ways in which we imagine and portray the relationship between humans and the environment in all areas of cultural production."[3] It leads from the romantic author Wordsworth or from Thoreau, who lived a simple life in the woods for two years, to *Google Earth* or Werner Herzog's film *Grizzly Man* about an animal rights activist who lived with grizzly bears in Alaska for 13 summers. From this broad field, a specific theme will be selected in the following. Based on ancient and modern writings that instruct the great landowner how to deal with agriculture and forestry, with his servants, his vassals or slaves, the question arises of relationships between the organization of the great house as an agricultural production site and modern economics.

Incidentally, if we take the Greek word as our starting point, ecology and economy mean roughly the same thing. Both have formed from the Greek word for "house", "oikos", supplemented by "nomos", "law" and "logos", "reason" and "word" respectively. In the following, we will ask whether and to what extent the ancient literature of the house fathers, also called

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[1] Ernst Haeckel, Generelle Morphologie der Organismen, Berlin 1866, p. 286. The translations from German are ours.

[2] Cheryll Glotfelty, Literary Studies in an Age of Environmental Crisis, in: Cheryll Glotfelty and Harold Fromm, The Ecocriticism Reader, The University of Georgia Press, Athens and London, 1996, XV-XXXVI, here XVIII; Richard Kerridge, Introduction, in: Richard Kerridge and Neil Sammells, Writing the Environment: Ecocriticism and Literature, Zed Books, London, New York 1998, p. 8; Ken Hiltner, First-Wave Ecocriticism, in: Ken Hiltner (ed.), Ecocriticism. The Essential Reader, Routledge, London and New York 2915, p. 1

[3] Greg Garrard, Ecocriticism, Routledge, London, New York, 2012, cover

economists, and their descendants in the early modern period are of interest today. The hypothesis to be confirmed is that it is precisely their normative approaches that can be a corrective to contemporary economics and thus support concerns of contemporary ecology. This hypothesis has an implication: the environment as a world of objects is constituted by the subject, i.e., by the individual's values, by the knowledge with which he interprets the world, and by his relation to the fellow human beings who belong to his world and with whom he interprets it. If one wants to understand the environment as an object, then one has to start with the subject. The subject, but also his house, is the microcosm with which the macrocosm of the environment corresponds.

A central work of ancient literature on agriculture is Virgil's *Georgica*, which he wrote between 37 and 29 BC. The Roman author advises man to adopt an attitude of reverence when he cultivates nature with diligence. It is the will of Jupiter, he says, to see man work. Virgil deals with agriculture, fruit-growing, viticulture, animal husbandry and beekeeping. That he sees these disciplines of knowledge in a social context is shown by his description of the bee-state, which he presents as a model for the Roman state. The bees, with their loyalty and diligence, their sociability and division of labor, appear to him as heirs of the Golden Age. In Virgil, agriculture is thus related to virtues, situated in the state as whole and idealized with the model of the bee-state. The *Georgica* thus becomes one of the sources of early modern instructions for the large landowner, who had to organize the work in his house and on his lands. Another source was the literature of normative economics.

In ancient Greece, economics was part of practical philosophy and ethics. It dealt with what should be and established norms for the order of the house, the principle of which was self-sufficiency. In the face of extensive self-sufficiency, the market only had a supplementary function. Within the framework of the community, the good will of all ensured that, in reciprocity, one shared the burdens of the other and that, in a just exchange, whoever had too much of one thing gave it to whoever had too little. This can be seen as economic ethics or as an anthropological perspective in which man is the measure of all things. Ancient economics starts from the householder and his relationship with his wife as his helper, then comes to the children, the household members, the servants, the slaves, the friends and neighbors, before looking at the wealth in movable and immovable goods, followed by the procurement of means for the household members through intrahousehold provision or through extrahousehold acquisition.[4] Aristotle advises: "But what

is natural must be gauged from those things which are in their natural state, not from those which are corrupt."[5] Xenophon's *Economics*, a dialogue Socrates conducts with others, also discusses the generation of surpluses that occur where the household is managed thoughtfully, purposefully, and with diligent work. The surpluses thereby make it possible not least for the landlord to fulfill public and private obligations, whose costs only a wealthy person can carry. Finally, the management of a house with agriculture is an appropriate occupation for polis citizens. After discussing marriage and the tasks of husband and wife in the house, Xenophon finally emphasizes the ability of the master of the house to motivate his subordinates to top performance, like a commander or politician.[6]

In Aristotle, man as a *zoon politikon*, as a being designed for society, is the starting point of economics. Economic purposes are the maintenance of the household community, procreation and child rearing. The house forms the basis for the larger and higher community of the polis, which is why Aristotle places his discussion of economics in the first book of *Politics*. While the house provides for daily living together, needs of the military, law, and religion that go beyond that are carried within the framework of the polis. The smallest social grouping is the house, which is conceived as a self-sustaining unit where lacking goods are acquired by giving surplus products in exchange or by purchase. This supplementary satisfaction of needs distinguishes Aristotle from acquisitiveness, which aims at unlimited profit-making for its own sake. The latter, chrematistics, seems unnatural to him, since it does not serve to secure subsistence and stops at what is necessary for a perfect life.[7] The good *oikonomos* has the virtues of prudence, diligence, and thrift, while the bad one is guided by sloth, carelessness, and unrestrained desires. Aristotle therefore urges "that the care of the *oikonomos* be directed more to men than to dead property, and more to the excellence of the former than to the abundance of the latter, which we call wealth."[8]

Among the Romans, it was first Marcus Porcius Cato, the Elder (234-148), whose book *De agricultura* deals with the income to be derived from an estate. Unlike Aristotle, he gives preference to the areas that bring the most profit. This, however, is contradicted by the pedagogical principles he handed down on the conduct of life, in which he rejects luxury and calls for a return to the *mos maiorum*: "You care a lot about food and you care very little about a proper life." Or, "I would rather compete with the bravest for valor than with the richest for riches or with the greedy for covetousness."

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[4] Cf. Erich Egner, Der Verlust der alten Ökonomik. Seine Hintergründe und Wirkungen, Berlin Duncker & Humblot, 1985, p. 25

[5] Aristoteles, Politik, Eugen Rolfes ed., Meiner, Hamburg, 1995, p. 9 (1254 a)
[6] Cf. Julius Hoffmann, Die „Hausväterliteratur" und die „Predigten über den christlichen Hausstand", Beltz, Weinheim, Berlin 1959, p. 8-10
[7] Aristoteles, Politik, I, 1258 a
[8] „Cf. Julius Hoffmann, Die „Hausväterliteratur"

Or, "I am reproached for not possessing many things, but I reproach those for not being able to do without them."[9] In 170 chapters, Cato gives advice on the purchase of an estate, the construction of buildings, the relationship of the lord of the manor to his subjects, the care of health and the sick, and religious worship.[10] In Marcus Tullius Cicero (106-43), it is nature, or the reason that prevails within it, that guides dutiful action. Guiding concepts here are *decorum*, propriety, control of the passions, right measure, *honestas*, honor, *verecundia*, sense of propriety, and *ornatus vitae*, a sense of beauty. In the Stoic view, what is produced on earth "is created for the benefit of men, but men are begotten for the sake of their fellow men, that they, one to another, may of themselves be mutually useful, so in this we must follow nature as a guide, making common benefit central by reciprocity of benefits."[11] Thus, the doctrine of life management is the basis for stewardship. This makes clear that dealing with fellow human beings and with the object world is borne by the subject. Thus, if one wants a certain way of dealing with the environment, then, according to ancient conception, it is not the environment but the subject that must be taken as a starting point.

In patristics, Christianity shifts interest to the afterlife and the inner life of the individual. The fact that man was granted only a limited right to use the goods of the world resulted in an ascetic attitude in housekeeping, the demand for moderation in the pursuit of profit and the rejection of unlimited profit. Expenditure in excess of need appears as abuse. Society appears as an organism characterized by solidarity, piety and authority, so that modesty, moderation in material demands and exchange justice become basic principles.[12] Labor was held in such high esteem that profit without labor was considered unjustified, as in the case of the taking of interest. For Augustine, food and drink serve health and not pleasure: "What is already enough for health is still too little for pleasure. And it is often uncertain whether the necessary care for the body asks for help or whether already mendaciously lust and desire demand only service."[13] Thomas Aquinas limits the competitive thinking by the fact that each individual remained permanently bound to his profession in the organic system of the society of estates.[14] In the Middle Ages, the space of the home is also demarcated from that of

the state by distinguishing between private interest, services and taxes of public law origin, although it was not until the absolutist theorist of the 17th century that a precise distinction was made between the "seigneurie publique" of the king and the "seigneurie privée" of landed property. Upon the protection of the landlord rests the tranquility and security of peasant existence.[15]

Leon Battista Alberti (1404-1472) will be presented as an example of early economics in the humanist spirit. His three-part work *Della Famiglia*, published in 1434 and 1441, poses the question of the rise and decline of a family in dialogue form.[16] He defines housekeeping as the opposite of wastefulness and as care towards things.[17] For him, housekeeping also means, in Aristotelian terms, using as much of what one has as is necessary and keeping the middle ground between too little and too much.[18] To the individual he assigns the task of keeping his body healthy and strong, of bringing his soul into a cheerful mood through virtue, and of spending his time sensibly, i.e. avoiding wasting time. Alberti holds up work as a value against idleness, with his humanistic approach characterized by secularization, the pursuit of happiness, and the pursuit of utility. In the foreground is the demand to teach virtue, to control oneself and to reject one's own cravings and desires.[19] Frugality serves to have money when, for example, it is important to help a sick person, who is more important than money.[20] Frugality harms no one, rejects desires and preserves the family, while wastefulness attracts mendacious flatterers who disappear like fish as soon as the bait is gone.[21]

Regarding the relationship between body and mind, Alberti emphasizes that with the mind, memory and reason, divine gifts are given to man to distinguish what he should avoid and what he should strive for in order to preserve himself rightly. Self-control serves to restrain excessive desires through shame, moderation, and desire for praise.[22] For Alberti, man is by nature fitted to use things and born to be happy. Happiness, some think, is having nothing to spare, and striving for wealth. Others see happiness in the state of feeling no displeasure, and indulge in pleasures and delights.

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[9] Cf. Erich Egner, Der Verlust der alten Ökonomik. Seine Hintergründe und Wirkungen, Berlin Duncker & Humblot, 1985, p. 35

[10] „Predigten über den christlichen Hausstand", Beltz, Weinheim, Berlin 1959"

[11] Marcus Tullius Cicero, De officiis. Vom pflichtgemäßen Handeln, H. Gunermann (ed.), Stuttgart, Reclam 1976, p. 23 (I, 7)

[12] Cf. Erich Egner, Der Verlust der alten Ökonomik. Seine Hintergründe und Wirkungen, Berlin Duncker & Humblot, 1985, p. 69-71

[13] Augustinus, Confessiones, 10. v., chap. 31

[14] Cf. Erich Egner, Der Verlust der alten Ökonomik. Seine Hintergründe und Wirkungen, Berlin Duncker & Humblot, 1985, p. 72f

[15] Cf. Otto Brunner, Land und Herrschaft, Rohrer, Wien, Wiesbaden 1959, 4. Aufl., p. 242, 243, 265

[16] Cf. Erich Egner, Der Verlust der alten Ökonomik. Seine Hintergründe und Wirkungen, Berlin Duncker & Humblot, 1985, p.88-97

[17] Leon Battista Alberti, Della Famiglia. Über das Hauswesen, Artemis, Zürich, Stuttgart 1963, p. 185

[18] Leon Battista Alberti, Della Famiglia. Über das Hauswesen, Artemis, Zürich, Stuttgart 1963, p. 211

[19] Leon Battista Alberti, Della Famiglia. Über das Hauswesen, Artemis, Zürich, Stuttgart 1963, p. 67

[20] Leon Battista Alberti, Della Famiglia. Über das Hauswesen, Artemis, Zürich, Stuttgart 1963, p.154

[21] Leon Battista Alberti, Della Famiglia. Über das Hauswesen, Artemis, Zürich, Stuttgart 1963, p. 209

[22] Leon Battista Alberti, Della Famiglia. Über das Hauswesen, Artemis, Zürich, Stuttgart 1963, p. 170

Others, less sensually oriented, see happiness in being honored and appreciated by others. Real happiness, however, can be achieved for oneself and one's own only through good, righteous and virtuous works. The latter are those in which there is no suspicion, no involvement of anything dishonorable.[23] Virtue, then, for Alberti, is the basis of happiness, whereby the dominion of the mind over the body avoids waste.

The "domestic fathers' literature", as the economists of the 16th to 18th centuries are also called, since they describe the cosmos of the early modern whole house, proceeds equally from humanistic approaches such as Alberti's and Christian sermons. Here, alongside religious and moral duties, there is advice on farming, viticulture and gardening as well as animal husbandry, weather rules, astrological explanations and epistolary formulations. Popular in Germany was the priest Johannes Coler (1593-1603) with *Oeconomica ruralis et domestica*, which rejects the widespread disdain for agriculture and refers to the home as a monarchy in miniature, where wife, servants and children should follow the landlord. The *Georgica curiosa* (1682) by the landed noble Wolf Helmhardt von Hohberg demands reason, justice and kindness from the landlord instead of excessive harshness. He discusses in detail how the householder should behave towards God, his own passions, his wife, his children and his servants. Only then does he discuss agriculture, animal husbandry, bees, forestry and hunting. A late work is *Der Hausvater* by O. von Münchhausen (1764-1773). Characteristic of these texts is that they start from man and deal with the objects of nature only after they have presented his values and attitudes.

Only in passing should we mention the Protestant and Calvinist economists who, against the background of the doctrine of predestination, cultivated Puritanism, in which occupational success justified the assumption of the divine redemption of the believer in the hereafter, whereby the Lutheran had to prove himself in the respective occupation and in Calvinism occupational changes were possible. In Puritanism, secular thinking is imbued with religious considerations, as when, for example, John Milton makes the rise and fall of civil societies dependent on the virtue of discipline: "Discipline is not merely the removal of disorder, but, if divine things can somehow be given visible form, so as the visible embodiment of virtue."[24] Discipline means the avoidance of wasting time. Inner-worldly asceticism is what Max Weber calls the Puritan and Calvinist intensity of work, modesty of demands, and frugality combined with the rejection of pleasures such as going to the theater, dancing, and gambling.

Diligence, moderation and self-control appear here as the main virtues.[25] This ascetic lifestyle, a rational shaping of the whole of existence oriented to God's will, attempts to transform everyday life into a rational life in the world and yet not of this world or for this world, although chrematism, rejected since Aristotle, with its hunger for economic gain then awakens in the Puritan context as an economic virtue to a new flowering.[26] But here, too, the reason of the subject dominates when the object world is met with virtue and discipline.

In Spain, the genre of domestic fathers' literature is divided into two parts: On the one hand, there are texts that orient the figure of the householder to that of the prince in the princely mirrors; on the other hand, one finds morally and politically oriented texts on agriculture. To the former genre belongs *El perfecto señor* (1626, 1653) by Antonio López de Vega. Love of God and fear of God come first in his explanations of the spirit of the householder. This is followed by disciplines of knowledge such as rhetoric, history and philosophy, which he is supposed to deal with without becoming conceited. Moral philosophy and practice, however, seem more important to him.[27] In dealing with subordinates, he is to consider "que la comodidad, i riqueza de los vassallos, haze ricos à los señores; i su maltratamiento, i pobreza los empobreze."[28] "En la Economica de su familia,"[29] he said, great caution was needed. "Cuide, cuide, i sepa del orden, con que en su casa se procede: la cantidad, i calidad de sus rentas: quando, i como se cobran, i destribuyen: si estan quixosos los criados (en cuya informacion consiste gran parte de la reputacion de los Señores) i si cada uno acude con cuidado, i suficiencia, a lo essencial de su ministerio."[30] He said that less important tasks should be entrusted to the care of his superintendents. When he hires new personnel, he should first pay attention to their virtues, since only tyrants prefer vicious persons. In hiring servants, it is said, "la nobleza del alma estime, i busque sobre la del cuerpo."[31] After the order of the house, the area outside comes into view. In the first place there is the prince, to whom loyalty and zeal for

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[23] Leon Battista Alberti, Della Famiglia. Über das Hauswesen, Artemis, Zürich, Stuttgart 1963, p. 171f

[24] Cf. Erich Egner, Der Verlust der alten Ökonomik. Seine Hintergründe und Wirkungen, Berlin Duncker & Humblot, 1985, p. 114

[25] Cf. Erich Egner, Der Verlust der alten Ökonomik. Seine Hintergründe und Wirkungen, Berlin Duncker & Humblot, 1985, p.115-118

[26] Cf. Erich Egner, Der Verlust der alten Ökonomik. Seine Hintergründe und Wirkungen, Berlin Duncker & Humblot, 1985, p. 122-125

[27] Carlos Vaillo, La formation culturelle de la personne chez Antonio López de Vega, in: Marie Roig Miranda (ed.), La transmission du savoir dans l'Europe des XVIe et XVIIe siècles, Classiques Garnier, Paris, 2000, p. 69-79, hier p. 76

[28] Antonio López de Vega, El perfecto señor, Madrid, Imprenta Real, 1653, p. 18

[29] Antonio López de Vega, El perfecto señor, Madrid, Imprenta Real, 1653, p. 19

[30] Antonio López de Vega, El perfecto señor, Madrid, Imprenta Real, 1653, p. 20

[31] Antonio López de Vega, El perfecto señor, Madrid, Imprenta Real, 1653, p. 24

service must be shown.[32]   Other persons are to be treated differently according to their place in the social hierarchy. He should avoid "la inhumanidad ordinaria a los grandes, i el desprecio con que tratan los inferiores."[33] In dealing with riches, one virtue is central: "La que deve tener por mas propia de su estado, es la Liberalidad."[34] It is accompanied by modesty. In public occasions it is restrained: "Sepa medir, i proporcionar a su persona, sobre lo conveniente, lo grande: pero huya los excesos inimitables [...] i tocando estremos, a que no pueden llegar otros, la embiciosa emulacion sabrà calumniarlos."[35] Here, then, López de Vega is squarely in the Aristotelian tradition of domestic fathers' literature, which demands moderation and limitation.

The *Nobleza virtuosa* (1619) by Pedro Henrique Pastor also links nobility to virtue: "Sola la virtud es el propio bien del hombre, pues todas las demas cosas humanas se consumen, y ella da muestras de naturaleza eterna."[36] In detail, the cardinal virtues, honoring the father, obedience to the king and the relationship with the wife, children and vassals are dealt with.[37] With the latter, he said, it is important to be well advised and guided: "A los pueblos, y vassallos particulares, que conocieres de malas inclinaciones, animos inquietos, y deseosos de novedades, procurad ponerles freno, con quitar las ocasiones, y limitarles el poder."[38] Generous may the householder be in forgiving accidental and not malicious culpable behavior, or when dues are not paid on time. Privileges once granted to vassals are not to be withdrawn and special services are not to be demanded. In dealing specifically with the poor and ignorant farm laborers, the landlord is to listen patiently to their concerns.[39] For Henrique Pastor, too, the starting point of advice is virtue.

Gabriel Alonso de Herrera, on the other hand, starts with agriculture. In his *Agricultura general* (1513), he praises rural life as if it were the Golden Age: "Mas labrar el campo vida sancta, segura, llena de inocencia, agena de pecado. Quién podrá en breve decir las excelencias y provechos que el campo acarrea? El campo quita la ociosidad dañosa, en el campo no hay rencores ni enemistades; mas se conserva la salud, por donde la vida mas se alarga."[40] When there were no cities, he said, there was also less disease and less need for medicine. Agriculture combined "provecho, placer y honra."[41]   Cato is cited, for whom it was considered the highest praise when someone was called "ser buen labrador." Gladly, the Romans took from among the labradores their capitanes, who "conservaron su inocencia, vivieron sanctamente."[42] Herrera, like Virgil, first discusses soil conditions and fertilization, then devotes himself to cereals, viticulture, forestry and livestock. Agriculture, he says, is the oldest of the mechanical arts that exist, since it goes back to Adam. Later, the arts were developed and perfected, but Herrera emphasizes that the first inventors of an art, like the beginnings, are of particular importance, citing Aristotle. Herrera does not claim to be the inventor of agriculture, but at least he is the one who, starting from Greek and Latin models, presents it in Spanish. It is irrelevant that the ancient guidelines do not refer to Spanish climatic conditions or soils, but to Italian or Greek ones, they are just as valid as the ancient rules of medicine. And on the question of the primacy of the old or the new, Herrera gives preference to the former: "De creer es que supieron los romanos labrar el campo tan bien como nuestros españoles; y aun pienso yo que algo mejor, porque mas se preciaban dello; y no hay quien tan bien ni tan perfectamente haga alguna cosa como el que se precia y honra della."[43]

Lope de Deça, in his "Govierno polytico de Agricultura" (1618), emphasizes the dignity, utility and necessity of agriculture, considering it superior to all other arts and accomplishments, "pues ella sola es la natural, digna de nobles, de virtuosos, y de sabios."[44] And he invokes Xenophon, for whom agriculture is an activity appropriate for kings. Drawing on Aristotle, he contrasts natural agriculture with the unnatural multiplication of money through the taking of interest. Lope de Deça therefore sees an important reason for the decline of agriculture in the sharp increase in rents, which ruined the tenant, especially in the event of crop failure or failure of livestock. It benefited the "Arçobispados, Obispados, Dignidades, Canongias, Curatos, Beneficios, Prestamos, Encomiendas de las Ordees militares tercias Reales, y otras ansi."[45]

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[32] Cf. Francisco José Aranda Pérez, Familia y sociedad o la interrelación casa-república en la tratadística española del siglo XVI, in: James Casey, Juan Hernández Franco (ed.), Familia, parentesco y linaje, Universidad de Murcia 1997, p. 177-186

[33] Antonio López de Vega, El perfecto señor, Madrid, Imprenta Real, 1653, p. 37

[34] Antonio López de Vega, El perfecto señor, Madrid, Imprenta Real, 1653, p. 39

[35] Antonio López de Vega, El perfecto señor, Madrid, Imprenta Real, 1653, p. 43

[36] Pedro Henrique Pastor, Nobleza virtuosa, Zaragoza, Juan de Lanaja, 1619, p. 5

[37] Cf. Jean-Michel Laspéras, Manuales de educación en el Siglo de Oro, in: Bulletin Hispanique 97, 1, 1995, p. 173-185

[38] Pedro Henrique Pastor, Nobleza virtuosa, Zaragoza, Juan de Lanaja, 1619, p. 117-118

[39] Cf. Pedro Henrique Pastor, Nobleza virtuosa, Zaragoza, Juan de Lanaja, 1619, p. 123, 135-136, 130

[40] Gabriel Alonso de Herrera, Agricultura general, Madrid, Imprenta real, 1818, p. 4

[41] Gabriel Alonso de Herrera, Agricultura general, Madrid, Imprenta real, 1818, p. 4

[42] Gabriel Alonso de Herrera, Agricultura general, Madrid, Imprenta real, 1818, p. 5

[43] Gabriel Alonso de Herrera, Agricultura general, Madrid, Imprenta real, 1818, p. 3

[44] Lope de Deça, Givierno polytico de Agricultura, Madrid, Alonso Martin de Balboa, 1618, p. 2

[45] Lope de Deça, Givierno polytico de Agricultura, Madrid, Alonso Martin de Balboa, 1618, p. 33

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A people, he said, is morally good by its agricultural workers and corrupted by those who practice shameful occupations. Agricultural activity "aprovecha tambien mucho para la fortaleza, y robustez, y su operacion, no afemina como la de las artes baxas, y mugeriles."[46] Quoting Aristotle again, he praises agriculture: "Los primeros fundadores de una republica, de una ciudad, de una comunidad, de una casa particular. Lo primero trataron, y han de tratar del sustento de los hombres, y animales."[47] Lope de Deça attributes several reasons why agriculture in formerly fertile Spain was powerless in his time. Because Spain had gained so many lands and colonies with Flanders, Italy, and America, many Spaniards had left to steer and manage these areas, which were now lacking in Spain.

Moreover, from the newly acquired lands come guests who did not contribute to agriculture, but "a sus negociaciones, y al cebo de la plata, y oro, buscando artes, y artificios [...] Esta gente al fin es mucha, y comen sin sembrar, ni criar."[48] Foreign trade had led to a corruption of morals, "con que parece esta adulterada la noble senzillez de los Españoles, y en que buscan descansada, y viciosa vida, y huyen del trabajo virtuoso, y como fue sentencia dada por Dios a nuestros primeros padres, que auiamos de trabajar para comer, y queremos comer sin trabajar."[49]

The natural and necessary has given way to luxury: "Tantos hombres de todas edades como estan ocupados en servir superflumente en cosas mas superfluas, y no necessarias. [...] Donde bastauan dos sastres son aora menester veynte para la superfluydad, y multiplicacion de vestidos, y guarniciones que ha inuentado la vanidad, y va inuentando cada dia."[50] An innumerable amount of "ministros de la gula" were devoted to "superfluas artes, en desprecio de las buenas costumbres antiguas Españolas."[51] If in the past hunger was satisfied, now it is fanned. If in the past the body of the agricultural worker was strong and healthy "no corrompido con el arte, y deleyte"[52], now numerous diseases appear as "castigos todos de la glotoneria, y luxuria"[53]. Also mentioned are perfumers and musicians who practice useless arts and those that serve pleasure. And if so many occupy themselves with superfluous and harmful things, they are naturally lacking in agriculture, which is as salutary as it is useful. Quoting Seneca and anticipating Rousseau, he particularly emphasizes the harmful effect of going to the theater. When children of agricultural workers studied law at universities, he says, this had no effect other than to multiply lawsuits. What is then elaborated on the loss of the former peace appears as an anticipation of Hobbes' "Homo homini lupus.": "Ninguno tiene alli ganancia sino con daño del otro. [...] No es otra su vida que la de los Gladiatores vivir, y pelear. Es una junta de fieras."[54]

Miguel Casa de Leruela, in *Restauración de la antigua abundancia de España* (1631), also deals with the decline of Spanish agriculture, attributing it to the lack of livestock: "la Carestia intolerable de precios, la Necesidad comun de las cosas, y la Despoblacion general de España, son efectos de la ruina de los ganados."[55] The production of the staple food, bread, required animals to support agriculture. Casa de Leruela evokes the namesake Greek god Pan: "Por esto invocaba la filosofia antigua al Dios de los Pastores Pan, que quiere dezir Todo, y le aclamaba Señor de la materia universal."[56] He considers the consequences of the lack of cattle more devastating than those of idleness. Like Lope de Deça, he sees the causes in excessive rents and levies, which cause peasants to lose interest in agriculture, while greed and luxury reign on the side of the money recipients. The situation is comparable to ancient Rome, where Cato had already attributed the downfall of great empires to greed and effeminacy. Greed was insatiable: "Es ley penal de la Avaricia, que quanto quiera, que robe mucho siempre padeze necesidades. [...] Y assi para el desempeño de los naturales destos Reynos, se han de moderar no solamente el luxo iniciativo de la avaricia, la qual no guarda ley, estando la vanidad a sus anchuras."[57] This was a situation "contra las leyes de naturaleza, que ordenan a las comodidades, que alcancen a quien persiguen la labor, y el trabajo."[58]

Two aspects of the Spanish texts will be subjected to special consideration in the following, first the positively evaluated early agricultural primitive state evoked by Alonso de Herrera. Then, based on the critique of luxury in Casa de Leruela and Lope de Deça, precursors and their further developments will also be discussed.

[46] Lope de Deça, Givierno polytico de Agricultura, Madrid, Alonso Martin de Balboa, 1618, p. 7
[47] Lope de Deça, Givierno polytico de Agricultura, Madrid, Alonso Martin de Balboa, 1618, p. 10
[48] Lope de Deça, Givierno polytico de Agricultura, Madrid, Alonso Martin de Balboa, 1618, p. 23
[49] Lope de Deça, Givierno polytico de Agricultura, Madrid, Alonso Martin de Balboa, 1618, p. 23
[50] Lope de Deça, Givierno polytico de Agricultura, Madrid, Alonso Martin de Balboa, 1618, p. 24
[51] Lope de Deça, Givierno polytico de Agricultura, Madrid, Alonso Martin de Balboa, 1618, p. 24
[52] Lope de Deça, Givierno polytico de Agricultura, Madrid, Alonso Martin de Balboa, 1618, p. 24
[53] Lope de Deça, Givierno polytico de Agricultura, Madrid, Alonso Martin de Balboa, 1618, p. 25
[54] Lope de Deça, Givierno polytico de Agricultura, Madrid, Alonso Martin de Balboa, 1618, p. 27
[55] Miguel Casa de Leruela, Restauración de la antigua abundancia de España, Neapel, Lazaro Scorigio 1631, p. 3
[56] Miguel Casa de Leruela, Restauración de la antigua abundancia de España, Neapel, Lazaro Scorigio 1631, p. 7
[57] Miguel Casa de Leruela, Restauración de la antigua abundancia de España, Neapel, Lazaro Scorigio 1631, p. 70
[58] Miguel Casa de Leruela, Restauración de la antigua abundancia de España, Neapel, Lazaro Scorigio 1631, p. 72

The ideas of a primordial state can be positive or negative. In the antiquity, Hesiod saw a golden age as the first world age, which was followed by a silver, a bronze and an iron age. In the order of precedence, then, a descent is evident, as he saw the latter, his own, marked by brutalization of morals. Cervantes' Don Quixote sees in the Golden Age an epoch of innocence, in which the words "mine" and "thine" were still unknown, there was no deceit, but truth, simplicity and peace prevailed. He wants to restore this time through his chivalrous deeds.

Juan Luis Vives, in *De causis corruptarum artium* (1531), emphasizes that man, although created for the community, is, because of his self-love, "severe and harsh against others, which would be the cause of the greatest disturbances in life, since everyone would gather together as much as he could either by his ingenuity or his physical powers, for himself and for his own advantage."[59] For the fact that this situation has been overcome, Vives blames the introduction of justice, which put a stop to greedy hands and kept injustice away from coexistence. Here, a position is indicated that wishes to overcome a dangerous state of nature characterized by antagonistic interests by introducing socially guaranteed justice. The most prominent representative of this position in the 17th century is Hobbes, whose negative evaluation of the state of nature will therefore be presented in more detail below.

Hobbes criticizes the Aristotelian conception of man as a *zoon politikon*.[60] According to Aristotle, man's goal is *eudaimonia* (bliss), which can only be achieved in the polis. Therefore, Aristotle concludes, man is a communal being from his goal, i.e., from his nature.[61] To this Hobbes counters: if men were by nature political beings, then by their nature, i.e., by birth, they should be able to form a society with suitable, contractually established rules for living together. According to Hobbes, this is not the case since people would be born as children who lack the reasonable insight into the meaning of such contracts. Because only education leads to this reasonable insight, man is not by nature a communal being.[62] Hobbes also has a different conception of happiness than Aristotle. For him, it does not consist in the tranquility of a contented mind. "For there is no such *finis ultimus* (ultimate end) or *summum bonum* (highest good) as is mentioned in the books of the ancient moral philosophers [meaning Aristotle].

Happiness is a constant progression of desire from one object to another, the attainment of one being always only the way to the next."[63]

Thus, Hobbes is not concerned with the morally good life, but with bare survival. In this respect, his doctrine of the state of nature can be seen as the anthropological basis of his doctrine of the state. Humans, he argues, are comparable to mushrooms that have sprouted from the earth without any obligation on the part of one to the other.[64] But this is not to be imagined as paradise or as a golden age, but as a state of permanently threatening violent death, as a state of war of everyone against everyone, in which life is lonely, miserable, unpleasant, animalistic and short. Gluttony, competition, and scarcity of goods ensure that everyone is a wolf to everyone else.[65] In Hobbes, then, the state of nature turns out to be unnatural and something to be overcome.

The French Enlightenment thinkers of the 18th century also view the state of nature negatively. In *Le mondain* (1736), Voltaire makes fun of those who mourn old times, be it a golden age or the pastoral world of the *Astrée*. He himself prefers his present: "J'aime le luxe, et même la mollesse, / Tous les plaisirs, les arts de toute espèce, / La propreté, le goût, les ornements : / Tout honnête homme a de tels sentiments. [...] Le superflu, chose très nécessaire."[66] Voltaire imagines the state of nature without property as a time of poverty and ignorance: "Ne connaissant ni le tien ni le mien. / Qu'auraient-ils pu connaître ? ils n'avaient rien, / Ils étaient nus ; et c'est chose très claire / Que qui n'a rien n'a nul partage à faire. / [...] Il leur manquait l'industrie et l'aisance : / Est-ce vertu ? c'était pure ignorance."[67] And when Voltaire imagines Adam and Eve, the image is not very flattering: "Avouez-moi que vous aviez tous deux / Les ongles longs, un peu noirs et crasseux, / La chevelure un peu mal ordonnée, / Le teint bruni, la peau bise et tannée. [...] Le repas fait, ils dorment sur la dure : / Voilà l'état de la pure nature."[68] Therefore, in the article "luxe" of his *Dictionnaire philosophique*, Voltaire also praises the invention of the scissors for hair and fingernails as well as that of the shirt. Summing up, he says elsewhere : "On a déclamé contre le luxe depuis

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[59] Juan Luis Vives, Über die Gründe des Verfalls der Künste. De causis corruptarum artium, Emilio Hidalgo-Serna (ed.), München, Fink, 1990, p. 553-555

[60] De cive (1.2.); cf. Benedikt Wolfers, Geschwätzige Philosophie. Thomas Hobbes' Kritik an Aristoteles, Würzburg, Königshausen & Neumann, 1991, p. 61

[61] Aristoteles, Politik, Eugen Rolfes (Übers.), Hamburg, Meiner, 1995, p. 4 (1252a)

[62] Thomas Hobbes, Vom Menschen. Vom Bürger, Günter Gawlick (ed.), Hamburg, Meiner, 1966, p.76

[63] Thomas Hobbes, Leviathan, Hermann Klenner (ed.), Hamburg, Meiner, 1996, p. 80. Cf. Iring Fetscher, Der gesellschaftliche „Naturzustand" und das Menschenbild bei Hobbes, Pufendorf, Cumberland und Rousseau, in: Schmollers Jahrbuch für Gesetzgebung, Verwaltung und Volkswirtschaft, 80. Jahrgang, II. Halbband, 1960, p. 641-685, here p. 683

[64] Thomas Hobbes, Vom Menschen. Vom Bürger, Günter Gawlick (ed.), Hamburg, Meiner, 1966, p. 82

[65] Thomas Hobbes, Leviathan, Hermann Klenner (ed.), Hamburg, Meiner, 1996, p. 104

[66] Voltaire, Le mondain, in: Les oeuvres complètes de Voltaire 16, Voltaire Foundation, Oxford, 2003, p. 295-313, here p. 295-296

[67] Voltaire, Le mondain, in: Les oeuvres complètes de Voltaire 16, Voltaire Foundation, Oxford, 2003, p. 295-313, here p. 296-297

[68] Voltaire, Le mondain, in: Les oeuvres complètes de Voltaire 16, Voltaire Foundation, Oxford, 2003, p. 295-313, here p. 298-299

deux mille ans, en vers & en prose, & on l'a toujours aimé."[69] In Voltaire, then, luxury is the counterpart of the state of nature. We therefore come to the further development of the second aspect that emerged from the Spanish texts, luxury.

Luxury is not something objective. A thing becomes a luxury by the fact that it is experienced by someone in a special way. While one person perceives the fresh air in the forest at home as a luxury, for another it is a trip to the Seychelles. Is luxury immoral? The fact that luxury contradicts the virtues was already proven by the Aristotelian doctrine of the middle measure. In the Christian context, luxury is repeatedly associated with *luxuria* and appears immoral. In his letter to the Galatians, Paul states that Christians should be guided by the spirit and not by the desires of the body. Thus, let them be guided by virtues, peace, kindness, goodness, faithfulness, gentleness and self-control, and not driven by selfishness, envy, immorality and debauchery.[70] *Luxuria* is among the seven root sins that lead to debauchery, hedonism, covetousness and sexual licentiousness. It is also popularly known as a mortal sin and stands alongside *superbia*, *avaritia*, *ira*, *gula*, *invidia* and *acedia*. For the Christian author Prudentius (348-405), luxury through gluttony, wine consumption and lust leads to the softening of the senses and is at the origin of sin.[71] Augustine also argues along these lines when he upholds the Stoic condemnation of luxury[72], claiming that wealth promotes the indulgence of sensuality and vanity, while poverty and suffering discipline the mind. The appearance of luxury, he argues, leads to the destruction of civilization and caused the fall of Rome.[73] Thus, if one takes vital or natural needs as the standard, deviation from them is contrary to nature, as Seneca points out: "Omnia vitia contra naturam pugnant, omnia debitum ordinem deserunt; hoc est luxuriae propositum."[74] Seneca distinguishes between natural desires, which have limits, and unnatural ones, which know no limits. While the natural desire can stop somewhere, the unnatural one wanders indefinitely.[75] In the 2nd century AD, the church father Clement of Alexandria also refers to nature, which provides orientation for the entire way of life, for clothing and nutrition.[76] The right measure, the Aristotelian *mesotes*,

is what luxury as excess of pleasure, money or honor misses. According to Aristotle, the good life is not achieved through luxury, but through a virtuous way of life, "for even with moderate means it is possible to act in accordance with virtue. This can be clearly seen from the fact that private citizens do not lag behind princes in right and virtuous action, but rather seem to be ahead of them. It is enough, therefore, if the necessary means are available."[77] According to Aristotle, the cardinal virtue of *moderatio* counsels choosing the middle measure, "those middles, namely, which we are convinced, as corresponding to right reason, lie between excess and deficiency." [78]

We find the counter position advocating luxury again in the French Enlightenment thinkers of the 18th century. For Montesquieu, luxury is a contribution to the fight against poverty: "Il faut bien qu'il y ait du luxe. Si les riches n'y dépensent pas beaucoup, les pauvres mourront de faim."[79] In weighing the moral and social value of luxury, the latter seems weightier. From there to the elevation of luxury to morality it is only a small step. Saint-Évremond succeeds in a first reevaluation of values when he argues that frugality is conditioned by constraints and is not a virtue.[80] That luxury is not associated with effeminacy but that it means work is emphasized by Montesquieu in his 106th letter of the *Lettres persanes*. With peoples, who would have to get along still without the arts, also a skillful monkey could live in all honors. After all, comforts should not be confused with idleness: "Paris est peut-être la ville du monde la plus sensuelle et où l'on raffine le plus sur les plaisirs; mais c'est peut-être celle où l'on mène une vie plus dure."[81] A ruler may thus take care "that his sujets vivent dans les délices: il faut qu'il travaille à leur procurer toutes sortes de superfluités avec autant d'attention que les nécessités de la vie."[82] Finally, Condillac arrives at the paradoxical connection of luxury with the central Enlightenment virtue of utility: "Nous voulons vivre dans le luxe, et nous voulons que notre luxe soit utile."[83]

Machiavelli did not reevaluate values, but rather separated morality from politics. While the cardinal virtues were the focus of the traditional Mirrors of Princes, Machiavelli had recommended in his Anti-Princely Mirror that the prince acts immorally in the interest of efficiency and the reason of state. Machiavelli's separation of morality and politics for the

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[69] Voltaire, Dictionnaire philosophique. Portatif, Londres 1764, p. 256; cf. p. 258

[70] Cf. Gal. 5, 16-24, cf. Dorit Grugel-Pannier, Luxus, p. 101

[71] Cf. Die Psychomachie des Prudentius, Ursmar Engelmann (ed.), Herder, Basel, Freiburg 1959, p. 52f

[72] Cf. Marcus Tullius Cicero, De officiis. Vom pflichtgemäßen Handeln, H. Gunermann (ed.), Stuttgart, Reclam 1976, p. 89-90 (I, 29)

[73] Cf. Dorit Grugel-Pannier, Luxus. Eine begriffs- und ideengeschichtliche Untersuchung unter besonderer Berücksichtigung von Bernard Mandeville, Frankfurt a.M., Lang, 1996, p. 196

[74] Seneca, Epistolae 122, 5; cf. Dorit Grugel-Pannier, Luxus, p. 27

[75] Lucius Annaeus Seneca, Marion Giebel (ed.), Reclam, 2014, p. 54 (16. letter)

[76] Cf. Dorit Grugel-Pannier, Luxus, p. 103

[77] Aristoteles, Nikomachische Ethik, Hamburg, Meiner, 1995, p. 254 (1179 a)

[78] Aristoteles, Nikomachische Ethik, Hamburg, Meiner, 1995, p. 130 (1138 b)

[79] Montesquieu, De l'esprit des lois, Paris, Pourrat, 1831, pág. 197

[80] Saint-Évremond, Oeuvres, Paris, Des Maizeaux, 1753, vol. 2. pág. 148, 152, vol. 3. pág. 206-211

[81] Montesquieu, Lettres persanes, Ligaran, 2015, p. 361

[82] Montesquieu, Lettres persanes, Ligaran, 2015, p. 362

[83] Étienne Bonnot de Condillac, Le commerce et le gouvernement considérés relativement l'un à l'autre (1776), Paris 1961, p. 239

state becomes the separation of morality and economics for the individual in Bernard Mandeville (1670-1733), who grew up in the Netherlands. His addressee is not the prince but the individual. He thus shares Bayle's and Montesquieu's opinion that what is morally questionable can be socially beneficial. He therefore rejects frugality as the principle of keeping away from everything superfluous, since it leads to primitiveness. The absence of luxury in Sparta was only the flip side of the depressing military service. Spartans were characterized only by a lack of needs; the amenities of civilized countries were unknown to them, as were the arts. What happens to a prosperous country from which rapacity, greed and luxury are banished is illustrated by Mandeville in his *Bee Fable*, published in 1705 and variously expanded. While the state thrived on the vices of individuals, the situation changes after Jupiter makes pride, luxury, and crime disappear: The social productive force slackens, numerous professions become superfluous, and unemployed bees leave the state.[84] It was the vices of the individual that maintained societal prosperity. Thus, Mandeville reverses Virgil's bee-state, mentioned at the beginning, which was sustained by virtues.

The excursion into 18th-century France and England showed how the tradition of antiquity and early modern domestic literature was ended by replacing measure with excess, necessities with luxuries, and moral standards with immoral vices. This freed the view of objects from moral implications. The environment could unobjectionably serve profit maximization. The view of economic events focused on the market and could disregard the people involved.

While mercantilism and cameralism were still compatible with the literature of the domestic fathers when they saw the prince as a domestic father, at the end of the 17th century a mechanistic world view based on the natural sciences emerged through Thomas Hobbes and John Locke. The natural sciences, with their use of experience and experimentation and with their mathematical representation of interrelationships, brought about the end of the old economics. In Locke's view, the pursuit of gain drives the acquisition of individual wealth, which in turn benefits the good of the whole. As monarchies receded, the pattern of patriarchal hierarchical domestic order also disappeared in favor of equality for people, especially housewives, and with the rise of outside provision via the market, the paradigm of self-sufficiency was lost. Urbanization, industrialization, unemployment after overproduction and long working hours became widespread. Entrepreneurs became the upper middle class. Utilitarianism leads to value relativism when it defines use or gratification without considering whether utility is life-enhancing or life-destroying. Asceticism and

moderation limit desires and thus slow economic progress. Poverty appears to be surmountable through abundance on the market, so that abundance becomes an economic policy goal and an equally autonomous *homo oeconomicus* with unrestrained acquisitiveness and striving for wealth corresponds to the autonomous market. It becomes apparent that all virtues handed down in former economics no longer play a role. Forgotten is the saying attributed by Xenophon to Socrates: "You seem to me to believe that happiness consists in indulgence and living well, but I believe that it is divine to need nothing, but that the closest thing to the divine is to need as little as possible." Forgotten also the sentence of Seneca: "If you want to make someone rich, you must not increase his wealth, but decrease his desires." Or, "one is rich not by what he possesses, but more by what he knows with dignity to do without."[85] What would be needed is a transition from a growth-oriented economy to one of economic equilibrium, without loss of humanity.[86] According to Sombart, economic science should be cultural, social and human science at the same time.[87] Household science, in the face of ecological damage, should be concerned with the ought, should be teleological. For Henri Bergson (1859-1941), the pursuit of comfort and luxury in the 20th century characteristically replaced the demand for asceticism in the Middle Ages.[88] He calls for a return to simplicity.

The house was seen as the image of the state, but since the 18th century it dissolved and became the intimate privacy of the family, which, in contrast to the pre-modern community of production of the whole house, was only a community of consumption and where the separation of home and workplace became common. In paternalistic analogy the house father stood to the country father and up to God father. The house father was the bearer of autochthonous power as the lord of the whole house. As is well known, even today a judicial search warrant is required before the state and the police are allowed to enter the protected space of the house.[89] The economics of the 19th and 20th century replaced the concept of happiness with that of utility and is oriented more to the increase of the gross domestic product than to responsibility toward future

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[84] Cf. Dorit Grugel-Pannier, Luxus, p. 198-200, 214, 216, 242-243

[85] Cf. Erich Egner, Der Verlust der alten Ökonomik. Seine Hintergründe und Wirkungen, Berlin Duncker & Humblot, 1985, p. 180 (Xenophon, Erinnerungen an Sokrates, 1. v., 6, 2,3,10, Memorabilien, Tusculum, München 1977²; *Seneca Aus den Briefen an Lucius*, in: *Antike Weisheit, Tusculum*, E. Heimeran ed., München 1939, p. 31, 35).
[86] William Kapp, Das Problem der Enthumanisierung der ‚reinen Theorie' und der gesellschaftlichen Realität, Kyklos XX, 1967, p. 307, 328-329
[87] Sombart, Die drei Nationalökonomien, München 1930, p. 174-176
[88] Henri Bergson, Les deux sources de la morale et de la religion, Paris 1932, p. 316
[89] Paul Münch, Lebenformen in der frühen Neuzeit, Ullstein, Berlin 1992, p. 168, 172, 181-188

generations.[90] A newer form aligned with the old economics that has been developing in the United States for about a century under the name of *home economics*, while in Germany ecotrophology has emerged from the Greek words *oikos* and *trophä* (nourishment, sustenance) since the 1960s. While contemporary economics calculates price mechanisms starting from the market, ancient economics is concerned with the sustenance of people in the whole house.[91]

In conclusion, let us look back at our hypothesis that the normative approaches of ancient economics can be a corrective to contemporary economics and thus support concerns of contemporary ecology. It has been shown that in Virgil, as in Xenophon and Aristotle, when considering agriculture, the economist first starts from the head of the household and his values. Only then is the environment constituted as a world of objects by his value conceptions, by his knowledge, and by his relationship to his fellow men. If one wants to understand the environment as an object, then one has to start with the subject. From the Roman Cato to Alberti, the Calvinist economists or the relevant Spanish authors of the Siglo de Oro, virtues are demanded in housekeeping, work is praised, moderation is advocated, and luxury and waste are rejected. The primitive state, which from antiquity to the early modern period is understood by some as an exemplary golden age characterized by rural life and agriculture, is rejected in the French Enlightenment. Now self-interest and greed become the standard, while virtue seems irrelevant in the face of Machiavelli's separation of state and morality or Mandeville's separation of economics and morality. It no longer seems necessary for the individual's mind to control his passions and put his own house in order before he concerns himself with the wider realm outside the home. It is possible, however, that this very development is the prerequisite for the fact that modern economics is limited to the calculation of market activity, disregarding ethics as well as the happiness of the individual. It can be learnt from the old economists that the macrocosm of the environment corresponds with the subject and his house as microcosm.

The correspondence of microcosm and macrocosm is also evidenced by the term Anthropocene, which refers to the impact of man, Greek *anthropos*, on climate and environment. Since it makes the earth the product of human activity, it becomes an artifact, so that the distinction between nature and culture becomes blurred, because man sees results of his own deeds when he looks at the history of the earth.

Earth history, which deals with the period from the formation of the Earth to the geological present, had until now referred to the present period as the Holocene, that is, as a stage that began at the end of the Ice Age about 11,700 years ago with the warming of the Earth. This history of the Earth was seen as independent of human history. Recently, however, the term Anthropocene has been introduced, which assumes effects of human history on Earth history. Now climate has become a global risk and the world community is challenged to find solutions without historical precedents.[92] There is not complete agreement on whether the geological Anthropocene begins with industrialization in England or from 1950 onward. What is certain, however, is that an unlimited ecodynamic with increasing concentrations of greenhouse gases in the atmosphere, melting glaciers, rising sea levels and declining biodiversity coupled with increasing population growth, growing world trade, increasing tourism and intensified land use will lead to collapse[93] if no limits and norms are set in the sense of the old economy. Let us recall Seneca's phrase: "Omnia vitia contra naturam pugnant, omnia debitum ordinem deserunt; hoc est luxuriae propositum." [94]

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[93] Cf. Franz Mauelshagen, „Anthropozän". Plädoyer für eine Klimageschichte des 19. und 20. Jahrhunderts, in: Zeithistorische Forschungen 9, 2012, p. 131-137, here p. 137
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Determinants of U.S. Grants, Credits and Assistances to India during Bretton Woods

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Abstract- In this paper, author tried to establish econometric relation of US grants, credits and assistance to India with exports and imports of USA and India and gross national income of USA during Bretton Woods regime through cointegration and vector error correction model taking data from US Bureau of Economic Research and United Nations Conference on Trade and Development. The paper observed that US grants, credits and assistance to India during 1945-1970 had been growing at the rate of 39.61% per year significantly which had three upwards structural breaks with long run upward cyclical trend. US grants, credits and assistance to India during 1945-1970 had three significant cointegrating equations with exports and imports of USA and India and national income of USA. The vector error correction model is stable, non-stationary and non-normal having problem of autocorrelation. US grants and credits to India have short run causalities from India's imports and US gross national income.

Keywords: Bretton Woods, US grants, credits and assistance, cointegration, vector error correction model, short run causality, long run causality.

GJHSS-E Classification: LCC Code: KF26.B39

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Abstract- In this paper, author tried to establish econometric relation of US grants, credits and assistance to India with exports and imports of USA and India and gross national income of USA during Bretton Woods regime through cointegration and vector error correction model taking data from US Bureau of Economic Research and United Nations Conference on Trade and Development. The paper observed that US grants, credits and assistance to India during 1945-1970 had been growing at the rate of 39.61% per year significantly which had three upwards structural breaks with long run upward cyclical trend. US grants, credits and assistance to India during 1945-1970 had three significant cointegrating equations with exports and imports of USA and India and national income of USA. The vector error correction model is stable, non-stationary and non-normal having problem of autocorrelation. US grants and credits to India have short run causalities from India's imports and US gross national income. There are long run causalities to US credits and grants to India from both imports of India and USA and from gross national income of USA during the Bretton Woods regime significantly.

Keywords: Bretton Woods, US grants, credits and assistance, cointegration, vector error correction model, short run causality, long run causality.

I. Introduction

During the regime of Bretton Woods, international monetary system was in gold exchange standard or rather dollar exchange standard because US dollar was convertible with gold and all other currencies were convertible to US dollar. The exchange rate system was fixed rate with adjustable with $\pm 1\%$ in either side when 1ounce of gold is equal to 35US$.At Bretton Woods, USA and allied countries rejected Keynes plan and accepted White's plan since USA was the leading and dominant country in the world in terms of international trade, international reserves of gold, capital flows including foreign investment and equity and foreign exchange holdings. Above all, USA was the super power in the world political and military strengths. Therefore, USA could not face any problem to select its currency as key currency to dominate multilateral international payments mechanism.

At 1945, India was a colony and its economy was a meagre $30 billion as compared to that US $ 300 billion and that of UK $ 60 billion. During the Bretton

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Woods era, USA was the creditor country to the world and UK was in war-related debt. India and China tried to lead an effort to unilateral transfers as current account so as to pressure convertibility to encash colonial transfer of sterling balance from UK. India's share of sterling balance in 1945 was 45% or £1.51 billion-the equivalent of $83.93 billion today. After finalisation of Bretton Woods, USA was refused to take India's sterling balance in 1949 where sterling balances were paid dawn in 1956.India was forced to abide by "rule based system of international co-operation". India's capital inflows started to grow unprecedentedly in terms of aids, grants, loans, foreign equities, portfolios and direct investment to meet the needs of development finance, to correct structural imbalance of balance of payments, to counteract cyclical growth of GDP and inflation. India devalued Rupee in 1949 and forced to depreciate again in 1966 due to IMF structural facility of loan. For example, before first plan, India took 100million SDR, in the 2nd plan and 3rd plan, it borrowed 200 million and 375 million SDR from IMF and during 1965-1968, India borrowed 415 million SDR from IMF and took 90million SDR under compensatory financing facility (Reddy, 2000). Even in 1966 March, India received US$ 200 million of stand by arrangement from IMF. In 1966 June World Bank sanctioned US$ 900 million for 3 years and USA sanctioned project assistance amounting to US$ 300 million. IDA also approved loans of US$ 295 million and US$ 642 million in 1967-68 and 1968-69 respectively to India (Srinivas, 2017).

US current account balance was positive but started to decline after 1963 and tend to negative from 1971.The real exchange index of Dollar started to fall and reached at bottom in 1966 and reached at peak in 1969 then fell down. The ratio of reserve to imports were 22 and 204 for USA and UK in 1951 which fell to 19 and 67 in 1965 respectively. UK devalued sterling by 30% in 1949 and 1967. French devalued 29% in 1967. India devalued 1949 and 1966 respectively (Meltzer, 1991). All these results produced the crisis of reserve currencies. USA and IMF created SDR as reserve and international payments for development finance. The cyclical inflation rate was observed during 1950-1971 although trade openness, international trade volume, living standard increased to a larger extent. But, slowly and steadily US $ liabilities became greater than US gold stock. In 1950, US gold stock was 25billion $ but foreign liabilities were 12 billion dollar. On the other hand, in 1967, US gold

stock was 12 billion dollar in comparison with 50 billion US dollar of foreign liabilities. In 1971, US liabilities was 80 billion dollar but US gold stock was only 9 billion dollar (Saderno, 2012). In 1970, oil price shock crumbled down international economy too. In 1971 August, President Nixon was forced to suspend the gold dollar convertibility and ultimately Bretton Woods system collapsed. US hegemony over the international economy started to decline. In 1950, 1960 and 1970 the world share of export of USA were 16.19%, 15.27% and 14.23% respectively and world import share were 11.93% and 13.48% respectively in 1960 and 1970.The international share of GDP of USA also started to diminish i.e., 27.3% in 1950, 24.25% in 1960, and 22.38% in 1970 respectively. India's world share of GDP was also declined gradually from 4.2% in 1950 to 3.87% in 1960 and 3.41% in 1970 respectively (Maddison, 2007).

The bulk of US grants, credits and assistance to India from 1945 to 1970 reshuffled Indian economy towards development with deficit finance taking huge loan from IMF, IBRD and IDA etc. Whether these capital inflows have significant relation with US export, import and GDP and India's export and import or not is the important econometric study of this paper during the regime of Bretton Woods.

II. Review of Literature

Reddy (2000) thought that the relationship between Bretton Woods and India is considered to be mutual benefit through not necessary one of full agreement on many matters. India commands greater respect in Bretton Woods Institutions than any time before for charting its own path towards growth and stability. India's move in Bretton Woods to show and sanction policy of poverty elimination and development in IMF strategy and India wanted to encash convertibility of colonial transfers from U.K. Schuler (2013) also felt similar opinion in the sense that India raised at Bretton Woods on the convertibility of Pound Sterling assets the extent to which the IMF would stress economic development over BOP considerations and quota. Chandavarkar (2001) argued that the role played by Raisman at the Bretton Woods was reflected by India's interest on quota, unilateral payment and policy on development. Simha (1970) thoughtfully explained that India's attitude was bound to be conditioned by special factors such as backwardness, it's appalling poverty, its dismally low standard of living and its just aspirations to make up the long leeway in industrial and agricultural development which should be matched with Bretton Woods developmental plans for major goals. Joshi (1944) acknowledged that India would serve India's interest in international negotiations without being dictated to by Britain. Indian delegates and Raisman echoed in the meeting about RBI's decisions on prioritise development goals, needs of poor countries,

special treatment status, and so on. India rightly considered about to maintain domestic price level than to keep up stable exchange rate. On the other hand, India should be allowed to use tariffs and foreign exchange rationing to protect and strengthen local industry. Joshi objected to the omission of any reference to sterling balances and even in the transitional period. He was positive to adjust exchange rate when India was in fundamental disequilibrium although he was in favour of flexible exchange rate being India as an agricultural country and he was indirectly favour fund's proposal of high level of employment with real income maintenance. Helleiner (2015) opined that Keynes singled out Deshmukh's performance on India's role and remarked that it was brilliant representation. But finally, USA chose to oppose underdeveloped phrase in the charter of IMF rather they wrote economically backward countries. On the contrary, India's initiative encouraged IBRD's development mandate to final charter. After the conference, Deshmukh (1974) highlighted the development orientation of Bretton Woods in a speech to an Indian audience.

Monboit (2008) said that the USA which since 1944 has turned from the world's biggest creditor to the world's biggest debtor, would cause to regret the position it took at Bretton Woods. Following White plan, the IMF insisted that the foreign exchange reserves maintained by other nations are held in the form of dollars. This is one of the reasons why the US economy does not collapse no matter how much debt it accumulates. Eichengreen (2018) rightly remarked that the conference took place at the time of unquestioned US hegemony over the western alliance and the global economy. America had the intellectual and financial resources with which to drive the reform process. Now it lacks both. Moreover, on the process of future Bretton Woods, he said that it would be useful first step toward making the world a safer financial place and it would minimise the danger that New Bretton Woods conference will go down in history as a failure. World Economic and Social Survey (2017) assessed that Bretton Woods era is the golden age of capitalism when growth of international trade was unprecedented and was created a multilateral international payment system known as Bretton Woods Monetary System and was a positive attempt to aid Europe through Marshall Plan which was a positive experience of development cooperation with successful implementation of sustainable development goal. Marshall plan which accounts 1% of GNP restored productive capacity in western Europe, improved price stability and helped their currencies in post war period. Even, USA started a package of development programme in developing countries through Official Development Assistance (ODA) which accounts 0.7% of GNI which increased to 1% of GNI from 1960.But volatile commodity price and declining prices of primary products remained unsolved

issues today. During Bretton Woods, structural imbalance in trade between developed and developing countries, gap of foreign exchange earnings, technological change and competitive devaluation were observed and due to devaluation in UK in 1949 and 1967, devaluation in France in 1967 and declined US gold reserve with negatively moving current account ultimately broke down Bretton Woods system.

Balasubrahmonian (n.d.) stated that India's reserves position dropped precipitously from 1947 onwards which forced to draw $115m (80.3% of reserves) from the IMF in 1956-7. The country further borrowed $122.5m from the IMF during 1961-2 and $100m in 1962-3. India took World Bank's soft loan, the International Development Association which were 45% of its total loans in the 1960s to India (roughly $800m) that were utilised as infrastructural development and transportation.

India's Five-Year Plans depended on deficit financing to be plugged by foreign aid. The ratio of foreign aid to new private capital investment between 1948 and 1961 was 6:1. One of the largest donors to India was the United States, which contributed between 1954 and1967 including $3.8bn of PL480 food aid which allowed India to focus Plan expenditures on heavy industry development.

In the 1960s, these dynamics began to shift. American dollar hegemony began to come under strain as the fixed exchange rate regime came under pressure. By 1961, America had abandoned the policy of local currency repayment for dollar loans. The troika of the United States, the World Bank and the IMF, sought to persuade India to devalue, liberalise, imports and gave higher priority to agriculture. This was characterised as the Bank's most significant attempt to use the leverage of its lending to modify macroeconomic policies in a major member country. During mid-1960s, debt multilateralization mediated through the IMF and World Bank had virtually taken place. The bilateral aid relationship between India and America had come under strain, not merely because of the pressure on American gold reserves and the diminished agricultural surplus, but also because of India's rather vocal discomfort with the Vietnam War and her status as leader of the Non-Aligned World. The crisis in India's Five-Year Planning came on the heels of the suspension of American aid during the 1965 War with Pakistan.

Balasubrahmanian (2018) also reminds us that VKRVRao acknowledged the benefits of signing the Bretton Woods agreements but showed three serious defects from the view point of India, such as [i] the failure to include wartime balances within the scope of the fund,[ii] the small size of the quota allotted to India and [iii] the failure to receive a permanent seat on the Executive Board of the Fund. Moreover, on the question of sterling balance BalaSubrahmanian remarked that ultimately, India -UK bilateral agreement settled India's

sterling balances where as the dis-satisfaction remains between India and Bretton Woods resolution.

Sato (2010) argued that during Bretton Woods period, India followed fixed exchange rate with US dollar facing huge balance of payments deficit acutely two times during 1952-57 and 1965-66 amounting to -3.0% of GDP and even India faced bulk of fiscal deficit for development finance in which India took external finance as aid, debt finance and equity for payments management in terms of external borrowing, NRI deposits and equity finance as foreign direct and portfolio investments. India's capital inflows reached at peak of 4.5% of GDP in 1965 where USA played the leading role.

III. Source of Data and Methodology

The paper assumed: x_1= US exports in billion US$, x_2= India's exports in US billion $,$m_1$=US imports in billion US$, m_2=India's imports in billion US$, y= US grants, credits and other grants in India in billion US$ (Grants are transfers for which no payments are expected, credits are loan disbursements or transfers under other agreements and assistance represents the transfer of US farms products in exchange for foreign currencies), z=Gross National Income of USA in billion US$ in current prices. Data have been collected from US Bureau of Economic Research, United Nations Conference on Trade and Development and https://shodhganga.inflibnet.ac.in/bitstream/10603/1715 52/14/12_chapter%2002pdf.

Linear and non-linear trend lines were calculated by applying the semi-log regression model. The structural breaks have been found out by using Bai-Perron Model (2003). Decomposition of trend and cycle was shown by utilising Hodrick Prescott Filter Model (1997). Even, Hamilton filter model (2018) has been applied for finding cycles, trends and seasonal variations. Cointegration test was done by following the Johansen model (1988). Vector Error Correction Model was also analysed through the Johansen model (1991). Short run causality was checked by the Wald Test (1943). Hansen-Doornik Normality test (1994) was used to show residual test of normality of the Vector Error Correction Model. Long run causality was verified by cointegration equation.

IV. Observations from Models

[i] *Nature of Trends*

US grants, credits and assistance in India during Bretton Woods era from 1945 to 1970 have been catapulting at the rate of 39.61% per year significantly.

$$Log(y) = -1.610015 + 0.39619t + u_i$$

$$(-1.49) \qquad (5.67)*$$

R^2=0.57, F= 32.17*, DW=0.88, y=US grants, credits and assistance in India (million US$), t=year,* =

significant at 5% level, u_i=random error. The steady trendline is plotted in Figure 1[b]. In fact, its trend should be non-linear with increasing in the first phase and decreasing in the second phase significantly which is estimated as below:

$$\text{Log}(y) = -3.978 + 1.0244t - 0.0245t^2 + u_i$$

$$(-2.99)^* \quad (4.51)^* \quad (-3.01)^*$$

R^2=0.696, F=26.35*, DW=1.97, u_i=random error,*= significant at 5% level. The non-linear estimated trend line is depicted in Figure 1A below which is stable according to stability test of recursive residuals.
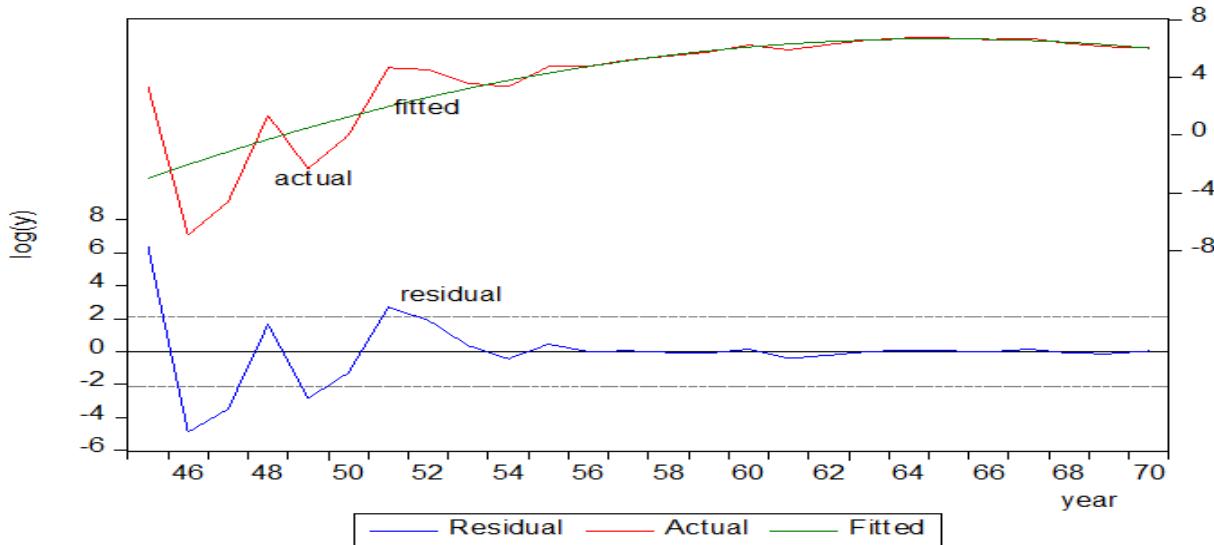
Source: Drawn by author

Figure 1 A: Non-linear estimated trend line.

Bai-Perron test for structural breaks using HAC standard errors & covariance found four structural breaks in y in which upward breaks were seen in 1951, 1957, 1963 and downward structural break was seen in 1968.All of which are significant. Details of structural breaks are given in Table-1.

Table 1: Structural breaks

Variable	Coefficient	Standard Error	t-Statistic	Probability
		1945 - 1950 -- 6 observations		
C	-2.594035	1.246351	-2.081304	0.0498
		1951 - 1956 -- 6 observations		
C	4.292241	0.235640	18.21526	0.0000
		1957 - 1962 -- 6 observations		
C	5.825674	0.211089	27.59817	0.0000
		1963 - 1967 -- 5 observations		
C	6.697476	0.015874	421.9177	0.0000
		1968 - 1970 -- 3 observations		
C	6.191113	0.061442	100.7634	0.0000
		R^2=0.82, F=24.63, DW=1.89		

Source: Calculated by author

In Figure 2[b] the structural breaks are plotted clearly. Hodrick-Prescott Filter of US grants and credit during 1945-1970 assured long run upward trend and cycles with four peaks and troughs assuming λ=100.It is seen in the figure 3[b]

But Hamilton filter model (2018) confirmed by decomposing into trend, cycles and seasonal variation that the US grants to India showed three peaks and two troughs, one upward and downward trends and a seasonal variation spreading throughout the period from 1945-1970.In panel 1 the cycles, in panel 2, the trend and in panel 3, the seasonal variations were clearly plotted in the Figure 1B below.

Figure 1B: Hamilton filter of US grants to India

US exports (in billion US$) has been increasing at the rate of 6.18% per year during Bretton Woods era significantly.

$$Log(x_1) = 8.866471 + 0.061898t + u_i$$

$$(45.99)^* \quad (4.95)^*$$

$R^2 = 0.506$, $F = 24.58^*$, $DW = 2.01$, $x_1 =$ US exports in billion US$, $t =$ year, $^* =$ significant at 5% level, $u_i =$ random error. This trendline is observed in Figure 1[c].

U.S. exports consists of four upward structural breaks in 1953,1960,1964 and 1968 respectively which were found from Bai-Perron model. In Table 2 the values of co-efficients, t statistic and probabilities have been arranged.

Table 2: Structural breaks of US exports

Variable	Coefficient	Standard Error	t-Statistic	Probability
		1945 - 1952 -- 8 observations		
C	9.077395	0.272974	33.25364	0.0000
		1953 - 1959 -- 7 observations		
C	9.632027	0.085901	112.1290	0.0000
		1960 - 1963 -- 4 observations		
C	9.924247	0.027029	367.1641	0.0000
		1964 - 1967 -- 4 observations		
C	10.23312	0.043563	234.9040	0.0000
		1968 - 1970 -- 3 observations		
C	10.52716	0.047858	219.9649	0.0000
		$R^2 = 0.589$, $F = 7.53$, $DW = 1.96$		

Even in the Figure 2[c] the structural breaks are seen distinctly. In the long term trend one downward trend was observed during the complete upward trend from 1945 to1970 where three peaks and troughs were clearly visible in analysing the H.P.Filter model which is plotted in the Figure 3[c].

Indian exports (in million Rupees) has been stepping up at the rate of 2.42% per year during 1945-1970 significantly.

$$Log(x_2)= 6.898774+0.024207t+u_i$$

$$(151.97)* \quad (8.23)*$$

$R^2=0.738$, $F=67.82*$, $DW=0.883$, $x_2=$Indian exports in million Rs, t=year, *=significant at 5% level, $u_i=$random error. This trend line is plotted in Figure 1[d].

Indian exports showed two upward structural breaks in 1962 and 1968 respectively which are significant. All values have been given in Table-3. Moreover, in Figure 2[d], the structural breaks of Indian exports are visibly seen neatly.

Table 3: Structural breaks of Indian exports

Variable	Coefficient	Standard Error	t-Statistic	Probability
		1945 - 1961 -- 17 observations		
C	7.102809	0.043301	164.0339	0.0000
		1962 - 1967 -- 6 observations		
C	7.408435	0.031426	235.7420	0.0000
		1968 - 1970 -- 3 observations		
C	7.555521	0.025241	299.3354	0.0000
		$R^2=0.675$, F=23.907, DW=0.94		

Source: Calculated by author

In the H.P.Filter model, Indian exports during 1945-1970 had one long run downward trend during the upward trend where six peaks and troughs were found in the long run cycle. In Figure 3[d] the cycles and trend are clearly seen.

US imports (in million US$) during the course of Bretton Woods era have been rising at the rate of 7.56% per year significantly.

$$Log (m_1)= 8.483118+0.075691t+u_i$$

$$(155.29)* \quad (21.39)*$$

$R^2=0.95$, $F=457.91*$, $DW=0.50$, $m_1=$US imports in million US$, t=year,*=significant at 5% level, $u_i=$random error. It is clearly plotted in Figure 1[e].

US imports have three strong upward structural breaks in 1950,1959 and 1966 respectively where all the breaks are significant. All values have been tabulated in Table-4.

Table 4: Structural breaks of US imports

Variable	Coefficient	Standard Error	t-Statistic	Probability
		1945 - 1949 -- 5 observations		
C	8.627016	0.074478	115.8326	0.0000
		1950 - 1958 -- 9 observations		
C	9.336330	0.055513	168.1833	0.0000
		1959 - 1965 -- 7 observations		
C	9.731028	0.062946	154.5942	0.0000
		1966 - 1970 -- 5 observations		
C	10.36985	0.074478	139.2332	0.0000
		$R^2=0.93$, F=98.64, DW=1.21		

Source: Calculated by author

In the long run trend of US imports, there are one downward trend and one upward trend having seven peaks and six troughs during long run cycles under Bretton Woods era which is plotted in Figure3[e].

Indian imports (in million Rupees) have been stepping up at the rate of 4.8% per year significantly during 1945-1970.

$$Log (m_2)= 6.837756+0.048027t+u_i$$

$$(70.05)* \quad (7.59)*$$

$R^2=0.706$, $F=57.74*$, $DW=0.719$, $m_2=$Indian imports in million US$, t=year, *=significant at 5% level, $u_i=$random error. This trendline is seen in Figure 1[f].

Indian imports during 1945-1970 showed two upward structural breaks significantly in 1948 and 1960 respectively. All the breaks are clearly shown in Table-5. Moreover, the structural breaks have been plotted in the Figure 2[f].

Table 5: Structural breaks of Indian imports

Variable	Coefficient	Standard Error	t-Statistic	Probability
		1945 - 1947 -- 3 observations		
C	6.637074	0.203941	32.54414	0.0000
		1948 - 1959 -- 12 observations		
C	7.374708	0.071756	102.7744	0.0000
		1960 - 1970 -- 11 observations		
C	7.839227	0.056555	138.6125	0.0000
		R^2=0.77, F=38.77, DW=1.539		

Source: Calculated by author

In H.P.Filter model, Indian imports have steady upward trend path but in the cycles there are six peaks and troughs in the long run which were significant. This is plotted in Figure 3[f].

Gross national income of USA (in million US$) during 1945-1970 had been rising at the rate of 5.99% per year significantly.

$$Log(z)=12.2006+0.059987t+u_i$$

$$(712.72)* \quad (54.11)*$$

R^2=0.99, F=2928.70*, DW=0.78, Z=Gross National Income of USA (in million US$), t =year,*=significant at 5% level, u_i=random error. The trendline is shown by Figure 1[a].

Gross national income of USA had three upward structural breaks in 1951, 1959 and 1965 significantly as seen by Bai-Perron model. The values of breaks have been arranged in Table-6. Even, the structural breaks have been plotted in Figure 2[a].

Table 6: Structural breaks of GNI of USA

Variable	Coefficient	Standard Error	t-Statistic	Probability
		1945 - 1950 -- 6 observations		
C	12.38944	0.048447	255.7309	0.0000
		1951 - 1958 -- 8 observations		
C	12.86459	0.041956	306.6175	0.0000
		1959 - 1964 -- 6 observations		
C	13.21049	0.048447	272.6784	0.0000
		1965 - 1970 -- 6 observations		
C	13.62577	0.048447	281.2501	0.0000
		R^2=0.94, F=118.25, DW=1.25		

Source: Calculated by author

The long run trend of the US National income from 1945 to 1970 is seen as steadily upward but the cyclical path constitutes seven peaks and troughs respectively which were observed by H.P.Filter model. The cycles and trend are clearly observed in Figure 3[a].
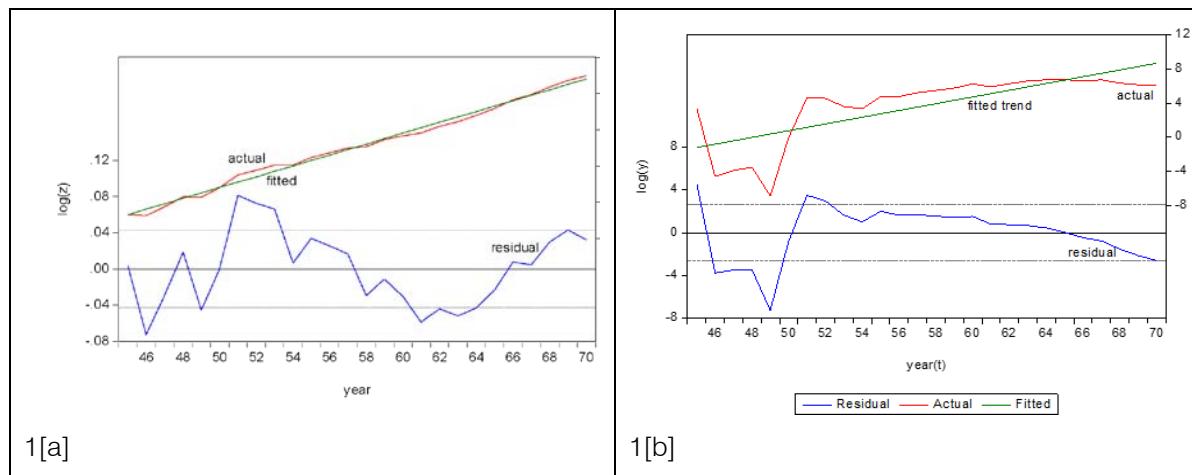

Figure 1: Growth Rates
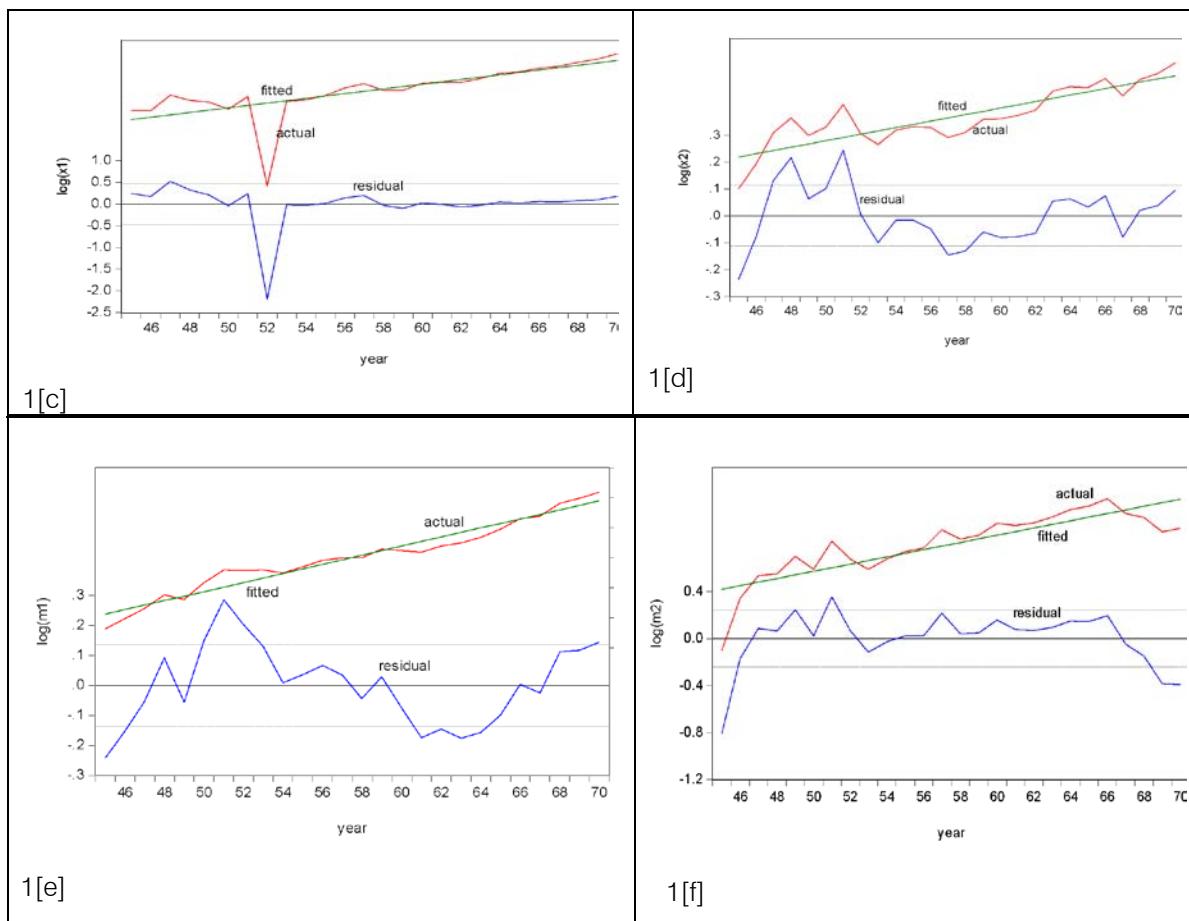
Source: Plotted by author

Figure 1: Growth Rates

2[c]

2[d]

2[e]

2[f]
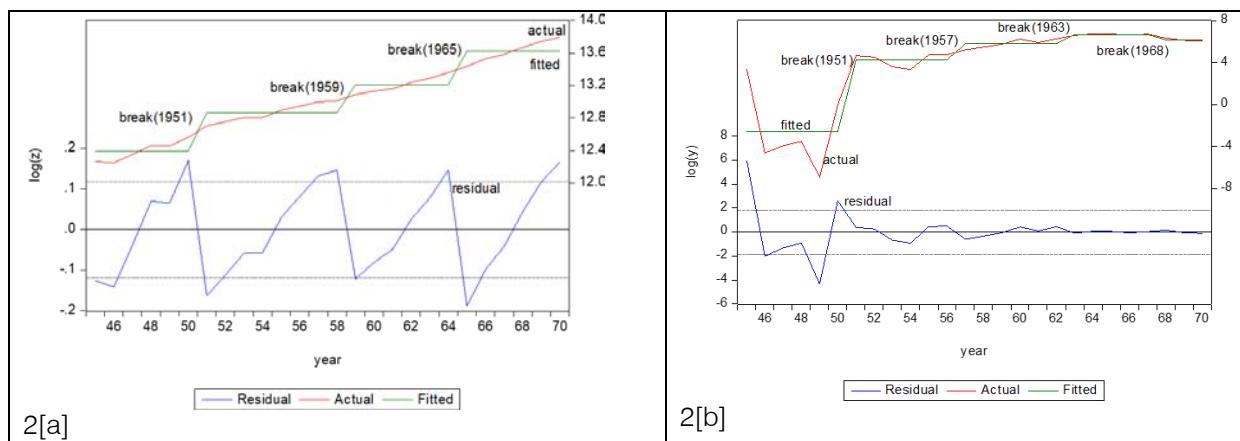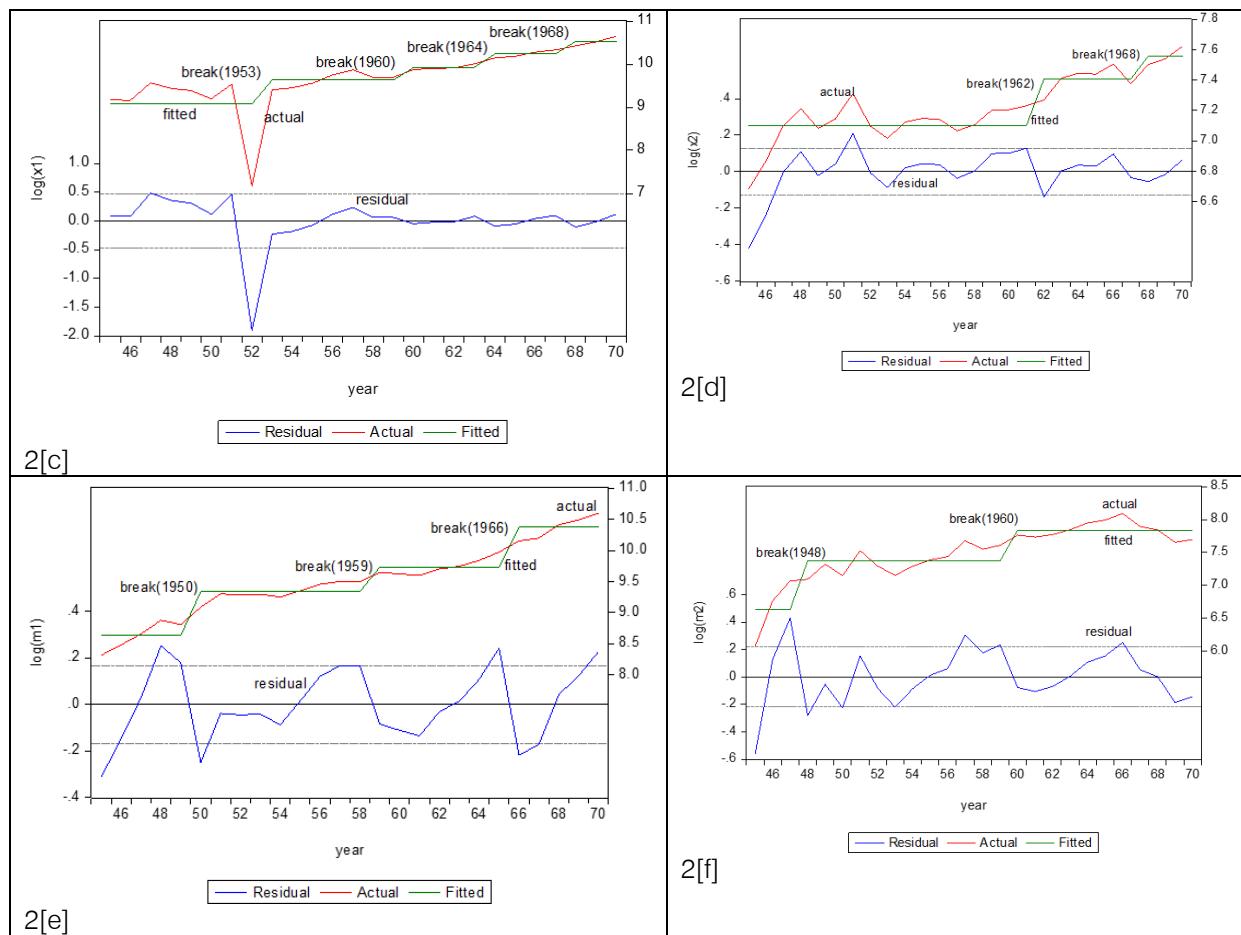
Figure 2: Structural Breaks

3[a]

3[b]

3[c]

3[d]

3[e]

3[f]
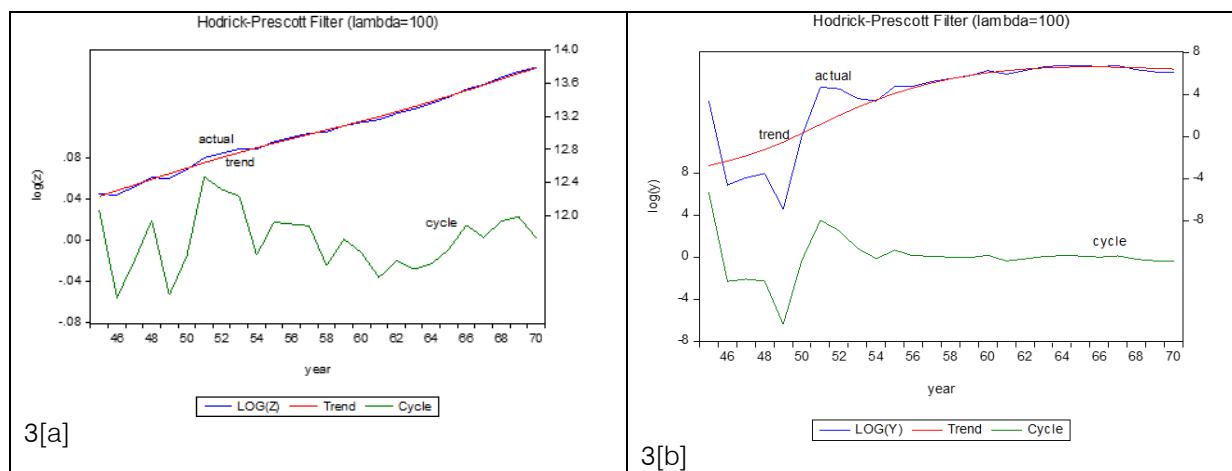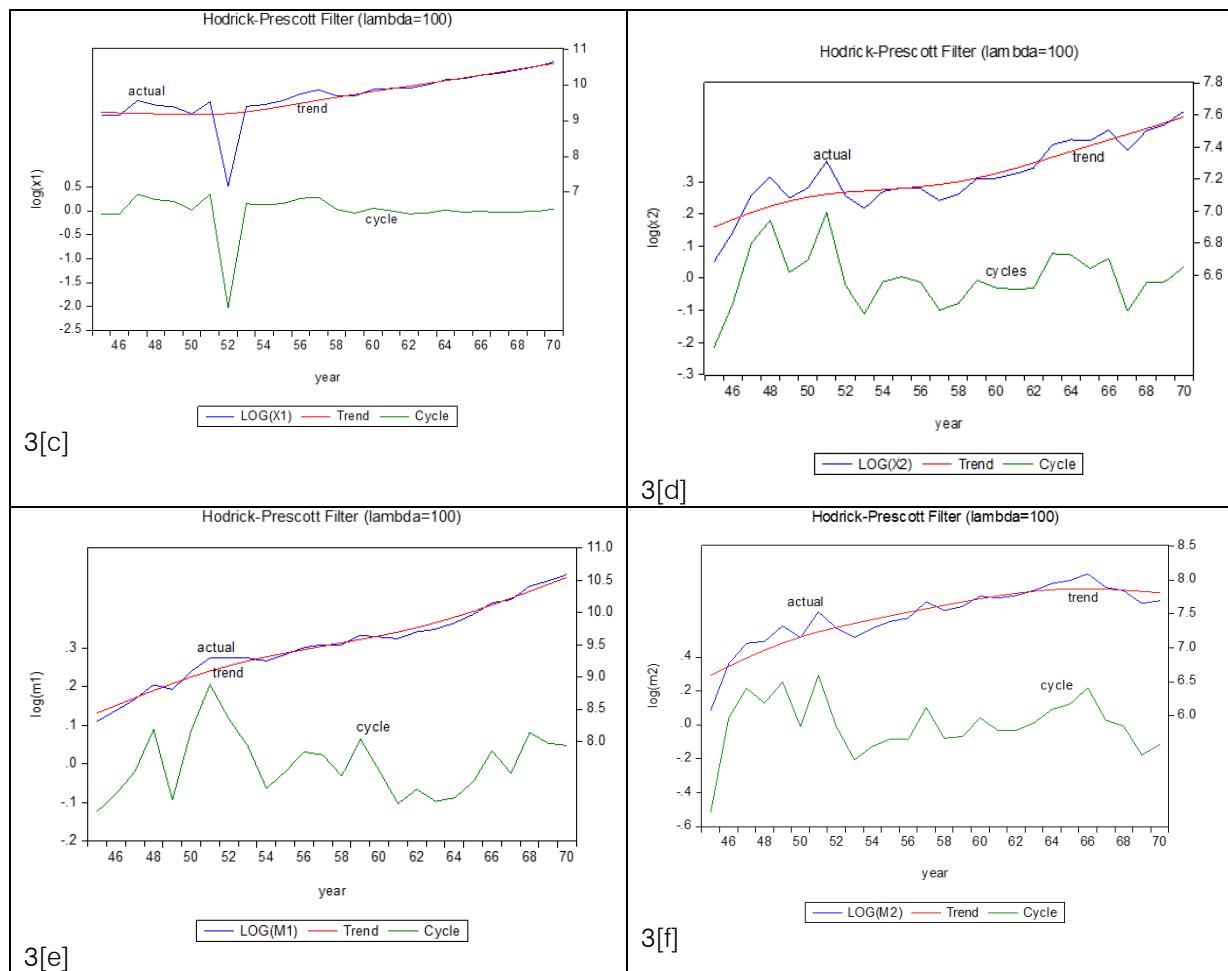
Source: Plotted by author

Figure 3: H.P.Filter Cycles

[ii] *Analysis of Cointegration and Vector Error Correction Model*

Johansen unrestricted rank test of the first difference series of US grants, credits and assistance to India (logy), US exports (logx$_1$) and imports (logm$_1$), Indian exports (logx$_2$) and imports (logm$_2$) and US gross national income (logz) (assuming linear deterministic trend) during 1945-1970 confirmed that Trace statistic and Max-Eigen statistic have three cointegrating equations each which are significant at 5% level. All the values have been arranged in the Table 7.

Table 7: Cointegration test

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Probability.**
None *	0.988933	209.5674	95.75366	0.0000
At most 1 *	0.873876	101.4756	69.81889	0.0000
At most 2 *	0.726799	51.78388	47.85613	0.0204
At most 3	0.473833	20.64271	29.79707	0.3803
At most 4	0.191834	5.231419	15.49471	0.7838
At most 5	0.004976	0.119726	3.841466	0.7293
Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.988933	108.0919	40.07757	0.0000
At most 1 *	0.873876	49.69168	33.87687	0.0003
At most 2 *	0.726799	31.14117	27.58434	0.0167
At most 3	0.473833	15.41129	21.13162	0.2611
At most 4	0.191834	5.111693	14.26460	0.7276
At most 5	0.004976	0.119726	3.841466	0.7293

* denotes rejection of the hypothesis at the 0.05 level, **MacKinnon-Haug-Michelis (1999) p-values
Source: Calculated by author

The regression equations of the error correction model stated that [i] $\Delta logy_t$ is positively related with $\Delta logy_{t-1}$, $\Delta logx_{2t-1}$ and $\Delta logm_{2t-1}$ significantly and is negatively related with $\Delta logz_{t-1}$ significantly. Two cointegrating equations tend to equilibrium significantly [ii] $\Delta logx_1$ is positively related with $\Delta logm_{1t-1}$ significantly and three error corrections have been moving equilibrium. [iii] $\Delta logx_2$ is affected positively with $\Delta logy_{t-1}$, $\Delta logx_{1t-1}$, $\Delta logm_{1t-1}$, $\Delta logm_{2t-1}$ and negatively related with $\Delta logz_{t-1}$ significantly. [iv] $\Delta logm_2$ is affected positively with $\Delta logm_{1t-1}$ and negatively with $\Delta logx_{2t-1}$, $\Delta logm_{2t-1}$ and $\Delta logz_{t-1}$ respectively at significant level of 5%. Two cointegrating equations have been marching divergent [v] $\Delta logz_t$ is positively related with $\Delta logy_{t-1}$ significantly and all error corrections terms have been moving convergent insignificantly. All the values have been arranged in the Table 8 neatly.

Table 8: VECM

	$\Delta logy_t$	$\Delta logx_1$	$\Delta logx_2$	$\Delta logm_1$	$\Delta logm_2$	$\Delta logz_t$
CointEq1	-0.919410	-0.138362	-0.052019	-0.034675	0.053072	-0.012815
t	[-2.91373]*	[-2.13840]*	[-4.35131]*	[-1.74748]	[2.64200]*	[-1.82942]
CointEq2	-2.184286	-1.234668	-0.202720	-0.001922	0.204627	-0.034264
t	[-1.30870]	[-3.60755]*	[-3.20587]*	[-0.01831]	[1.92584]	[-0.92478]
CointEq3	-13.19885	-2.989674	-0.866915	-0.458562	0.755106	-0.194131
t	[-2.56454]*	[-2.83289]*	[-4.44600]*	[-1.41685]	[2.30467]*	[-1.69919]
$\Delta logy_{t-1}$	1.127690	0.076964	0.053819	0.036208	0.012207	0.017260
t	[3.71492]*	[1.23646]	[4.67966]*	[1.89679]	[0.63170]	[2.56137]*
$\Delta logx_{1t-1}$	0.767305	-0.089338	0.079794	-0.034335	-0.024764	-0.005851
t	[1.08034]	[-0.61342]	[2.96541]*	[-0.76874]	[-0.54769]	[-0.37111]
$\Delta logx_{2t-1}$	0.083100	0.164712	0.187206	-0.012184	-0.703254	0.110115
t	[0.01543]	[0.14911]	[0.91724]	[-0.03596]	[-2.05060]*	[0.92079]
$\Delta logm_{1t-1}$	4.369679	2.647903	0.486588	0.074579	1.787153	0.147939
t	[0.73351]	[2.16765]*	[2.15594]*	[0.19908]	[4.71241]*	[1.11869]
$\Delta logm_{2t-1}$	7.022404	-0.415770	0.217290	0.168567	-0.361965	0.074068
t	[2.69673]*	[-0.77864]	[2.20248]*	[1.02938]	[-2.18346]*	[1.28131]
$\Delta logz_{t-1}$	-47.18023	-2.425637	-1.616675	-0.842372	-3.810986	-0.721121
t	[-2.71297]*	[-0.68021]	[-2.45373]*	[-0.77027]	[-3.44229]*	[-1.86794]
C	2.319524	-0.011090	0.055371	0.120396	0.160433	0.084940
t	[2.63784]*	[-0.06151]	[1.66207]	[2.17728]*	[2.86596]*	[4.35143]*

Source: Calculated by author

By applying Wald test on the system equations of the VECM regression equations, it was observed some short run causalities in the following fashion: US grants, credits and assistance to India have short run causalities from India's imports and US gross national income whose Chi-square(1) value is rejected from H0=no causality. In the similar way, causality of US export from US import, causality from US grants, credits and assistance, US imports, Indian imports and US gross national income to Indian exports, causality from US gross national income to Indian imports and short run causality from US grants, credits and assistance to US gross national income were observed significantly.

Table 9: Short run causality

Short run causality from …..to…..	Chi-square(1)	Probability	H0=no causality	Sig/insig
Causality from $\Delta logm_{2t-1}$ to $\Delta logy_t$	7.2723	0.007	rejected	significant
Causality from $\Delta logz_{t-1}$ to $\Delta logy_t$	7.3601	0.0067	rejected	Significant
Causality from $\Delta logm_{1t-1}$ to $\Delta logx_t$	4.698	0.0302	rejected	Significant
Causality from $\Delta logy_{t-1}$ to $\Delta logx_{2t}$	4.6312	0.0301	rejected	Significant
Causality from $\Delta logm_{1t-1}$ to $\Delta logx_{2t}$	4.6480	0.0311	rejected	Significant
Causality from $\Delta logm_{2t-1}$ to $\Delta logx_{2t}$	4.8509	0.0276	rejected	Significant
Causality from $\Delta logz_{t-1}$ to $\Delta logx_{2t}$	6.0207	0.0141	rejected	Significant
Causality from $\Delta logz_{t-1}$ to $\Delta logm_{2t}$	11.849	0.0006	rejected	Significant
Causality from $\Delta logy_{t-1}$ to $\Delta logz_t$	6.5606	0.0104	rejected	Significant

Source: Calculated by author

Three normalised cointegrating equations are as follows.

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Table 10: Normalised equations

Cointegrating Equation	CointEq1	CointEq2	CointEq3
$logy_{t-1}$	1.000000	0.000000	0.000000
$logx_{1t-1}$	0.000000	1.000000	0.000000
$logx_{2t-1}$	0.000000	0.000000	1.000000
$logm_{1t-1}$	-256.3150	-16.28028	20.42067
t	[-8.88832]*	[-8.13604]*	[9.27763]*
$logm_{2t-1}$	-85.46583	-6.110907	6.773430
t	[-5.79156]*	[-5.96780]*	[6.01358]*
$logz_{t-1}$	353.3942	22.25599	-29.15125
t	[8.37491]*	[7.60104]*	[-9.05106]*
C	-1519.563	-98.35036	126.7701

Source: Calculated by author

Taking into account of the system equations, the cointegrating equations turned into the following forms.

$$\text{Cointegrating equation1} = Z_{1t-1} = -0.9194logy_{t-1} - 256.3150logm_{1t-1} - 85.465logm_{2t-1} + 353.394z_{t-1} - 1519.56$$

$$(-2.91)^* \quad (-8.88)^* \quad (-5.79)^* \quad (8.37)^*$$

$$\text{Equation-2} = Z_{2t-1} = -0.1383logx_{1t-1} - 16.280logm_{1t-1} - 6.1109logm_{2t-1} + 22.255logz_{t-1} - 98.350$$

$$(-2.13)^* \quad (-8.136)^* \quad (-5.96)^* \quad (7.60)^*$$

$$\text{Equation-3} = Z_{3t-1} = -0.0520logx_{2t-1} + 20.4206logm_{1t-1} + 6.773logm_{2t-1} - 29.151logz_{t-1} + 126.77$$

$$(-4.35)^* \quad (9.27)^* \quad (6.013)^* \quad (-9.05)^*$$

In the first cointegrating equation, it was established that there were long run causalities to US credits, grants and assistance to India from both imports of India and USA and from gross national income of USA during the Bretton Woods era significantly and since all t values of coefficients were significant and coefficient of $logy_{t-1}$ was negative and significant, it means that the cointegrating equation moves to the equilibrium or convergent. In the same token, US export had significantly long run causal relationships from US and Indian imports and US gross national income and this equation tended to equilibrium. Similarly, US export had long run causal relations with US and Indian imports and US gross national income and the cointegrating equation was convergent.

In the Figure 4, the cointegrating relationships have been plotted neatly.
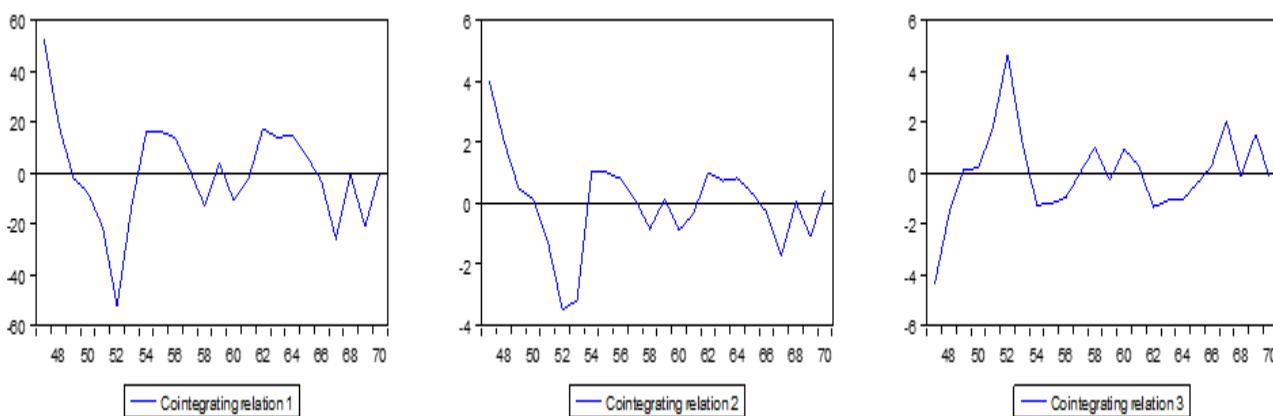
Source: Plotted by author

Figure 4: Long run cointegrating relation

Above all, the model consists of 6 imaginary roots, two negative roots and one root is less than one, two roots are greater than one and one root is unity respectively. Therefore, the model is non-stationary. Besides, one root lies on outside the unit circle and others lie inside the unit circle which are shown in the Figure 5 which confirms that the model is unstable.

Table 11: Roots of characteristics polynomial

Root	Modulus
1.000000	1.000000
1.000000 - 1.20e-15i	1.000000
1.000000 + 1.20e-15i	1.000000
-0.085857 - 0.768798i	0.773578
-0.085857 + 0.768798i	0.773578
-0.584303 - 0.503332i	0.771202
-0.584303 + 0.503332i	0.771202
0.597528 - 0.314799i	0.675380
0.597528 + 0.314799i	0.675380
-0.632088	0.632088
0.302643	0.302643
-0.077931	0.077931

Source: Calculated by author
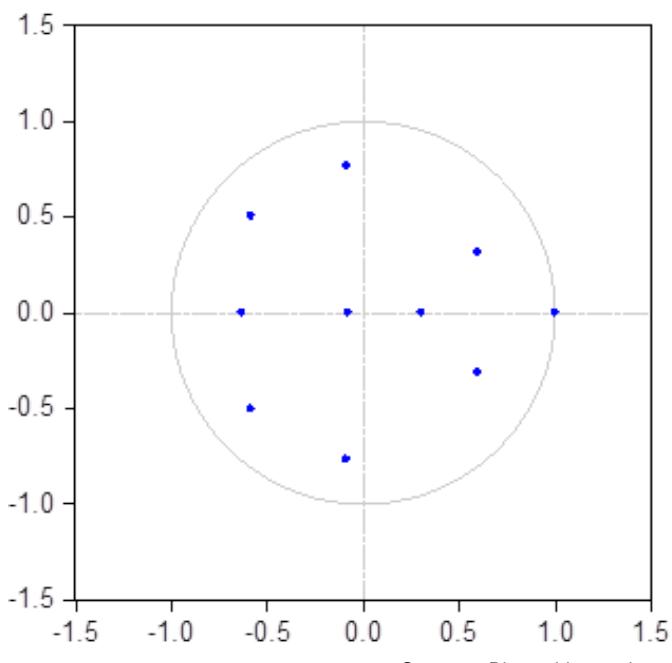
Source: Plotted by author

Figure 5: Unit circle

The residual test showed that the model contains problem of autocorrelation which were shown in the Figure 6 where vertical bars move on both the sides. So, there are seasonal variation too.
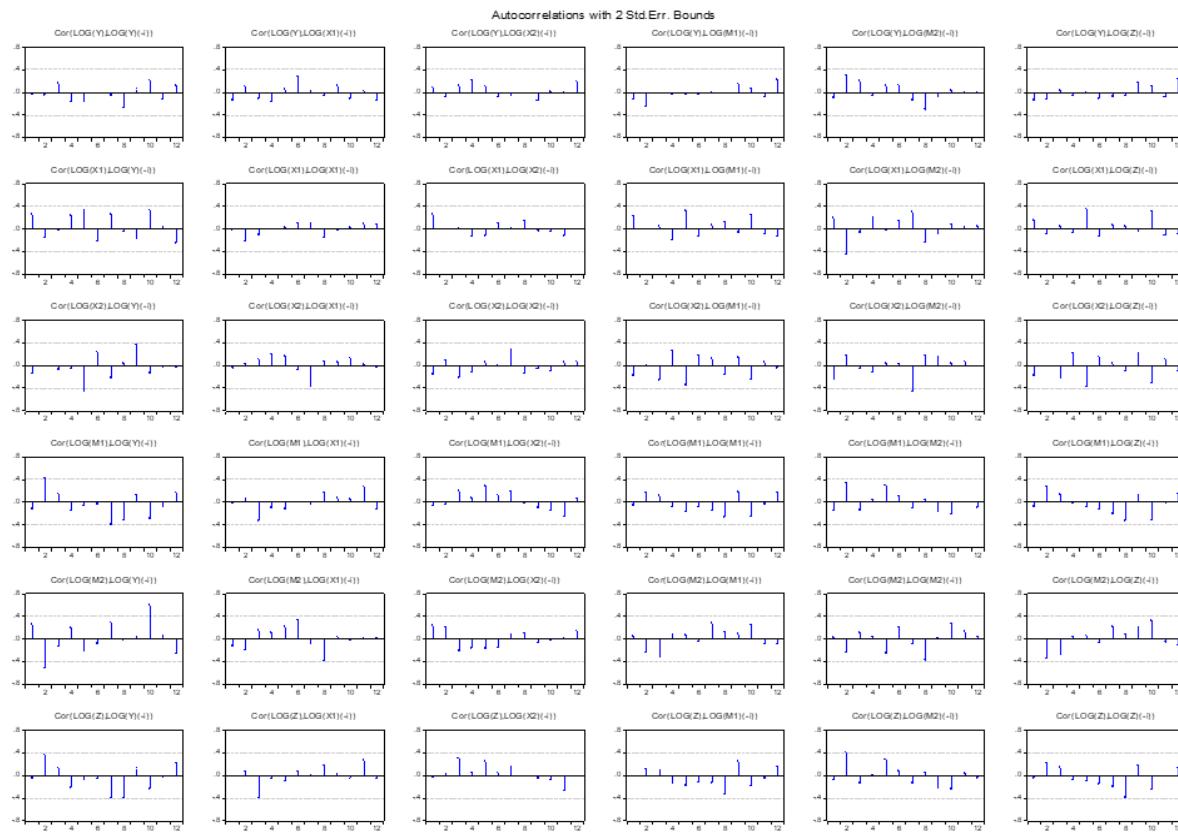
Figure 6: Autocorrelations

Hansen-Doornik Vector Error Correction residual normality test verified that only component 2 of the Chi-square value of skewness is rejected for normality but all other values of kurtosis and Jarque-Bera are accepted for normality.

Table 12: Normality test

Component	Skewness	Chi-square	Degree of freedom	Probability
1	-0.226283	0.292548	1	0.5886
2	-0.880496	3.849867	1	0.0497
3	-0.373644	0.782211	1	0.3765
4	-0.135275	0.105336	1	0.7455
5	-0.114754	0.075891	1	0.7829
6	-0.519435	1.470931	1	0.2252
Joint		6.576784	6	0.3618
Component	Kurtosis	Chi-square	Degree of freedom	Probability
1	3.644874	3.465186	1	0.0627
2	2.960164	1.726110	1	0.1889
3	3.516051	2.174090	1	0.1404
4	2.545372	0.062207	1	0.8030
5	3.383664	2.563333	1	0.1094
6	2.768483	0.008646	1	0.9259
Joint		9.999573	6	0.1247
Component	Jarque-Bera	Degree of freedom	Probability	
1	3.757734	2	0.1528	
2	5.575977	2	0.0615	
3	2.956301	2	0.2281	
4	0.167543	2	0.9196	
5	2.639224	2	0.2672	
6	1.479578	2	0.4772	
Joint	16.57636	12	0.1662	

The impulse response functions assumed Cholesky one standard deviation innovations which expressed that the responses of $\log(y)$ to $\log(m_2)$ and $\log(z)$, responses of $\log(x_1)$ to $\log(m_2)$ and $\log(z)$, responses of $\log(m_1)$ to $\log(x_2)$, response of $\log(m_1)$ to $\log(m_2)$, response of $\log(z)$ to $\log(y)$, response of $\log(m_1)$ to $\log(x_2)$ and response of $\log(m_1)$ to $\log(m_2)$ have been moving toward equilibrium which are observed in the Figure 7.
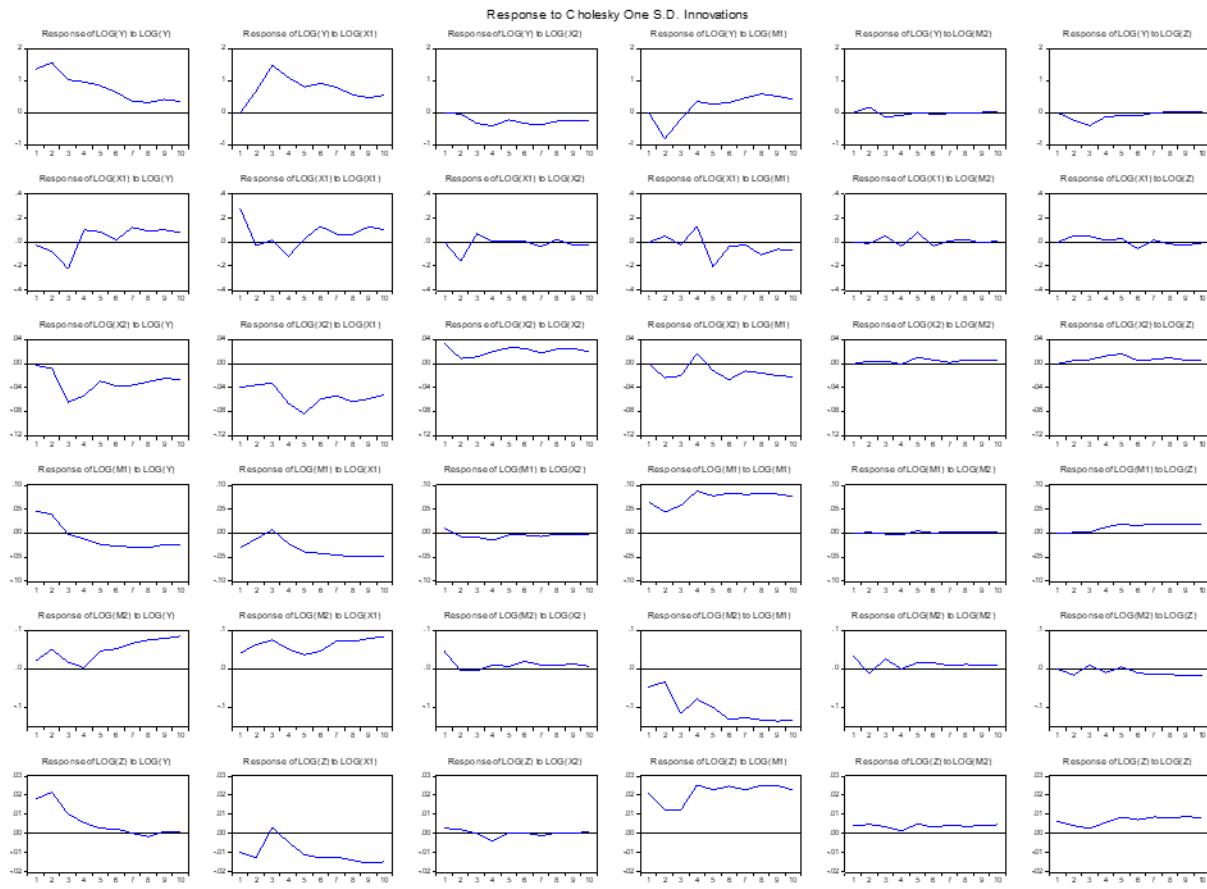
Source: Plotted by author

Figure 7: Impulse Response Functions

V. Limitations and Future Scope of Research

The model described here suffers from some limitations too. If the variables like, balance of trade, inflation rate, exchange rate of Rupee could be taken into account, then the more viable results might be obtained. Thus, the paper assures enough scope for further research in the offing.

VI. Conclusion

The paper concludes that US grants, credits and assistance to India during 1945-1970 had been growing at the rate of 39.61% per year significantly which had three upwards structural breaks with long run upward cyclical trend and seasonal variations. The upward structural breaks with upward cyclical filter along with high growth rates were also seen from exports and imports of USA and India and from National income of USA during 1945-1970. US grants, credits and assistance to India during 1945-1970 had three significant cointegrating equations with exports and imports of USA and India and national income of USA. The vector error correction model is unstable, non-stationary and non-normal having problem of autocorrelation. US grants, credits and assistance to India have short run causalities from India's imports and US gross national income. There were long run causalities to US credits, grants and assistance to India from both imports of India and USA and from gross national income of USA during the Bretton Woods era significantly.

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Conflict of Interest

There is no conflict of interest in the process of the paper publication.

Bio-Note: MA in Economics, Ph.D. in Economics. Published 12 books, Co-edited 2 books, Edited 2 books, Published more than 220 articles in national and international journals and in edited books.

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Impact of Trade Liberalization on the Nigerian Manufacturing Sector

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IMPACTOFTRADELIBERALIZATIONONTHENIGERIANMANUFACTURINGSECTOR

Strictly as per the compliance and regulations of:

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Abstract- The study examines the inter-relationship between trade liberalization and manufacturing performance in Nigeria. Time series data sourced from Central Bank of Nigeria (CBN), National Bureau of Statistics (NBS) and Manufactures' Association of Nigeria (MAN) for the period 1980 to 2010 were utilised. Short-run error correction model (ECM) and long-run (OLS) regression techniques was employed to derive the estimates. The findings from the study indicate that the adoption of trade liberalization strategies in Nigeria have negatively affected the country's manufacturing sector, This shows that trade openness has brought about negative total factor productivity in Nigeria as manufacturers often respond to uncompetitive ease in trade restrictions by outright closures, reduction in production, and sometimes, relocation to neighboring countries. However, empirical evidence suggests trade liberalization increases Nigeria's manufacturing output when total value of manufacturing output was used as measure of performance, although was not significant at the conventional test levels. Additionally, the incidence of the Dutch Disease syndrome was found to adversely affect Nigeria's manufacturing sector performance measures employed in this study, and result aptly support the resource-curse hypothesis. Moreover, foreign direct investment contributes positively to Nigeria's manufacturing value-added, whereas it serves as a drag on total manufacturing output of the country. While real exchange rate negatively and significantly affect manufacturing sector's incremental value-addition to production in the long run, the impact on overall total output was found to be positive and significant, thus reinforcing the axiom that exchange rate can affect the allocation of resources in an economy. Results suggest that increases in tariff positively and significantly boost production value-addition in both our specified short-run error correction model (ECM) or long-run (OLS) model. Lastly the coefficient of the error correction was negative and less than one (1), indicating a stable return from short-run disequilibrium to long-run equilibrium over the period.

I. Introduction

Nigeria, like many other developing countries has engaged in a number of economic reforms and negotiations aimed at promoting industrialization. At the regional level, trade reforms are significant components of the Economic Community of West African States (ECOWAS) negotiations. Trade liberalization and poverty reduction initiatives have been reflected in strategic and developmental plans in the country. Several arguments have been advanced for such reforms because of the impact on industrial manufacturing sector.

While some studies (Dollar 1992; Sachs and Warner 1995 and Edwards 1998) claimed that there is a positive (either direct or indirect) correlation between openness and growth, others such as (Rodriguez and Rodrik, 1999) conclude that there is little systematic evidence of a good relationship between trade regime and growth. Such studies conclude that the reforms have negative impact on economic growth. However, the volume of literature on the positive relationship between trade liberalization and economic growth reforms has continued to grow, but as Malhotra has argued, that there is no convincing evidence that trade liberalization is automatically or always associated with economic growth, let alone poverty reduction (Malhotra, 2004).

Nigeria experienced a policy shift from import substitution industrialization strategy (ISIS) to export promotion (EP), under the structural adjustment programme (SAP). This was because ISIS had failed to achieve set industrialization and growth objectives. Some factors were identified as hurdles to growth of the manufacturing sector. These hurdles include, corruption, lack of the rule of law and transparency, bureaucratic red tape, and inefficient factor and product markets as constraints to manufacturing development. Others point to the phenomenon of the "Dutch Disease" in which resource-induced rent-seeking behavior crowds out economic activities in manufacturing. The availability of good infrastructure such as water, electricity, roads, and fuel is important for industrial development. Poor infrastructures often result in higher production costs.

In Nigeria, manufacturers have had to provide such facilities by themselves. Thus, they, become uncompetitive with firms in countries where infrastructures are excellent. It is not strange, therefore, that a developing country like Nigeria has traditionally been wary of implementing trade liberalization measures and has resisted the opening up of its economy out of fear of marginalization of local manufacturing industries. But things have changed in recent years, as the government has employed far reaching policy reforms including liberalization of the markets to outsiders, mainly out of the requirements of adjustment conditionalities. From 1986 there was a radical shift in

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Nigeria's trade policy from restrictive control to a more liberal stance. This was largely as a result of inefficiencies associated with control systems and their inabilities to achieve both internal and external balances.

Faced with unfair competition, local manufacturers cried for governments' intervention to ameliorate the situation. But the emerging signals from official circles point to government's insensitivity due to a pact with World Trade Organization (WTO) trade liberalization policy in which Nigeria became a signatory over 10 years ago. While this position may be appreciated, it is necessary as a nation to acknowledge the lack of readiness to meaningfully participate in a globalized world of intense competition owing to some inadequacies created by inefficient infrastructure (for example, electricity, water, communication and transportation) and low capacity building. The trade liberalization situation has now been worsened by the recent introduction of ECOWAS Common External Tariff (CET). The Manufacturers Association of Nigeria is not comfortable with the business climate as regards the adverse effects on performance, employment and imports. In light of the issues that have trailed trade liberalization, the key research questions are; to what extent has trade liberalization been carried out in Nigeria? What are the effects of trade liberalization on the manufacturing sector? What are the effects of trade liberalization on productivity in the sector?

II. Review of Relevant Literaure

Trade liberalization is a key element in the fast-expanding globalization process. There is preponderance of evidence (Dollar, 1992; Ben-David, 1993; Edwards, 1998; Frankel and Romer, 1999; Sachs and Warner, 1995) that trade liberalization promotes higher growth rate of income and output. According to Bhagwati and Srinivasan (1999), numerous individual country studies over the past three decades suggest that "trade does seem to create, even sustain higher growth". Growth in manufacturing industries is strongly related to overall growth in the economy – although the relationship differs substantially from country to country. The link of overall growth to manufacturing sector performance has been demonstrated both in cross-country analyses and for individual countries. For example Spanu, (2003), Thirlwall (2000), and Jomo and Arnim (2007) show that development, not only by contributing to a more efficient allocation of resources within countries, but also by transmitting growth from one part of the world to another.

The idea that the trade policy regime of a country has an impact on the country's trade and growth is not new and it dates back at least to Adam Smith. Broadly, as identified by Duncan and Quang

(2000), there have been three theoretical approaches to the trade and growth nexus: Neoclassical, Endogenous Growth, and the Institutional approach.

a) Theoretical Review
   i. *Neoclassical Approach*
      The neoclassical approach to the trade-growth nexus invokes general equilibrium models with constant or decreasing returns to scale. Moreover, it is built upon the choices of rational individuals acting solely through market. Trade patterns among countries are determined by comparative advantage, either in the form of technology differences as in Ricardian models or of resource endowment as in Heckscher-Ohlin models. The neoclassical models of international trade theory in general predict that a country will have static gains from lowering its trade barriers.

One of the most important static gains from trade liberalization predicted by neoclassical model is the increase in allocative efficiency. Since trade policy has an important impact on the transmission of international price signals, lowering trade barriers would lead to a reallocation of resources to the sector with comparative advantage. As a result, resources are used more efficiently and the welfare of the country as a whole rises. The gains from trade liberalization are - by nature of the neoclassical models - static, and trade policy like other government policies has only level effect, not growth effect a well-known prediction of neoclassical growth models in Solow (1956) and Swan (1956). However, the validity of the key assumptions on which the neoclassical approach is built has been questioned by a number of economists. For example, Rodrik (1988), and Devarajan and Rodrik (1989) argue that scale economies and imperfect competition are prevalent in developing countries. They show that under these conditions, the welfare impact of trade liberalization becomes complicated. The theoretical possibility of a welfare-reducing impact from trade liberalization in the presence of imperfect competition and increasing returns to scale has been pointed out in others.

   ii. *Endogenous Growth Approach*
      The dynamic gains of trade liberalization are closely linked to writings on endogenous growth: "a new growth" theory that has proliferated since the mid-1980s. Much has been made of the endogenous growth trade theory.

According to the endogenous growth theory approach, trade policy can impact on income and the long run growth through (a) scale effect; (b) allocation effect; (c) spillover effect; and (d) redundancy effect. (a) Scale effects: The integration of markets through trade can create scale effects via the integration of goods markets on flows of intangible and non-rival "knowledge capital". Examples of dynamic gains from

trade via scale effects can be found in the models of Rivera-Batiz and Romer (1991), and Grossman and Helpman (1991a). Jones (1995) argues that scale effects are at odds with the existing empirical evidence of OECD countries. (b) Allocation effects: The static gains from the reallocation of resources in neoclassical models can be sustained and transformed into a growth effect, if the changes in the composition of national output are related to the production of accumulable factors. For developing countries, however, access to cheap imported capital goods is perhaps the most compelling mechanism linking trade and growth. Protection policies that restrict the import of capital equipment reduce real investment and lower the rate at which physical capital accumulates. As a result, the rate of long-run growth is – as commonly predicted by the endogenous growth theory – reduced, and if technical progress is embodied in capital goods, the negative impact of protection on growth will be magnified. (c) Spillover effects: Integrating world markets facilitates access to the knowledge available in other nations. Technical progress embodied in goods represents an opportunity for countries engaging in international trade to learn from trading partners. In the literature investigating the link between growth and trade via technological spillovers, the diffusion process is modeled in two main ways. It can be a non-purposeful activity where trade simply provides economies access to a world pool of knowledge that is freely available. Feenstra (1996) and Grosssman and Helpman (1990, 1991c) adopted this approach. The second approach models the diffusion as a purposeful activity in which the less developed countries can imitate technology available in the more developed countries. (d) Redundancy effects: The redundancy effect of trade policy on growth is closely related to the characteristics of knowledge. Since knowledge is a non-rival good, opening the economy can reduce the unnecessary waste of resources devoted to Research and Development from a global point of view. Increased foreign competition in Research and Development as a result of trade liberalization can eliminate redundancy in research across countries. Theoretical models in which the redundancy effect is used can be found in Grossman and Helpman (1991a) and Rivera-Batiz and Romer (1991).

The theoretical possibility that trade liberalization might have a negative effect on economic performance has been demonstrated in various endogenous growth studies. In Lucas (1988), free trade might cause a country sufficiently to move far from its steady state to become completely specialized in low-technology goods with its short-run comparative advantage, although it has a long-run comparative advantage in high-technology goods. Young (1991) shows that trade liberalization might cause the less developed countries to specialize in the production of "old" goods with little gains from learning by doing. Consequently, growth could be higher for less developed countries under autarky than under free trade, despite some static gains from trade.

iii. *Empirical Review*

Ige (2006) posited that the first-best rules of thumb that may be appropriate for the highly distorted economies are not necessarily appropriation for economies that have liberalized as much as Nigeria. He argued further that piecemeal across-the-board tariff reductions in Nigeria are not always beneficial from a welfare perspective and generally must be coordinated with export subsidy reductions to ensure welfare gains.

Bakare and Fawehinmi (2011) examined the relationship between trade openness and industrial productivity in Nigeria. Using a parsimonious error correction mechanism, the empirical results show that there is a significant relationship between trade openness and industrial productivity in Nigeria. It shows that trade openness led to an increase in export and consequently increases industrial output.

Adenikinju and Chete (2002) studied the effect of trade liberalization on the total factor productivity performance of the Nigerian manufacturing sector. This was accomplished in two stages. First, the TFP indicator was estimated at the firm level using the fixed effect model. Second, the TFP indicators so generated were regressed against trade liberalization and market structure variables. Two important findings from this research of concern to policy makers deserve amplification. The first is the relatively low productivity in the Nigerian manufacturing sector. This could be attributed to a plethora of factors, including a weak technological base and low level of capacity utilization. The second major finding from this study is that there are significant pay-offs from the policy of trade liberalization. The current policy of trade liberalization, which emphasizes lower tariffs and increasing openness of the economy, was found to be growth enhancing. Quite interesting is the role of Foreign Direct Investment in productivity growth at both firm and sectoral levels. There is a spillover effect generated by foreigners in the economy. Thus, the implementation of policies that encourage or restrict foreign ownership can be expected to have direct effects on industry performance, quite apart from the indirect effects that result from modification of the behavior of locally owned firms or changes in the size and distribution of firms.

Ogunkola et al (2006) studied the impact of trade and investment policy reform in Nigeria. Their findings suggest that these do not appear to have significantly affected the manufacturing sector. Specifically, manufacturing investment growth is positively related to manufacturing output growth but negatively associated with the sector's export and non-export growths. The trade policy reform dummy

significantly affects manufacturing output growth while the investment policy reform dummy does not. However, manufacturing investment growth is positively and significantly influenced by its one-period lag.

Adebiyi (2002) studies the relation between trade policies and industrial growth in Nigeria, using quarterly time series data spanning 1973 and 2001. Undertaking empirical work on the relation between trade liberalization and industrial growth in Nigeria in the empirical investigation of the aggregate growth function of index of industrial production in Nigeria, he found out that there is no unique co integral relation between the index of industrial production and its major determinants. The results of the study seem to suggest the importance as well as the imperative for Nigeria to embark on comprehensive trade liberalization policies in order to accelerate and sustain industrial growth.

Bakare and Fawehinmi (2011) studied Trade Openness, Non-Oil Industrial Sector. The findings from the study show that sectors with a high component of local raw materials generally performed better than those depending on imported inputs. In this study, empirical investigation found that the unilateral trade openness of 1986 produced the sustainable impact on the non-oil industrial sector of the Nigerian economy. It was observed that public domestic investment, savings rate, capacity utilization and infrastructure have negative impacts on Nigeria's industrial performance. Their findings and conclusion support the need for the government to consolidate and maintain the credibility of the trade policies for sustainable growth and development. More progress will be achieved if the conditions needed for a deregulated trade system to work properly are set in place.

There were also mixed results emerging from three studies of trade liberalization in African countries. In Zimbabwe (Rattso and Torvik, 1998), it was found that the drastic trade liberalization implemented in the early 1990s resulted in a contraction in output and employment that was accompanied by a sharp increase in imports and a rising trade deficit. The study argues that the contraction in output was associated with de-industrialization, a development that may also have had unfavorable effects on the future growth potential of the economy.

III. Methodology and Theoretical Framework

Researchers have adopted many different empirical methods to analyze the linkages between trade liberalization and industrial performance. These different methodologies have strengths and weaknesses, and have some conceptual approaches. McCulluch and Calandrino (2001) identified three main empirical approaches used by various researchers in exploring the link between trade and industrial performance: the descriptive or qualitative approach,

the data-based approach and the modeling approach. In general, most of the empirical studies carried out within the past fifteen years have concentrated on cross-country and panel data regression analyses. Only few studies have employed Ordinary Least Squares (OLS) and recently, the Computable General Equilibrium (CGE) techniques.

Ousmanou (2009) Using pre-and post-reform industry-level panel and aggregate national infrastructure data, examines the effects of infrastructure on industry productivity in Cameroon, controlling for trade variable and correcting for the likely endogeneity of infrastructure and other regressors. The empirical strategy involves, (i) estimation of production functions augmented by the infrastructure quantity and quality indicators and then derivation of industry-level productivity measures, (ii) accounting for output growth, and (iii) assessment of infrastructure impact on industry productivity growth.

Mouelhi (2007) took into account the effects of exogenous shocks and the delay of adjustment. A pooled sample of industries is used in this econometric analysis because the number of observations by industry is too small to conduct estimations separately for each different industry. About 17 observations (years) by industry are available, but not for all the variables. Moreover, two years are lost in constructing lags and taking first differences for estimations. A lag of variables as instruments to correct the endogeneity problem was used. The dynamic nature of the models and techniques used needs more observations that is why pooled sample of industries was used. Fixed effects models to check biases caused by unobserved sector characteristics or cross section specific effects correlated with performance outcomes that are fixed over time was also used.

a) Theoretical Framework

The study found Lucas (1998) human capital model as framework on which the work is based due to its emphasis on both labour and physical capital productivity enhancement. The basic idea of the model is that people divide their time between work and training. So, there is a trade-off, since when taking on training people give up part of their work income, but raise their future productivity and therefore their future wages.

Thus, the decisions concerning the accumulation of human capital depend on the dynamic features of the economy, which made it endogenous. Since human capital accumulation is the 'engine' of growth, growth will itself be endogenous as well. This model has two types of capital: physical and human capital. The fundamental equation of the model which is a portfolio equilibrium equation states that, in steady-state, the marginal product of the two types of capital must be the same.

Lucas (1988) presents a growth model in which output is generated via a production function of the form

$$Y = AK^{\alpha}(uhL)^{1-\alpha} \qquad (3.1.1)$$

Where: Y =output, A = growth of knowledge, K = capital and L = labor the variables are usually defined as 0< α< 1.The variable u is defined as the proportion of total labor time spent working, and h is what Lucas calls the stock of 'human capital.'

The production function can be rewritten in per-capita terms as

$$y = Ak^{\alpha}(uk)^{1-\alpha} \qquad (3.1.2)$$

Which is a constant return to scale production function in k and uh. Capital accumulation proceeds via the usual differential equation,

$$\dot{k} = y - c - (\xi + \delta)k, \qquad (3.1.3)$$

While h accumulates according to

$$\dot{h} = \emptyset h(1-u) \qquad (3.1.4)$$

$$\dot{h}/h = \emptyset(1-u). \qquad (3.1.5)$$

b) Model Specification

MANQ $= \alpha_0 + \alpha_1 KS + \alpha_2 LF + \alpha_3 H + \alpha_4 OPN + \alpha_5 RER$
$+ \alpha_6 FDI + \alpha_7 DD + \alpha_8 TR + Ut$------------------------------ (3.2.1)

Log-Linear Model:

LNMANQ $= \beta_0 + \beta_1 LNDD + \beta_2 LNLF + \beta_3 LH + \beta_4 LNOPN + \beta_5 LNRER$
$+ \beta_6 LNFDI + \beta_7 LNTR + Ut$ --------------------------------- (3.2.2)

Where:

LNMP	=	Natural Log of Manufacturing sector Performance
LNKS	=	Natural Log of Capital Stock
LNLF	=	Natural Log of Labor Force
LNOPN	=	Natural Log of Openness of the Economy
LNRER	=	Natural Log of Real Exchange Rate
LNFDI	=	Natural Log of Foreign Direct Investment
LNDD	=	Natural Log of Dutch Disease
LNTR	=	Natural Log of Tariff
LNH	=	Natural log of Human capital
LNMANQ	=	Natural Log of Manufacturing Output Index

IV. DATA PRESENTATOION AND ANALYSIS

MODEL (I) - SHORT-RUN ANALYSIS

a) Parsimonous Error Correction (ECM)

Table 5.1: MODEL 1: Short-Run Mp with Error-Correction (ECM)

Dependent Variable: D(MP)				
Method: Least Squares				
Sample (adjusted): 1980- 2010				
Included observations: 30 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-106770.7	254567.8	-0.419419	0.6794
D(KS)	4.680403	0.637210	7.345150	0.0000
D(LF)	0.101331	0.196101	0.516727	0.6110
D(H)	0.030616	0.032745	0.934977	0.3610
D(OPN)	-4392.241	7244.523	-0.606284	0.5511
D(RER)	-3726.805	12911.62	-0.288640	0.7758
D(FDI)	1.692060	0.908081	1.863337	0.0772

D(DD)	-7657.213	9652.808	-0.793263	0.4369
D(TR)	1.992309	0.917593	2.171233	0.0421
ECM	-.0737842	0.296514	-4.140920	0.0005
R-squared	0.874379	Mean dependent var		800301.3
Adjusted R-squared	0.817849	S.D. dependent var		1370378.
S.E. of regression	584865.2	Akaike info criterion		29.65735
Sum squared resid	6.84E+12	Schwarz criterion		30.12442
Log likelihood	-434.8603	Hannan-Quinn criter.		29.80677
F-statistic	15.46765	Durbin-Watson stat		1.589486
Prob(F-statistic)	0.000000			

The short-run analysis of the relationship between manufacturing sector performance (manu-facturing sector) and the independent variables as captured in the model (1) of table 5.9 specification indicated that Tariff (TR), foreign direct investment (FDI), capital stock (KS), Labour stock (LS) and human capital (H) positively impacted on the manufacturing sector. Though, in spite of the positive impact these variables on the manufacturing performance, it was discovered that they influence were not statistically significant at 5% level except capital stock (KS) tariff (TR). Other predictors; openness of the economy (OPN), real exchange rate (RER) and Dutch Disease (DD) revealed a negative influence on the manufacturing sector but non statistically significant at 5% level. The combined influence of the predictors on the manufacturing sector or its performance was documented by the coefficient multiple of determination (R-squared) which was overly high at (0.87) indicating a good fit of the model. this implies that about 87% of variation in the manufacturing sector (Performance) is explained by the variables in the model leaving 0.13 (13%) unexplained.

$$MP_t = -106770.7 + 4.68KS + 0.101LF + 0.0306H - 4392.2OPN - 3726.8RER + 1.6FDI - 7657.2DD + 1.992309TR$$

$$(-0.419)\ (7.345)\ (0.516)\ (0.934)\ (-0.606)\ (-0.288)\ (1.863)\ (-0.793)\ (2.171)$$

Note that t-ratios of the parameters are in parentheses as indicated. From the above, the estimated rate of change of the conditional mean of MP with respect to KS, LF, H, OPN, RER, FDI, DD and TR one unit change in KS will make MP to increase by 4.68 while a unit change in LF will increase manufacturing performance by 3.06%. At the a priori, the relationship between KS, LF, H, OPN, FDI and TR is supposed to be positive while that of RER and DD is negative.

If all other variables are fixed, then for each unit change in LF, MP changes by 0.03 units.

The estimated co efficient of Error Correction Term (ECM) is – 0.737. This is highly significant with theoretical valid signs. This indicates that 73% of the disequilibrium in manufacturing performance is corrected in the next years. In other words, the speed of adjustment to disequilibrium in manufacturing performance in short-run is 73%, consequently whenever there is misalignment in the short run disequilibrium is appreciated within a year. The result suggests a high speed of convergence to equilibrium whenever there is a dis-equilibrating shock.

The F-statistics of 15.47 and with Durbin-Watson of 1.59 suggest good fit and without serial correlation model.

i. *MODEL1: LONG-RUN LNMP (OLS)*

Table 5.2: MODEL (2) LONG-RUN ANALYSIS

Dependent Variable: LNMP				
Method: Least Squares				
Sample: 1980 2010				
Included observations: 31				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-77.04177	12.05948	-6.388483	0.0000
LNKS	-0.268654	0.144901	-1.854051	0.0772
LNLF	6.294461	0.937134	6.716713	0.0000
LNH	-0.600596	0.246474	-2.436752	0.0234
LNOPN	-0.550812	0.242402	-2.272307	0.0332
LNRER	-0.606325	0.191146	-3.172049	0.0044
LNFDI	0.050960	0.069126	0.737212	0.4688

LNDD	-0.581113	0.218478	-2.659822	0.0143
LNTR	0.185099	0.095259	1.943114	0.0649
R-squared	0.990917	Mean dependent var		13.09155
Adjusted R-squared	0.987614	S.D. dependent var		2.541128
S.E. of regression	0.282803	Akaike info criterion		0.549571
Su *m squared resid	1.759510	Schwarz criterion		0.965889
Log likelihood	0.481657	Hannan-Quinn criter.		0.685280
F-statistic	300.0216	Durbin-Watson stat		1.733615
Prob(F-statistic)	0.000000			

In the above model 2, long run analysis

Capital Stock: The manufacturing sector performance responded negatively to capital stock (Ks). Theory has it that if investment per worker exceeds depreciation per worker, the change in capital per worker is positive: the capital intensity increases. But if investment per worker is less than the depreciation per worker, the change in capital per worker is negative: the capital intensity decreases. When capital and output are low, investment exceeds depreciation and capital increases. But when capital and output are high, investment is less than depreciation and capital decreases.

To maximise consumption in Steady State the economy must save until the marginal product of capital f'(k) is equal to the effective depreciation rate (δ). At which point, any further increase in saving, and hence capital, will push the marginal product of capital below the effective depreciation rate. To maximize consumption for current and all future generations, the economy should re-invest all capital income and consume all labour income. In other words, we need to write down households' intertemporal utility maximization problem (the RamseyCass-Koopmans Growth Model 4.1.15). If households are impatient to consume then it is optimal to have a level of steady-state capital which is less than the golden rule. Finally, it is never optimal to have a level of capital above the golden rule. This is because the process of capital formation is cumulative and- self feeding and it includes three inter-related stages

i. The existence of real savings and the rise in them
ii. The existence of credit and financial institution to mobilize savings and to direct them in desired channels.
iii. And to use savings for investment in capital goods.

Thus the problem of capital formation becomes two-fold-how to increase the propensity to save of the people in lower income group; and how to utilize current savings for capital formation. The major problem is that the rate of capital formation via savings mobilization and investment that will encourage the growth of output of t industries is very low, output is low and so is national income as a result per-capita-income is low, hence the propensity to save is very low and this poses a great hindrance to the rate of capital formation in Nigeria.

A one unit change in Ks holding other variable fixed will cause industrial performance to decline by 0.268. Even though it appears negative, the t-ratio is significant at 10% level, which means that in the long-run it will affect manufacturing performance positively. The *apriori* expectation is positive. Investment in capital has not only directly increase output, but also introduces positive externalities for related industrial labour force. The greater the capital stock and integration with international industries, the more investment will encourage savings, investment and economic growth has strong positive influence on manufacturing performance a high level of capital stock can strongly stimulate industrial production.

Labour force (LF) has positive and significant relationship with Manufacturing Sector Performance (MP). The rate of change of the conditional means MP with respect to LF is about 6.294, meaning that it will bring an increase in MP by about 6.294 units. This is particularly true because most of the industries in Nigeria are labour intensive. It means that the industries should embark on labour intensive projects, since it has comparative advantage than capital intensive projects.

Human capital (H) from theory is an important factor for the wealth of a nation due to its influence on the overall production of the country. Skilled labour is necessary to manage and develop them as well as to improve the quality and productivity of the existing labour. However, Nigeria is having problem with its human capital. The human development index provides a measure of human capital development (HDI) in three dimensions: income, health and education. The latest values of HDI shows Nigeria ranked 156 and with the value of 0.459 among 187 countries. The value places Nigeria in the bottom, meaning that Nigeria is considered to have low level of human development. Additionally, Nigeria is equally facing a relative high inequality, worsening the problem regarding the formation of human capital due to low value for education index of 0.457, compared to the average of 0.939 in the United State of America. Evidence shows that it has a negative relationship with manufacturing performance. The rate of change of the conditional mean MP with respect to H is about -0.600. It means that one unit change in H will bring about 0.600 decline in manufacturing performance. Human capital or in

other words, quality of labour force or knowledge embedded in human leads to augmentation of product and economic growth in countries. Quality of labour varies and labour productivity increases with education and training. However, education and training use resources that could have been allocated to alternative uses such as consumption or investment in physical capital. The decision to increase stock of education/ training within the labour force is conceptually similar to investment in stock of physical capital. A higher saving rate in physical capital not only increases KS, but also human capital H. The same applies for higher investment in human capital.

The relative contribution of physical and human capital in output depends on share of each factor. Even though human capital is only one factor to many that derives manufacturing performance, it is very important factor for the growth process of Nigeria. The productive capacity of a country is related to the level of human capital, explaining why human formation must be considered of great importance.

Openness (OPN) has a negative relationship with manufacturing performance. The rate of change of the conditional mean MP with respect to OPN is about -0.55. A one unit change in openness will make manufacturing performance to decline by 0.55 units. With free trade, all sorts of goods will flood the market in Nigeria with limited foreign direct investment to total absent of infrastructure. The local industries, if not protected, will not be able to compete internationally. Lack of technological know- how and IT is an added disadvantage to these facts. This findings collaborates that of Adenikinju and Chefe (1987). It has been shown that in Nigeria manufacturing sector, import liberalization has a negative impact on total factor productivity growth. The reason for this was adduced to the fact that domestic manufactures are unable to compete with often high quality imported products.

Real exchange rate has a negative relationship with manufacturing performance which is according to *apriori* expectations. The rate of change of the conditional mean MP with respect to Real exchange rate is about -0.61. A unit change in Real exchange rate will bring about 0.61 increases in industrial performance. According to the theory, depreciation in exchange rate makes export cheaper and import expensive. A negative sign of real exchange rate is healthy for the growth of the economy and indeed manufacturing performance. Real exchange rate depreciation implies appreciation of the nominal exchange rate which can result in current account surplus and increased international competitiveness as it affects export. Real exchange rate depreciation as a policy can be used in the short-run as expansionary monetary policy $\uparrow M \rightarrow \downarrow i \rightarrow \downarrow E \rightarrow$ real depreciation $\rightarrow$ more exports. In the long –run, it will lead to increase in inflation and price level which will

subsequently result to appreciation of the real exchange rate. A depreciated currency means that imports are more expensive and domestically produced goods and exports are less expensive. It also lowers the price of exports relative to imports. Real exchange rate appreciation implies depreciation in nominal exchange rate which reduces international competitiveness and may lead to current account deficit. Increased real exchange rate may lead to lower Manufacturing Sector Performance (MP) because of increased import activities. An appreciated currency is more valuable and therefore it can buy more foreign produced goods that are denominated in foreign currency. It also means that imports are less expensive and domestically produced goods for exports are more expensive.

Dutch disease (DD) has a negative relationship with industrial performance. This is in conformity with the *apriori* expectation. Dutch disease impacts the economy negatively because of its rent seeking activities. The rate of change of the conditional mean MP with respect to DD is about -0.58. A unit change in DD will cause manufacturingl performance to decline by 0.58.

Tariff has positive relationship with manufacturing performance which is according to economic theory and in accordance with the *apriori* expectations. Tariff discourages imports due to imposition of tax on the items. The rate of change of the conditional mean of industrial performance with respect to tariff is about 0.185. A unit change in tariff will cause manufacturing performance to rise by 0.185.

The R-square explains 99 percent of the determinants of manufacturing performance. The F-statistics of 300.0216 shows that, all the variables are significant in explaining the variation in manufacturing performance. The Durbin-Watson statistics was 1.733615 which shows that, there is no problem of serial correlation. The Akaike information criterion shows the variables are significant.

V. Conclusions and Recommendations

The study documented that all the variables used to measure trade liberalization exhibited positive sign and have statistically significant effect on manufacturing output index in Nigerian. Therefore, given trade liberalization positive effects on industrial performance in Nigeria and with the two major objectives and variables for hypothesis testing; the foreign direct investment (FDI) and tariff were found to impact positively on the manufacturing output index in the Nigerian economy; the study concluded that there is need for another policy measure that will positively promote industrial manufacturing output in Nigeria given the non significant of the policy variables included in the model.

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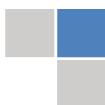
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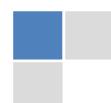
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The following is the official style and template developed for publication of a research paper. Authors are not required to follow this style during the submission of the paper. It is just for reference purposes.

Manuscript Style Instruction (Optional)

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

Structure and Format of Manuscript

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

A research paper must include:

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

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

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

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

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

FORMAT STRUCTURE

It is necessary that authors take care in submitting a manuscript that is written in simple language and adheres to published guidelines.

All manuscripts submitted to Global Journals should include:

Title

The title page must carry an informative title that reflects the content, a running title (less than 45 characters together with spaces), names of the authors and co-authors, and the place(s) where the work was carried out.

Author details

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

Abstract

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

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

Keywords

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

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

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

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

It may take the discovery of only one important paper to steer in the right keyword direction because, in most databases, the keywords under which a research paper is abstracted are listed with the paper.

Numerical Methods

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

Abbreviations

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

Formulas and equations

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

Tables, Figures, and Figure Legends

Tables: Tables should be cautiously designed, uncrowned, and include only essential data. Each must have an Arabic number, e.g., Table 4, a self-explanatory caption, and be on a separate sheet. Authors must submit tables in an editable format and not as images. References to these tables (if any) must be mentioned accurately.

Figures

Figures are supposed to be submitted as separate files. Always include a citation in the text for each figure using Arabic numbers, e.g., Fig. 4. Artwork must be submitted online in vector electronic form or by emailing it.

PREPARATION OF ELETRONIC FIGURES FOR PUBLICATION

Although low-quality images are sufficient for review purposes, print publication requires high-quality images to prevent the final product being blurred or fuzzy. Submit (possibly by e-mail) EPS (line art) or TIFF (halftone/ photographs) files only. MS PowerPoint and Word Graphics are unsuitable for printed pictures. Avoid using pixel-oriented software. Scans (TIFF only) should have a resolution of at least 350 dpi (halftone) or 700 to 1100 dpi (line drawings). Please give the data for figures in black and white or submit a Color Work Agreement form. EPS files must be saved with fonts embedded (and with a TIFF preview, if possible).

For scanned images, the scanning resolution at final image size ought to be as follows to ensure good reproduction: line art: >650 dpi; halftones (including gel photographs): >350 dpi; figures containing both halftone and line images: >650 dpi.

Color charges: Authors are advised to pay the full cost for the reproduction of their color artwork. Hence, please note that if there is color artwork in your manuscript when it is accepted for publication, we would require you to complete and return a Color Work Agreement form before your paper can be published. Also, you can email your editor to remove the color fee after acceptance of the paper.

TIPS FOR WRITING A GOOD QUALITY SOCIAL SCIENCE RESEARCH PAPER

Techniques for writing a good quality homan social science research paper:

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

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

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

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

5. Use the internet for help: An excellent start for your paper is using Google. It is a wondrous search engine, where you can have your doubts resolved. You may also read some answers for the frequent question of how to write your research paper or find a model research paper. You can download books from the internet. If you have all the required books, place importance on reading, selecting, and analyzing the specified information. Then sketch out your research paper. Use big pictures: You may use encyclopedias like Wikipedia to get pictures with the best resolution. At Global Journals, you should strictly follow here.
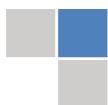
6. Bookmarks are useful: When you read any book or magazine, you generally use bookmarks, right? It is a good habit which helps to not lose your continuity. You should always use bookmarks while searching on the internet also, which will make your search easier.

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

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

9. Produce good diagrams of your own: Always try to include good charts or diagrams in your paper to improve quality. Using several unnecessary diagrams will degrade the quality of your paper by creating a hodgepodge. So always try to include diagrams which were made by you to improve the readability of your paper. Use of direct quotes: When you do research relevant to literature, history, or current affairs, then use of quotes becomes essential, but if the study is relevant to science, use of quotes is not preferable.

10. Use proper verb tense: Use proper verb tenses in your paper. Use past tense to present those events that have happened. Use present tense to indicate events that are going on. Use future tense to indicate events that will happen in the future. Use of wrong tenses will confuse the evaluator. Avoid sentences that are incomplete.

11. Pick a good study spot: Always try to pick a spot for your research which is quiet. Not every spot is good for studying.

12. Know what you know: Always try to know what you know by making objectives, otherwise you will be confused and unable to achieve your target.

13. Use good grammar: Always use good grammar and words that will have a positive impact on the evaluator; use of good vocabulary does not mean using tough words which the evaluator has to find in a dictionary. Do not fragment sentences. Eliminate one-word sentences. Do not ever use a big word when a smaller one would suffice.

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

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

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

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

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

18. Go to seminars: Attend seminars if the topic is relevant to your research area. Utilize all your resources.
Refresh your mind after intervals: Try to give your mind a rest by listening to soft music or sleeping in intervals. This will also improve your memory. Acquire colleagues: Always try to acquire colleagues. No matter how sharp you are, if you acquire colleagues, they can give you ideas which will be helpful to your research.

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

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

21. Report concluded results: Use concluded results. From raw data, filter the results, and then conclude your studies based on measurements and observations taken. An appropriate number of decimal places should be used. Parenthetical remarks are prohibited here. Proofread carefully at the final stage. At the end, give an outline to your arguments. Spot perspectives of further study of the subject. Justify your conclusion at the bottom sufficiently, which will probably include examples.

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

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Informal Guidelines of Research Paper Writing

Key points to remember:

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

Final points:

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

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

The discussion section:

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

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

General style:

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

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

Mistakes to avoid:

- Insertion of a title at the foot of a page with subsequent text on the next page.
- Separating a table, chart, or figure—confine each to a single page.
- Submitting a manuscript with pages out of sequence.
- In every section of your document, use standard writing style, including articles ("a" and "the").
- Keep paying attention to the topic of the paper.
- Use paragraphs to split each significant point (excluding the abstract).
- Align the primary line of each section.
- Present your points in sound order.
- Use present tense to report well-accepted matters.
- Use past tense to describe specific results.
- Do not use familiar wording; don't address the reviewer directly. Don't use slang or superlatives.
- Avoid use of extra pictures—include only those figures essential to presenting results.

Title page:

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

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

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

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

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

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

Approach:

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

Introduction:

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

The following approach can create a valuable beginning:

o   Explain the value (significance) of the study.
o   Defend the model—why did you employ this particular system or method? What is its compensation? Remark upon its appropriateness from an abstract point of view as well as pointing out sensible reasons for using it.
o   Present a justification. State your particular theory(-ies) or aim(s), and describe the logic that led you to choose them.
o   Briefly explain the study's tentative purpose and how it meets 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 for every section. If you make the four points listed above, you will need at least four paragraphs. Present surrounding information only when it is necessary to support a situation. The reviewer does not desire to read everything you know about a topic. Shape the theory specifically—do not take a broad view.

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

Procedures (methods and materials):

This part is supposed to be the easiest to carve if you have good skills. A soundly written procedures segment allows a capable scientist to replicate 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 to give the least amount of information that would permit another capable scientist to replicate 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 section, mention the specific item describing the way, but draw the basic principle while stating the situation. The purpose is to show 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:

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

Methods:

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

Approach:

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

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

What to keep away from:

o   Resources and methods are not a set of information.
o   Skip all descriptive information and surroundings—save it for the argument.
o   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 as entirely objective details of the outcome, and save all understanding for the discussion.

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

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

Content:

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

What to stay away from:

- o Do not discuss or infer your outcome, report surrounding information, or try to explain anything.
- o Do not include raw data or intermediate calculations in a research manuscript.
- o Do not present similar data more than once.
- o A manuscript should complement any figures or tables, not duplicate information.
- o Never confuse figures with tables—there is a difference.

Approach:

As always, use past tense when you submit 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 section.

Figures and tables:

If you put figures and tables at the end of some details, make certain that they are visibly distinguished from any attached appendix materials, such as raw facts. Whatever the position, each table must be titled, numbered one after the other, and include a heading. All figures and tables must be divided from the text.

Discussion:

The discussion is expected to be the trickiest segment to write. A lot of papers submitted to the journal are discarded based on problems with the discussion. There is no rule for how long an 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 implications of the study. The purpose here is to offer an understanding of your results and support all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of results should be fully 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 the prospect, and let it drop at that. Make a decision as to whether each premise is supported or discarded or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."

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.

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

Approach:

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

Describe generally acknowledged facts and main beliefs in present tense.

The Administration Rules

Administration Rules to Be Strictly Followed before Submitting Your Research Paper to Global Journals Inc.

Please read the following rules and regulations carefully before submitting your research paper to Global Journals Inc. to avoid rejection.

Segment draft and final research paper: You have to strictly follow the template of a research paper, failing which your paper may get rejected. You are expected to write each part of the paper wholly on your own. The peer reviewers need to identify your own perspective of the concepts in your own terms. Please do not extract straight from any other source, and do not rephrase someone else's analysis. Do not allow anyone else to proofread your manuscript.

Written material: You may discuss this with your guides and key sources. Do not copy anyone else's paper, even if this is only imitation, otherwise it will be rejected on the grounds of plagiarism, which is illegal. Various methods to avoid plagiarism are strictly applied by us to every paper, and, if found guilty, you may be blacklisted, which could affect your career adversely. To guard yourself and others from possible illegal use, please do not permit anyone to use or even read your paper and file.

CRITERION FOR GRADING A RESEARCH PAPER (COMPILATION)
by GLOBAL JOURNALS

Please note that following table is only a Grading of "Paper Compilation" and not on "Performed/Stated Research" whose grading solely depends on Individual Assigned Peer Reviewer and Editorial Board Member. These can be available only on request and after decision of Paper. This report will be the property of Global Journals

Topics	Grades		
	A-B	**C-D**	**E-F**
Abstract	Clear and concise with appropriate content, Correct format. 200 words or below	Unclear summary and no specific data, Incorrect form Above 200 words	No specific data with ambiguous information Above 250 words
Introduction	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
Methods and Procedures	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
Result	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
Discussion	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
References	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring

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