Mémoire présenté pour obtenir le diplôme de

MASTER 2 ÉCONOMIE APPLIQUÉE

Parcours

INGÉNIERIE ET ÉVALUATION ÉCONOMIQUE

Estimations sur données de panel de fonction d'importation et d'exportation de certains pays d'Afrique : la Côte d'Ivoire, l'Égypte, le Kenya et le Nigeria

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RÉSUMÉ

Le mémoire consiste à réaliser des estimations sur données de panel de fonctions d'exportation et importation de quatre pays africains (Côte d'Ivoire, Égypte, Kenya et Nigeria) afin de déduire, à travers les élasticité-prix et revenu, le comportement de ces économies vis-à-vis du commerce international. Ces pays font face aux paradoxes de « croissance sans développement » de Nubukpo et d'« économies inverses » qui sera développé suite aux multiples irrégularités et tards qui caractérisent ces pays. La première partie servira à déceler des éventuelles gains de productivité, du résultat de solde extérieur ainsi que les secteurs de spécialisation de leurs économies. La deuxième sera principalement axée sur les méthodes d'estimation et commentaires des résultats avec comme sous-catégorie, un partitionnement des observations en deux groupes (pré et post guerre froide).

Mots-clés : CEDEAO, ANMO, élasticité-prix, élasticité-revenus, taux de change réel, degré d'ouverture, paradoxe de croissance sans développement et d'économies inverses.

ABSTRACT

The thesis consists in carrying out estimations on panel data of export and import functions of four African countries (Ivory Coast, Egypt, Kenya and Nigeria) in order to deduce, through price and income elasticities, the behavior of their economies in allowance to international trade. These countries are victims of Nubukpo's "growth without development" paradox and "reverse economies" paradox which will be developed as a result of the multiple irregularities and delays that characterize these countries. The first part will serve to identify possible productivity gains, the trade balance result and the sectors of specialization of their economies. The second part will mainly focus on the estimation methods and comments on the results within, as a sub-category, a partitioning of data into two groups (pre and post cold war).

Keywords : ECOWAS, MENA, price and income elasticity, real exchange rate, Openness, Paradoxes of growth without development and inverse economies.

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A l’éternel, mon Dieu, le digne de louanges et de magnificence pour sa miséricorde et bénédiction dont il ne cesse de me faire grâce.

A mes parents, famille, amis et alliés pour le soutien et la motivation dont vous avez témoigné à mon égard dans le but de m’encourager.

Au personnel de la scolarité et professeurs de la faculté de Droit, Economie et Sciences Sociales pour l’encadrement et l’accompagnement dont j’ai bénéficié tout le long du cursus.

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SOMMAIRE

ACRONYMES & ABRÉVIATIONS

AIC	**:**	Akaike Information Criterion (Critère d'Information d'Akaike)
ANMO	**:**	Afrique du Nord et Moyen-Orient
BAD / AFDB	**:**	Banque Africaine de Développement (African Development Bank)
BIC	**:**	Bayesian Information Criterion
CEA	**:**	Commission Economique pour l'Afrique
CEDEAO	**:**	Communauté Economique des Etats de l'Afrique de l'Ouest
FMI	**:**	Font Monétaire International
ICP / CPI	**:**	Indice des Prix à la Consommation
IDE	**:**	Investissement Direct Etranger
LE EGP	**:**	Livre Egyptienne codée en « EGP »
NU	**:**	Nations Unies
OLS	**:**	Moindres Carrées Ordinaire (MCO)
OMC / WTO	**:**	Organisation Mondiale du Commerce
OPEP	**:**	Organisation des Pays Exportateurs de Pétrole
PPA / PPP	**:**	Parité de Pouvoir d'Achat
PIB / GDP	**:**	Produit Intérieur Brut
PVD	**:**	Pays en Voie de Développement
TB	**:**	Trade Balance (Balance Commerciale)
RCA	**:**	Ricardo Comparative Advantage (Avantages Comparatives)
UEMOA	**:**	Union Economique et Monétaire Ouest Africain
UA	**:**	Union Africaine
SIR	**:**	Société Ivoirienne de Raffinerie
ZES	**:**	Zone Economique Spéciale

SLAM SUR L'ÉCONOMETRIE

Économétrie,

De par ton approche, je trie

Des données aussi complexes que parfois je m'écrie.

Ton allure me fascine

Et par ton analyse, ma perception se raffine.

Du temps, t'en fais des séries

Et de ses travers, tu ériges des modèles pour retracer des histoires

Du passé, phénomènes ou tendances dont tu prédis la trajectoire.

Bien que tes formules s'apparentent dès fois à de la torture,

Tes résultats nous servent de visière vers le futur malgré les conjonctures.

Par ton accoutumance, on finit par se complaire

Et à la retraite, tu seras un acolyte pour Monsieur COMPAIRE.

Al-Foutahwy,

Plume de foi, Plume d'amour et surtout Plume de mésothérapie…

Introduction

L'Afrique, ce continent aux énormes richesses et potentialités a toujours été la convoitise des économies du monde. Cependant, depuis l'avènement des indépendances (pour la plupart dans les années 60), son développement est à la trainée des modèles occidentaux. Ces dernières décennies, font office de croissance économique et de progression du revenu moyen de la population telles qu'elles n'en avaient plus connues depuis le milieu des années 1970. Malgré ce dynamisme de mondialisation, la réalité reste particulièrement difficile à cerner du fait de la diversité des pays qui composent le continent et de l'insuffisance des données statistiques (Chevallier et Le Goff, CEPII 2014).

Les hydrocarbures, gaz naturel, le tourisme (notamment pour l'Égypte et le Kenya), l'agriculture ou horticulture (Kenya), la manufacture et les biens textiles sont au cœur de ces économies : se hissant ainsi un poids dans le commerce international. Par exemple, la Côte d'Ivoire dont l'économie est principalement basée sur l'agriculture, est le premier producteur et exportateur mondial de cacao (30% de la production mondiale), l'un des trois plus gros producteurs et exportateurs de noix de cajou et un grand exportateur d'huile de palme, de café et d'huile. L'Égypte avec un déficit commercial structurel (36,5 mds$ soit 10% du PIB en 2019/20) en raison de la faiblesse de son appareil exportateur et d'une part conséquente d'importations incompressibles (premier importateur de blé au monde, sa production manufacturière et industrielle dépend à 40% d'intrants importés) est un pays à revenu intermédiaire dont l'économie repose essentiellement sur le tourisme, les recettes du canal de Suez, les revenus de transferts privés et les exportations de pétrole et de gaz. Certains pays, (Ghana, Kenya, Nigeria…) considérés comme des « *frontier markets*[1] », ont attiré des capitaux privés, parfois au-delà des seuls secteurs d'exploitation des ressources naturelles (Or, Pétrole brute et Gaz naturel) et ont pu emprunter en devises sur les marchés financiers internationaux.

Le but de notre analyse est de présenter une étude totalement indépendante de chacun de ces quatre pays en matière de commerce et de développement et de montrer comment les découvertes

[1] est un terme désignant un ensemble de pays émergents ayant un marché financier établi mais dont la capitalisation boursière et la liquidité restent faibles.

de ressources naturelles dans ces pays ont relancé l'investissement public et les investissements directs étrangers (ICP, 2011). On étudiera ainsi l'insertion commerciale des quatre pays dans l'économie mondiale en analysant leur élasticité prix, et donc le rôle de la compétitivité prix et leur élasticité revenus (le rôle de la compétitivité hors prix). Et en dernier lieu, de ressortir les effets de la sous-facturation des prix à l'export ainsi que leur surfacturation à l'import suite à l'ampleur des flux financiers illicites liés aux exportations de produits extractifs[2] et aux écarts entre les données miroir du commerce bilatéral[3], maquillant ainsi les statistiques officielles de ces pays (Rapport des NU, 2020).

La première partie est consacrée à l'étude de la compétitivité et de la croissance de chaque pays. La seconde partie portera sur les estimations en données de panel des fonctions d'exportations et d'importations en volume de chaque pays.

[2] Or, platine, diamants, cuivre, fer, aluminium, manganèse, pétrole/gaz.
[3] L'écart entre les données miroir du commerce entre deux pays correspond à la différence entre la valeur d'un flux d'exportation d'un pays A et la valeur du flux d'importation correspondant d'un pays B.

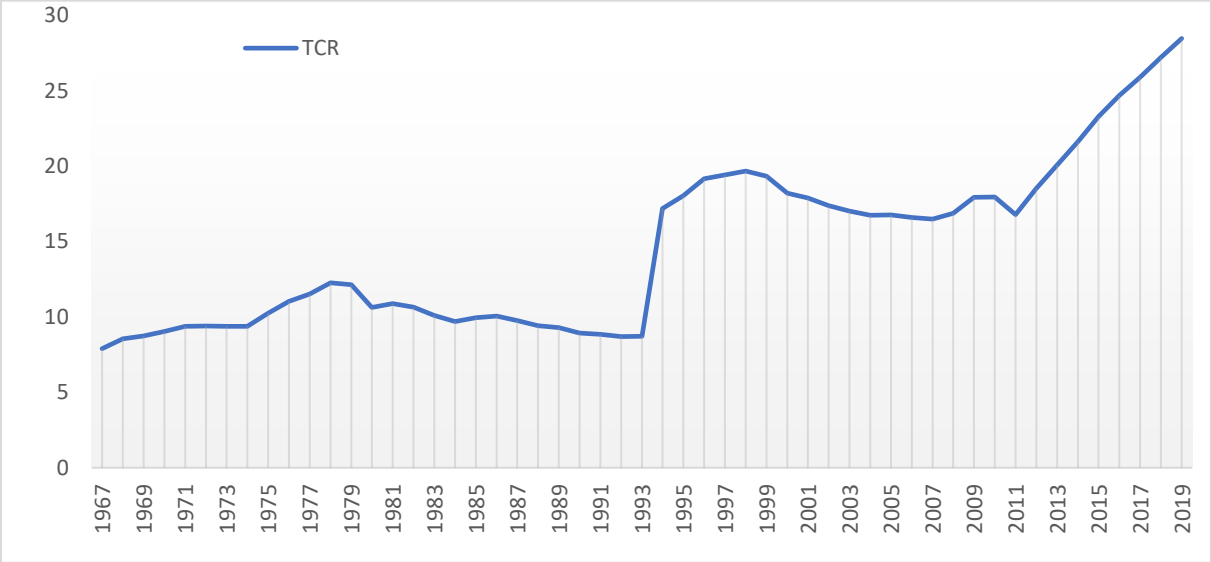
Partie I : Compétitivité et Croissance

Section I : Côte d'Ivoire



I.1 *Compétitivité-prix et niveau de vie :*

Graphique 1 : Compétitivité-prix par rapport à la France 1967-2019
Mesuré par le taux de change réels du PIB
(écart taux de change au taux de PPA)



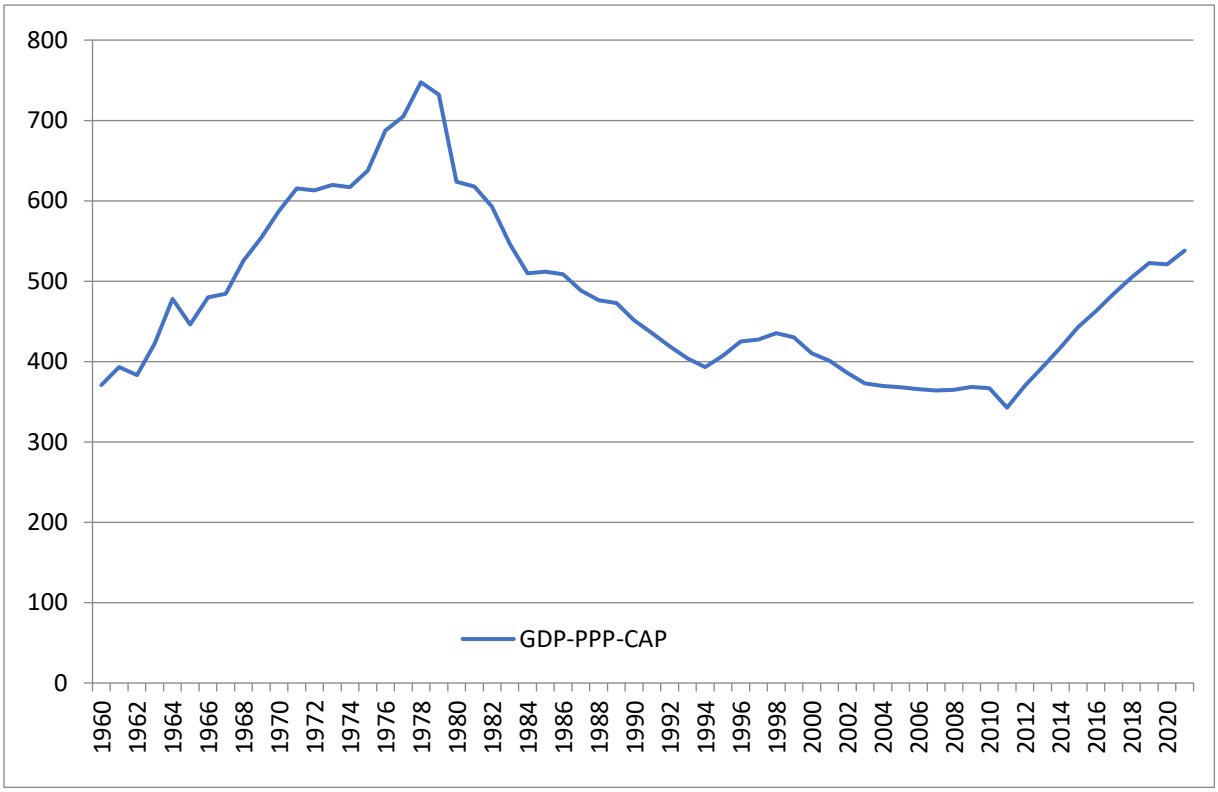
Source: CEPII, base Chelem Taux de change et PIB, novembre 2021

Bien avant la décision de changement radicale de la politique monétaire de la Réserve fédérale américaine (en 1979), la Côte d'Ivoire se démarquait à partir du début des ‘‘70’’ par de forts taux de change entrainant une perte de gains de compétitivité-prix. Par contre, depuis cette date, le pays a accru sa compétitivité-prix (malgré la crise de la dette des PVD en 1982) suite à la dévaluation du franc CFA. Pendant cette période, le TCR a connu une forte baisse d'environ 85% des prix français.

C'est à partir de 1994 que le cycle du TCR repart à la hausse, puis à la baisse suite à des périodes de crises politiques jusqu'en 2002, date à partir de laquelle, il ne cesse d'augmenter. Globalement, on est passé de 1967 à 2019, d'une hausse du TCR d'environ 7,9 % à 28,5 % des prix français.

Le **graphique 2** montre l'évolution du niveau de vie des Ivoiriens depuis le lendemain des indépendances.

<u>Graphique 2</u> : PIB/tête PPA de 1960-2020

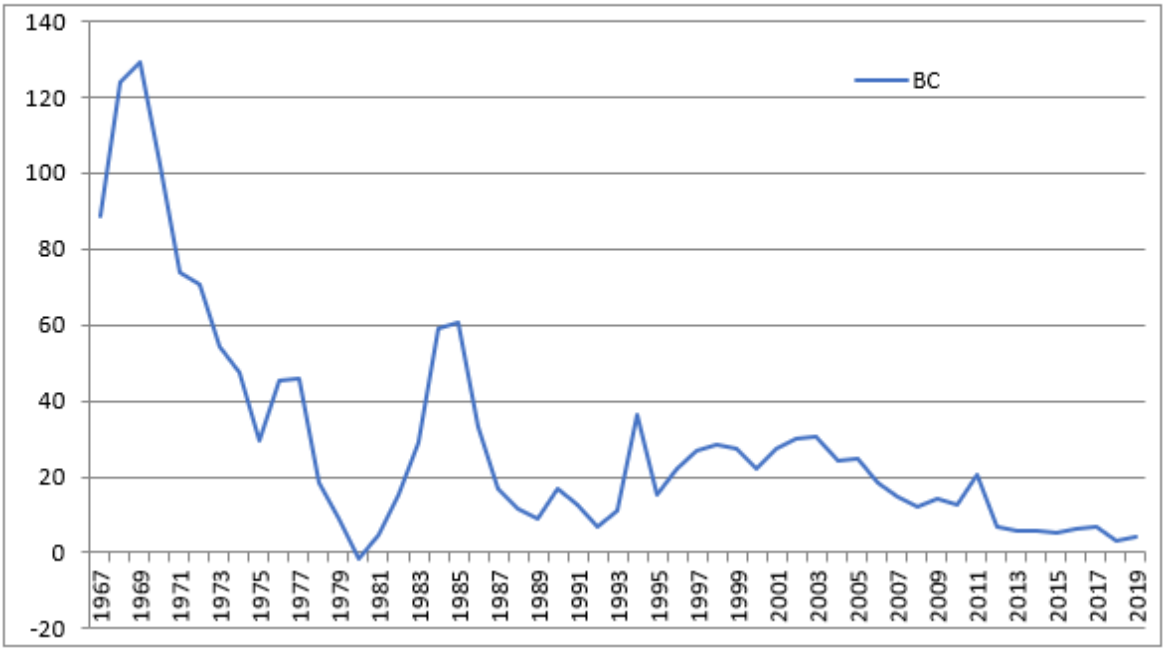


Source: CEPII, base Chelem PIB, novembre 2021 (échelle 1/10)

Les lendemains des indépendances furent roses car on assiste à une augmentation du niveau de vie des citoyens jusqu'en 1979. Date du déclin suite à la politique de dévaluation du franc CFA. C'est en 1994 qu'on assiste à nouveau, à un retour de croissance soutenue du PIB par habitant qui sera de courte période car s'estompe par l'éclatement de la crise politique de 1999 suivi de dégénérescences économiques sur une décennie de violences et d'incertitudes (2002 à 2011). Depuis le dénouement de la crise politique suite à l'avènement du Président Ouattara au pouvoir, l'appareil économique emboîte le pas au processus de rattrape avec une croissance forte et soutenue avoisinant 9,2% du PIB en 2013 et suivi de 8,5% en 2014 (le taux le plus élevé de l'UEMOA). Un des malheurs des économies africaines et des PVD en général, est que cette croissance ne profite qu'à une certaine classe de la population. À cela, témoigne un indice de Gini de 0,415 en 2015 ainsi que les études de Nubukpo (2009) qui concluaient que l'Afrique connaît depuis ''2000'' une « croissance économique sans prospérité » faisant face à de terribles difficultés pour leurs systèmes fiscaux et budgétaires.

I.2 *Évolution de la Balance Commerciale :*

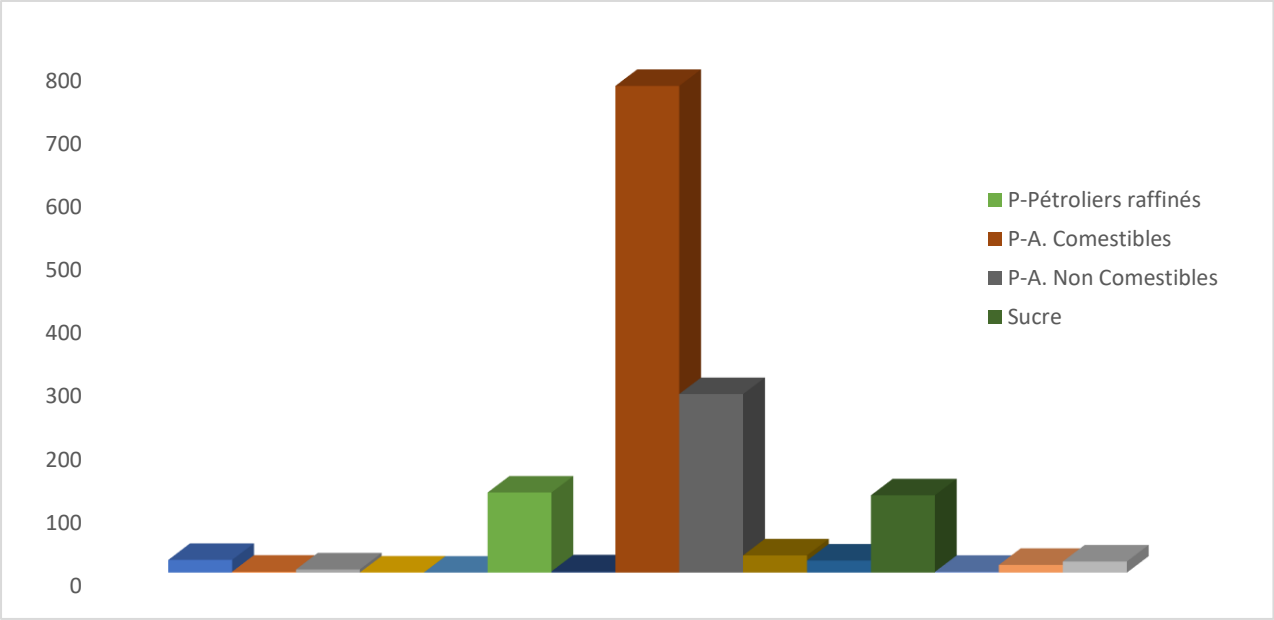
Graphique 3 : Balance Commerciale de 1967-2019



Source: CEPII, base Chelem Balance des Paiements, novembre 2021

Ce graphique indique des fluctuations de la balance de paiements en fortes hausses pendant la période d'amélioration du niveau de vie, juste avant la politique de dévaluation du franc CFA en 1980. Puis, subit à nouveau, un choc positif (suite aux gains de compétitivité-prix) pendant la crise de la dette des PVD. La balance des paiements reflète au mieux les différentes inflexions conjoncturelles. Là aussi, le paradoxe de « croissance économique sans prospérité » de Nubukpo (2009) est vérifié car la croissance ne se matérialise pas dans le solde extérieur.

<u>Graphique 4</u> : forte dépendance du secteur agricole et de raffinerie du pétrole (1967-2019)



Source: CEPII, base Chelem Balance commerciale, novembre 2021

Le **graphique 4** montre une dépendance principale de l'économie ivoirienne du secteur agricole (à la fois des produits comestibles et non comestibles) et des produits pétroliers raffinés (**3,8 millions** de tonnes de pétrole brut sont raffinés chaque année par la SIR pour faire parmi tant d'autres du : butane, super sans plomb, pétrole lampant, kérosène et gasoil). Le sucre ressort également dans l'excédent de cette balance commerciale. Le gouvernement a d'ailleurs interdit les importations du sucre pour relancer l'industrie sucrière locale et d'améliorer sa compétitivité face à une demande toujours croissance au niveau de la sous-région.

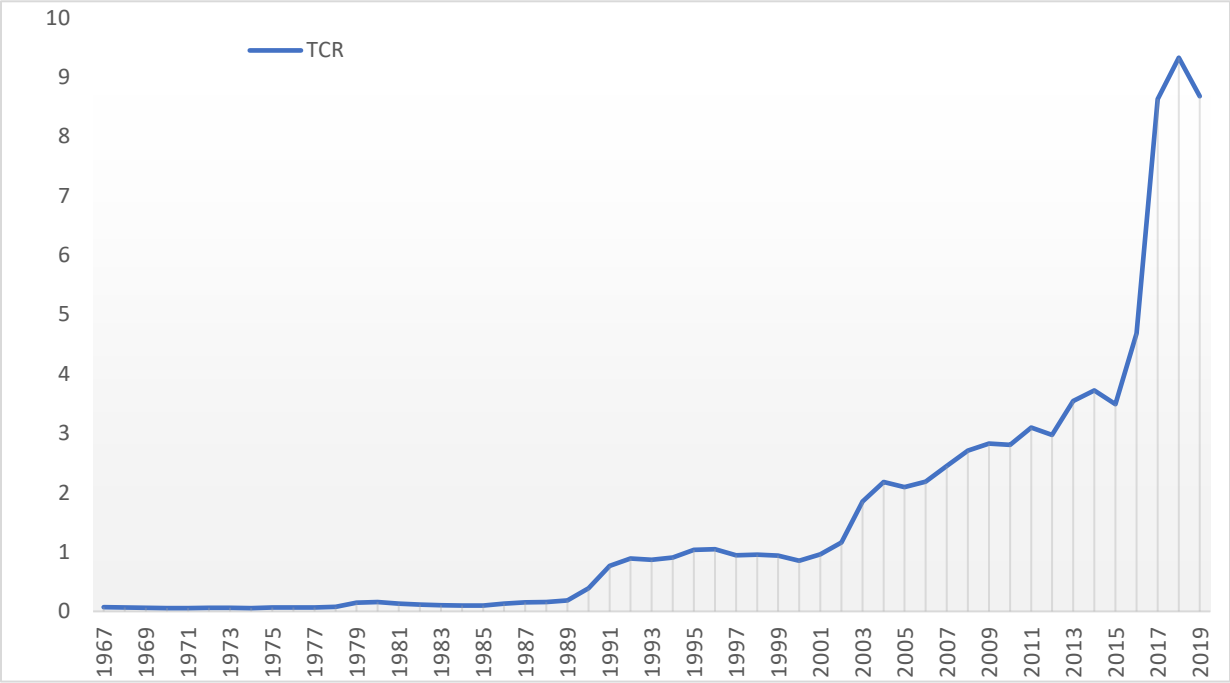
Section II : l'Égypte

chiffres clés

- Superficie en milliers de km² : 1 001
- Population en milliers (2001) : 69 080
- PIB par habitant en dollars (2001) : 1 426
- Espérance de vie (2000-2005) : 68.3
- Taux d'analphabétisme (2001) : 43.8

I.1 *Compétitivité-prix et niveau de vie :*

Graphique 1.1 : Compétitivité-prix par rapport à la France 1967-2019
Mesuré par le taux de change réels du PIB
(écart taux de change au taux de PPA)

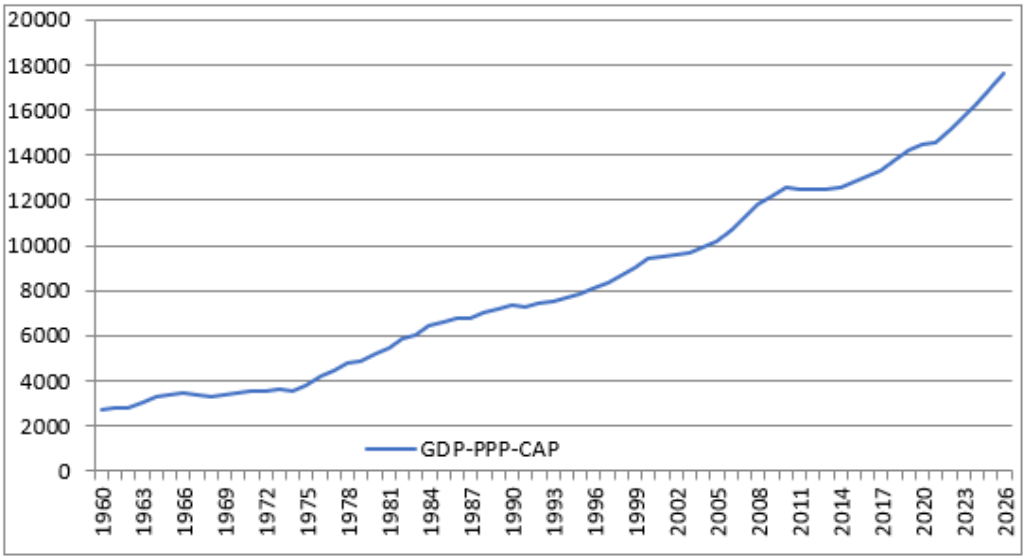


Source: CEPII, base Chelem Taux de change et PIB, novembre 2021

Dans le besoin de s'aligner aux devises étrangères majeures, l'économie égyptienne est principalement caractérisée par une politique d'appréciation de sa monnaie (LE). Cette pratique de hausse de TCR lui vaut une baisse de compétitivité-prix. Néanmoins on assiste à une dépréciation en 2018/2019.

Graphique 2.1 : sa croissance économique est l'une des plus dynamiques de la région ANMO. Elle fut en 2017, la première puissance économique du continent africain en matière de PIP-PPA. La croissance reste néanmoins insuffisante pour en finir avec ce paradoxe de péché originel car incapable d'endosser le poids des dépenses publiques (qui s'est vu multiplier par 2,2 en 5ans), d'absorber de façon inclusive les 800.000 jeunes qui rejoignent chaque année le marché du travail et de réduire la pauvreté qui touche environ 30% de sa population (vivant autour de 1,7$ au jour). Et c'est loin d'être gagné avec une dette publique galopante de 12 milliards $ sur 3 ans par le FMI (suite au programme d'ajustement macroéconomique déployé par les autorités pour financer les mégaprojets du pays).

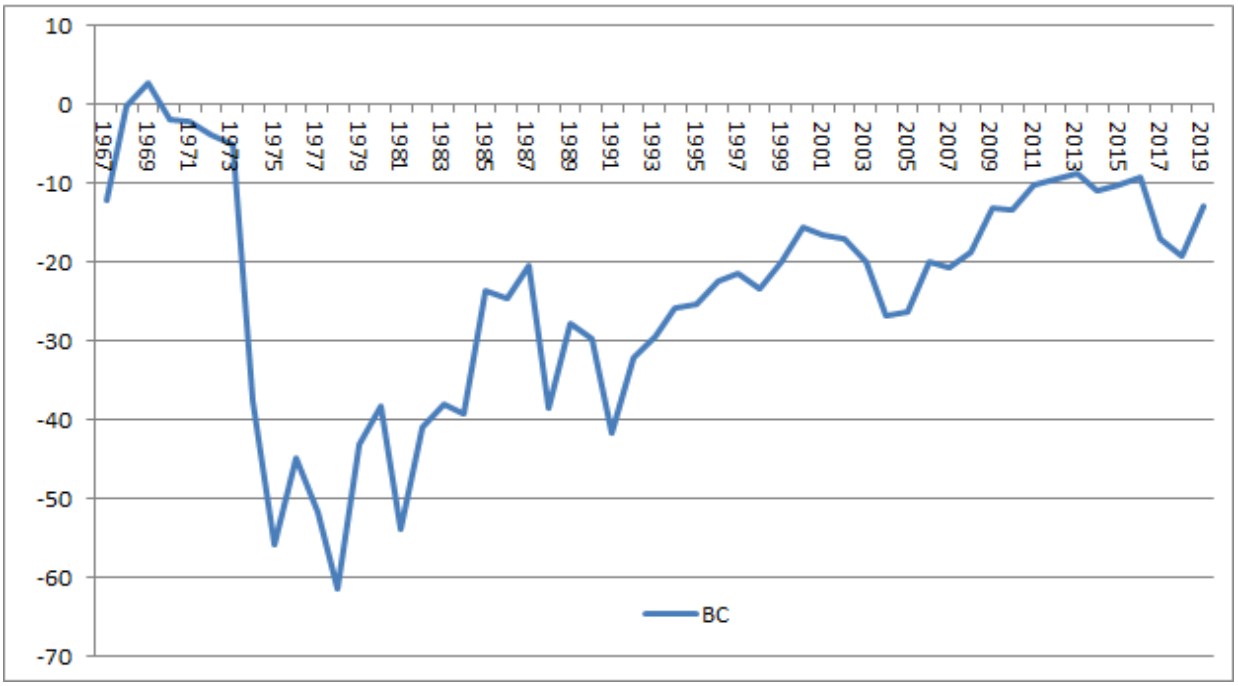
Graphique 2.1 : PIB/tête PPA de 1960-2020



Source: CEPII, base Chelem PIB, novembre 2021

I.2 *Évolution de la Balance Commerciale :*

Graphique 3.1 : Balance commerciale (1967-2019)

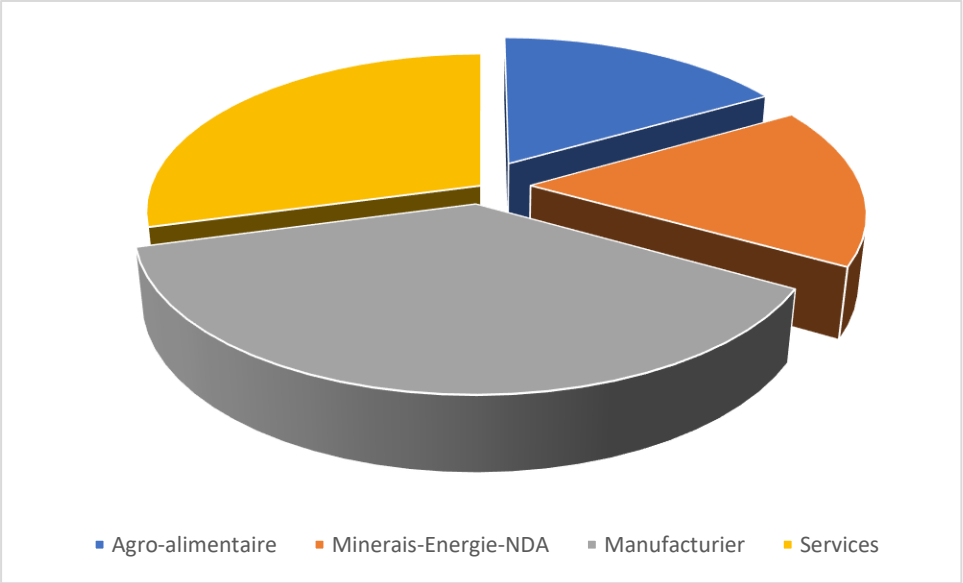


Source: CEPII, base Chelem Balance des Paiements, novembre 2021

Sa performance mitigée témoigne de son déficit commercial. Le pays dépend fortement des importations malgré son économie diversifiée (premier exportateur de blé). Suite à l'insuffisance de ses 9 raffineries pour répondre à la demande locale, le pays est obligé de recourir à

une demande extérieure malgré un niveau d'exportation en hydrocarbures de plus de 40% du total d'exportations et 9% du PIB (2008).

<u>Graphique 4.1</u> : Degré d'ouverture (1967-2019)



Source: CEPII, base Chelem Openness , novembre 2021

Son économie tourne principalement sur ces 4 secteurs d'activités. Le secteur manufacturier reste le plus important sur l'ensemble de la période. Le tourisme se place en seconde position et la première ressource en devises du pays (recettes d'ordre de 7 milliards $ par an). Cependant, il ne cesse de faire face à des chocs négatifs à travers l'histoire (les attentats de 1997-2004, l'instabilité politique de 2010-2012 marqué à sa fin par une demande des salafistes au près du gouvernement pour détruire les pyramides de Gizeh qu'ils jugent de monuments païens[4]…). Le secteur des minerais et énergies (hydrocarbures et gaz naturel) en troisième position et dernier lieu, l'industrie agro-alimentaire (avec ses cultures riches et variées le long du Nil).

[4] Le Figaro, « Un leader djihadiste appelle à la destruction de pyramides », *Le Figaro*, 12 novembre.

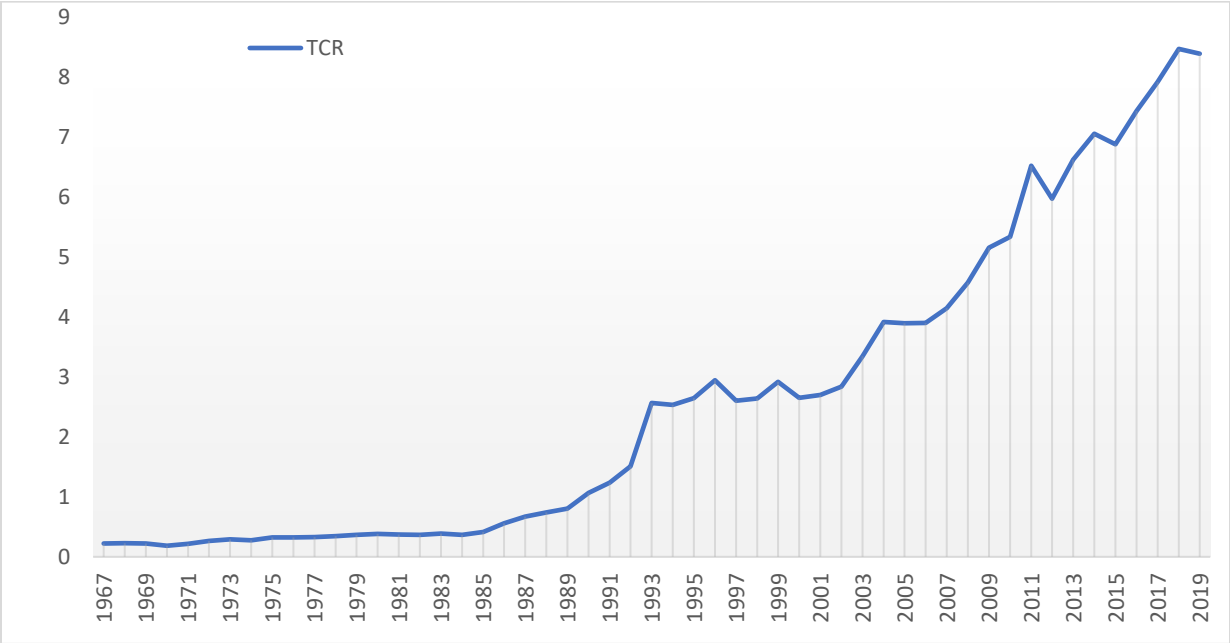
Section III : le Kenya

chiffres clés

• Superficie en milliers de km² :	580
• Population en milliers (2005) :	34 256
• PIB par habitant, valorisation dollars PPA (2005) :	1 144
• Espérance de vie (2000-2005) :	47
• Taux d'analphabétisme (2005) :	13.1

I.1 *Compétitivité-prix et niveau de vie :*

Graphique 1.2 : Compétitivité-prix par rapport à la France 1967-2019
Mesuré par le taux de change réels du PIB
(écart taux de change au taux de PPA)

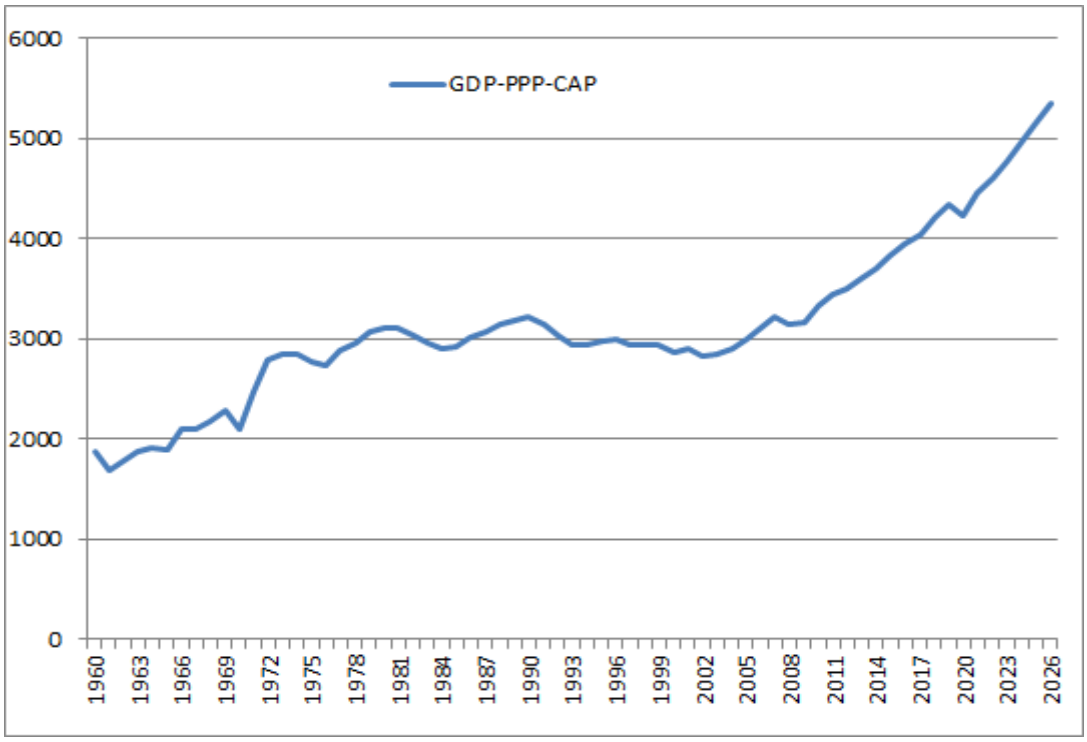


Source: CEPII, base Chelem Taux de change et PIB, novembre 2021

Sa compétitivité-prix est à l'instar de celle de l'Égypte (forts taux d'intérêts entraînant une baisse de la compétitivité-prix). Le problème avec cette pratique est qu'elle est handicapante des économies qui dépendent fortement de l'importation. Nos exportations coutent plus chers et avec notre gain de pouvoir d'achat suite à l'appréciation de la monnaie, on préfère acheter à l'étranger : faisant ainsi des pays pratiquant des politiques de dépréciation monétaire, un terrain propice pour les IDE (Trump reprochait à la chine de maintenir sa monnaie artificiellement basse). Néanmoins, à la fin de l'année 2011, le pays procède à une forte dépréciation de sa monnaie qui se fera rattraper par une inflation rapide, stabilisant ainsi les prix de 2012 à 2013 (BAD, 2012).

Le **graphique 2** nous indique que malgré une croissance du PIB par habitant, le Kenya reste un pays à revenu intermédiaire. Le pays connait une croissance continue suivie de quelques irrégularités en rapport à sa forte dépendance de l'extérieur (aide internationale suite aux problèmes de gouvernance du pays). La médiocrité de ses résultats économiques a aggravé le chômage et la pauvreté (qui augmente depuis 1997) notamment avec la détérioration de la situation budgétaire suite à l'accroissement des dépenses publiques.

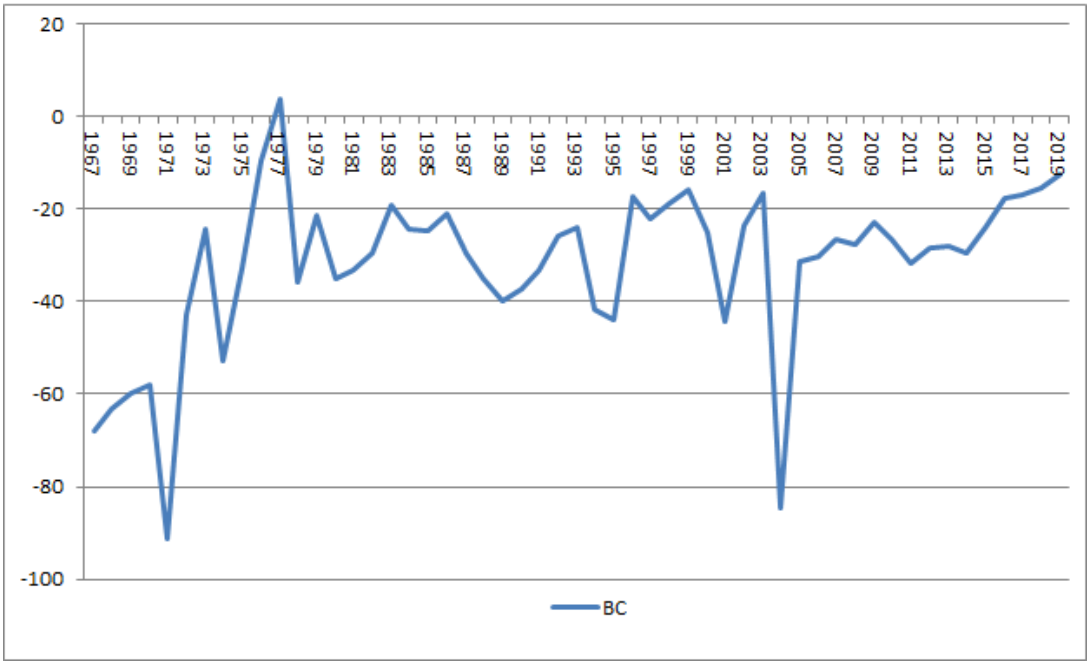
Graphique 2.2 : PIB/tête PPA de 1960-2020



Source: CEPII, base Chelem PIB, novembre 2021

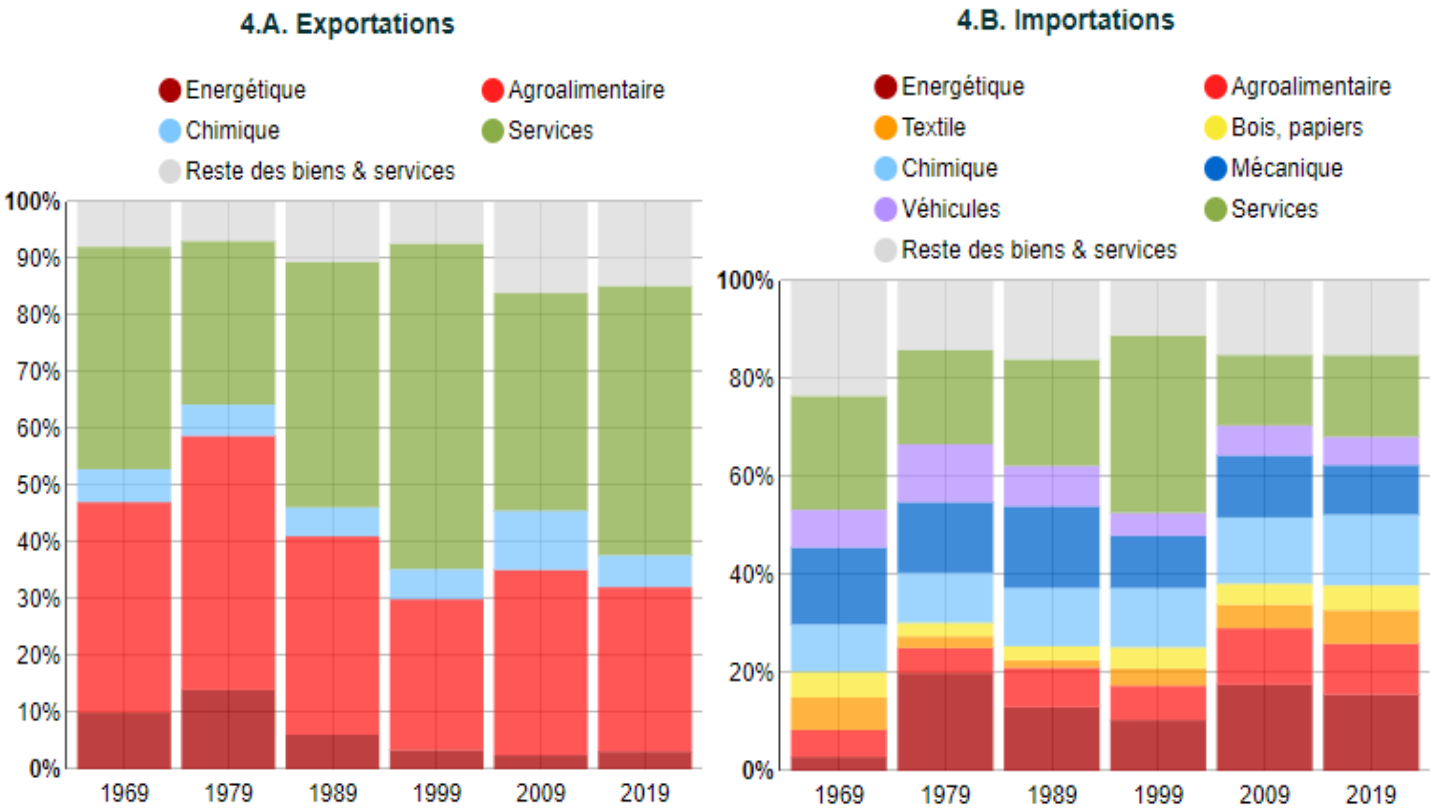
I.2 *Évolution de la Balance Commerciale :*

Graphique 3.2 : Balance commerciale (1967-2019)



Source: CEPII, base Chelem Balance des Paiements, novembre 2021

<u>Graphique 4.2</u> : Structure des exportations et des importations par filière
B&S, 1969-1979-1999-1999-2009-2019 (en %)



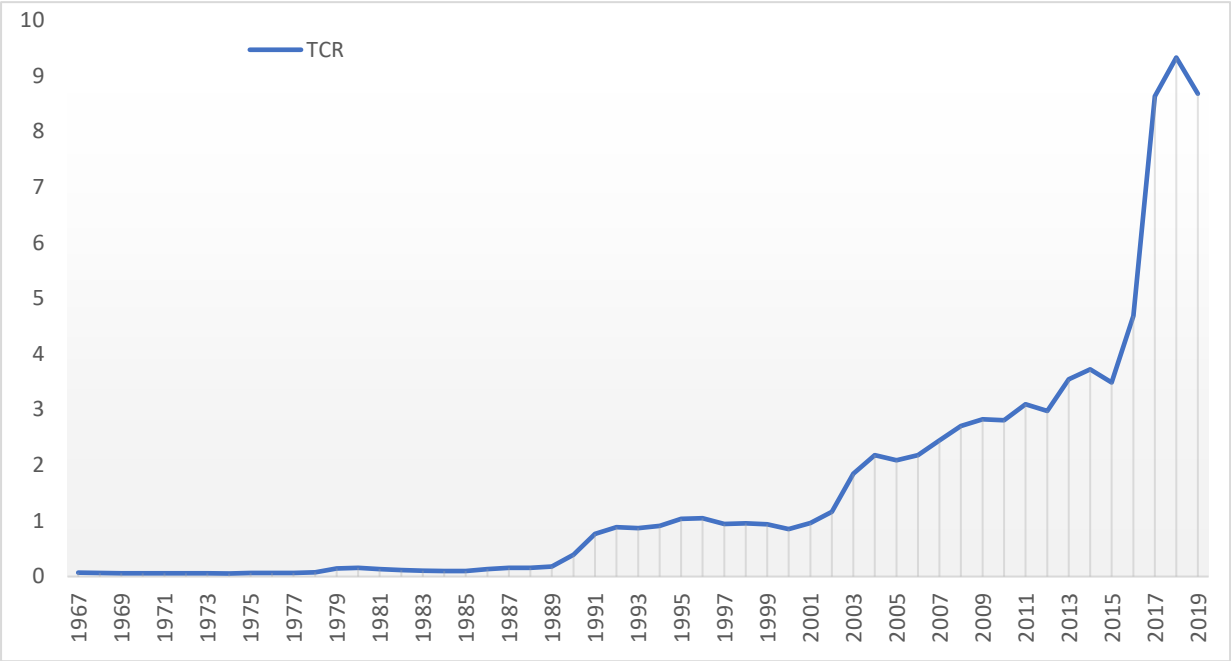
Source: CEPII, Visual data, 2019

Là aussi, le solde du commerce extérieur reste déficitaire malgré la continuité des taux de croissance avoisinant parfois les 5% (syndrome de Nubukpo). Cependant il reste l'un des rares pays africains à s'être développé dans le secteur industriel (importe du pétrole brut qu'il raffine pour son usage intérieur et pour l'exportation) et qui ne possède pas beaucoup de ressources naturelles comme les autres pays africains. Le tourisme (notamment avec son célèbre safari et mont Kilimandjaro) et l'agriculture (sa filière horticole impacte près de 2 millions de personnes et premier fournisseur de roses en Europe ; 3ème producteur mondial de thé derrière la Chine et l'Inde qui sont d'ailleurs ses principaux fournisseurs avec respectivement 24,1% et 11,1% du total importé) restent ses secteurs de prédilections.

Section IV : le Nigeria

I.1 *Compétitivité-prix et niveau de vie :*

Graphique 1.3 : Compétitivité-prix par rapport à la France 1967-2019
Mesuré par le taux de change réels du PIB
(écart taux de change au taux de PPA)



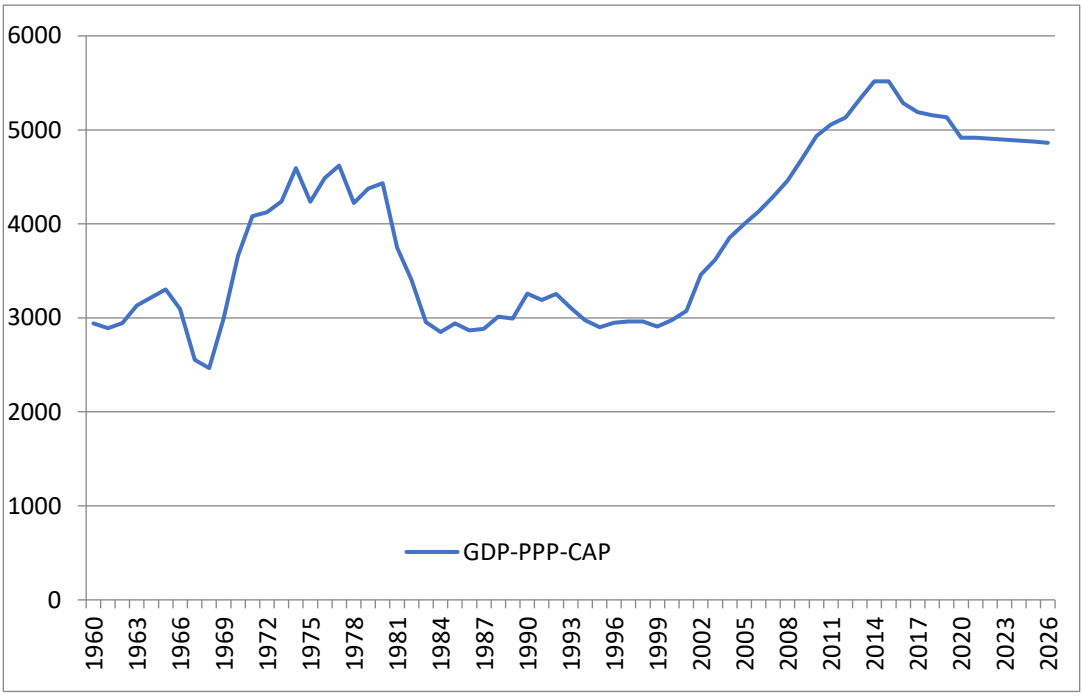
Source: CEPII, base Chelem Taux de change et PIB, novembre 2021

On constate une forte similitude des TCR entre le Nigéria, l'Égypte et le Kenya (la Côte d'Ivoire n'y figurant pas car régie par un système monétaire différent). La raison principale est que pendant la guerre froide, pour contourner la priorité dont bénéficiait les USA au Moyen-Orient, plusieurs pays européens s'approvisionnaient en pétrole au près des pays africains. Après le choc pétrolier de 1986 (suite à une offre excédentaire entraînant une forte baisse des prix) et à la fin de la guerre froide (chute des régimes communistes) en Europe en 1989, le continent fit à nouveau face à la convoitise de ses hydrocarbures par les pays industrialisés dans les ‘‘1990’’. L'inondation des recettes de ces pays en devises étrangères plus fortes, a entraîné des inflations dans ces pays : d'où le recours aux politiques de stabilité du niveau général des prix.

Le **graphique 2.3** souligne le fait qu'après les indépendances, le pays peinait à maintenir son statut de première puissance agricole du continent. Avec l'avènement de régimes militaires, il fera face à des années de mauvaise gestion gangrénées par une corruption institutionnalisée. C'est avec l'ascension au pouvoir du gouvernement civil d'Olusegun Obasanjo en 1999 que sa

croissance du PIB retrouve ses années de gloire notamment avec le début de la production du gaz naturel. Il reste parmi les plus élevés du continent (2ème en PPA/tête juste derrière l'Égypte).

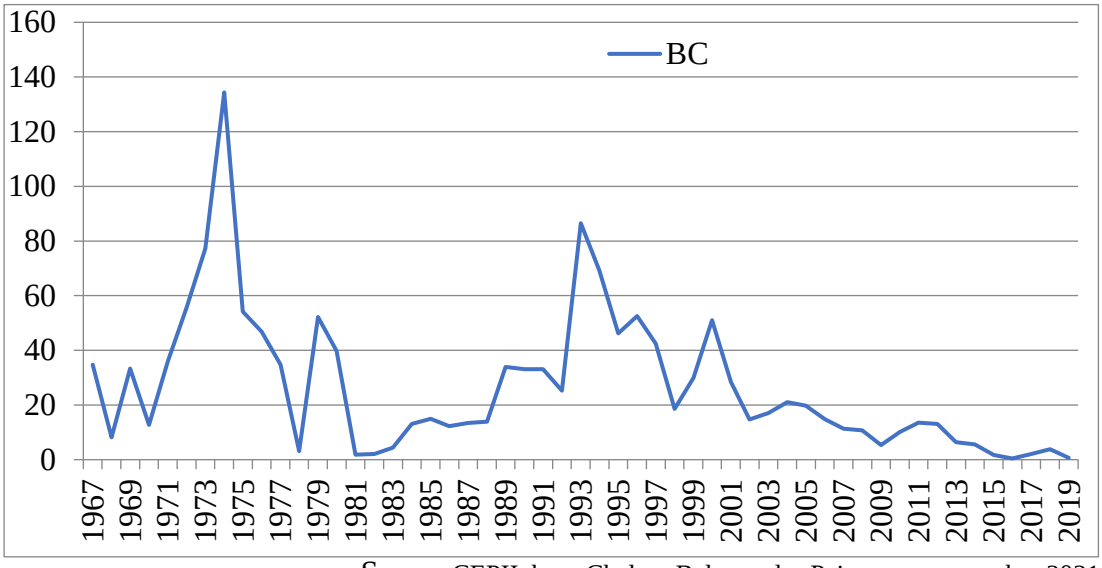
Graphique 2.3 : PIB/tête PPA de 1960-2020



Source: CEPII, base Chelem PIB, novembre 2021

I.2 *Évolution de la Balance Commerciale :*

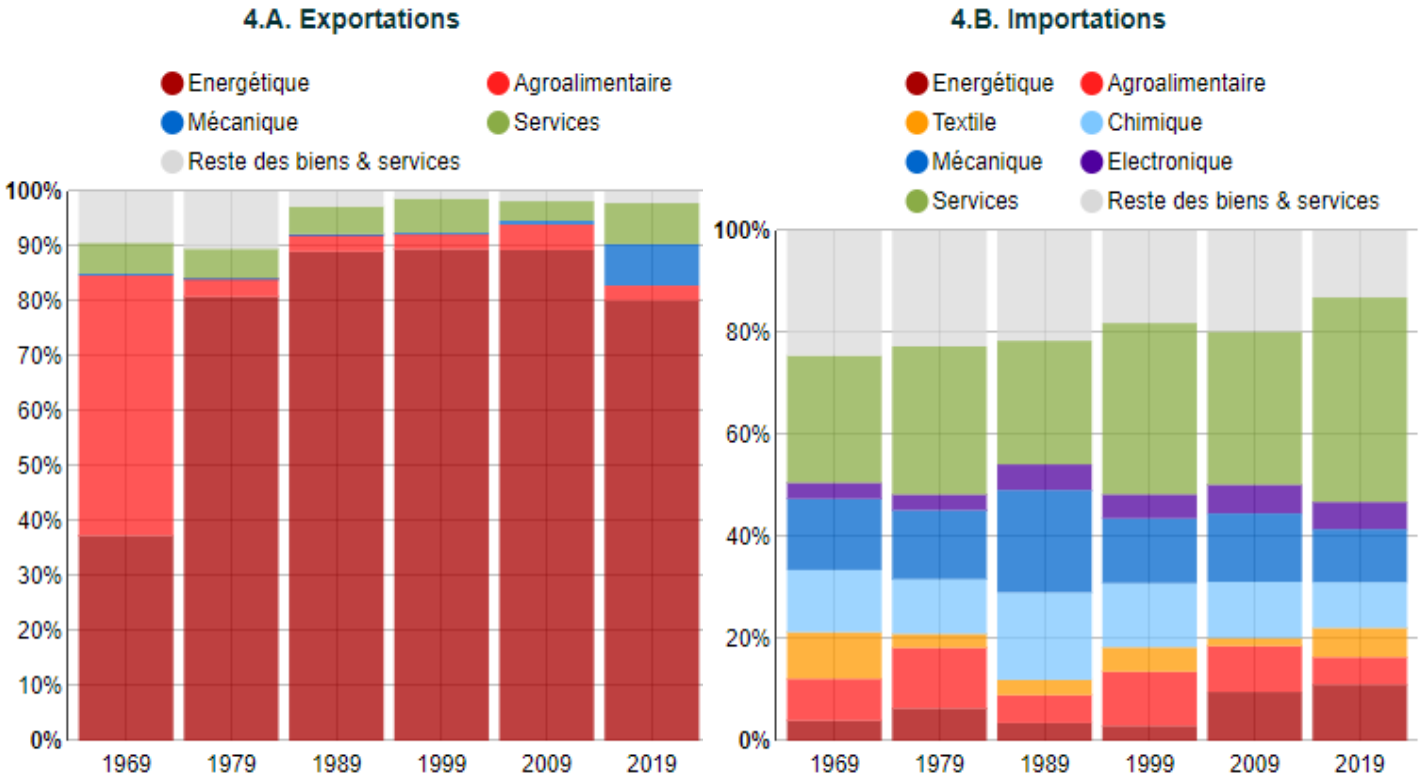
Graphique 3.3 : Balance commerciale (1967-2019)



Source: CEPII, base Chelem Balance des Paiements, novembre 2021

Là aussi, à l'instar de la Côte d'Ivoire, on a une balance commerciale excédentaire malgré sa faiblesse en 2019. Cela est en partie dû au fait que ce géant représente à lui seul plus de 60% des consommateurs, 47% du PIB, plus de 50% de la production industrielle et manufacturière de la sous-région (CEDEAO). Cependant son appareil économique est, depuis le boom pétrolier des années 1970, victime du syndrome hollandais[5] car faisant face à un secteur informel estimé à 75% de son économie hors pétrole.

<u>Graphique 4.2</u> : Structure des exportations et des importations par filière
B&S, 1969-1979-1999-1999-2009-2019 (en %)



Source: CEPII, Visual Data, base Chelem par pays

Il a fallu moins de deux décennies après l'indépendance pour que son industrie agroalimentaire sur laquelle reposait principalement son économie, se voit éclipser par le secteur énergétique. Son économie souffre majoritairement de problèmes politiques internes (corruption et guerre terroriste) entraînant ainsi son déficit budgétaire (exception des pays pétroliers aux revenus confortables).

[5] La maladie hollandaise est un phénomène économique qui relie l'exploitation de ressources naturelles au déclin de l'industrie manufacturière locale. En effet, l'exploitation de la ressource et la rente qu'elle procure augmente la valeur de la monnaie du pays, ses autres exportations sont ainsi moins compétitives alors que les importations s'accroissent, que les autres activités productives sont dépréciées, d'où la désindustrialisation.

Partie II : estimations des fonctions (X–M)

Étude économétrique

Estimation sur la période 1967-2019 des fonctions d'importations et d'exportations pour analyser le commerce de ces 4 pays africains. Notre base de données est constituée de 15264 observations au total. Soit 3816 observations pour chaque fonction d'un pays (72 produits classés selon la catégorie Chelem sur 53 années) pour connaître le rôle respectif de la compétitivité prix et de la demande mondiale dans le commerce de ces pays afin de vérifier si leur insertion commerciale pouvait bénéficier à leur développement économique et social et, donc, savoir si le mode de spécialisation choisi par ces pays était porteur d'un développement économique soutenable. Les estimations des élasticités revenus et prix ont été effectuées avec une économétrie de données de panels sur les équations en volume du commerce extérieur. Depuis les études de Krugman et Helpman en 1981 et celle d'Aghion et al. en 2000, les mesures de la compétitivité sont aujourd'hui complexes : la compétitivité-prix, la compétitivité hors prix (par la qualité et l'innovation) et la compétitivité informationnelle (par les réseaux, l'influence, et la protection du patrimoine immatériel) (Baulant, 2015). La compétitivité-prix est pourtant revenue sur le devant de la scène depuis les années 90 et 2000 avec, d'une part les politiques de désinflation compétitive menées par les pays avancés, et d'autre part, les fortes dépréciations de change subies par les PVD (Baulant, 2017). Pour les élasticités-prix, avec la mondialisation de tous les secteurs et une concurrence croissante internationale, on s'attend à un rôle renouvelé de la compétitivité-prix qui est aujourd'hui utilisée par tous les pays du monde, qu'ils soient développés ou non (Baulant et Compaire, 2019).

Les modèles économétriques des données de panel ont été pré-estimés avec TSP pour savoir vers quel modèle final s'orienter avant d'être estimés sur le logiciel STATA.

Pour chacune des variables du modèle, nous avons testé leur stationnarité. Ce pendant certaines variables sont non stationnaires prédisant ainsi une variation en termes d'intercept et de pente (voir l'efficience et la consistance l'effet aléatoire). Nous pouvons donc par ce procédé, savoir lequel des modèles ‘‘Between’’ (quand la différence entre les années domine) ou ‘‘Within’’ (quand la différence entre les produits domine) explique le mieux nos équations. En dépit de son intérêt, nous avons pourtant conscience que les estimations de données de panel comportent aussi des limites. La dimension temporelle micro-économique reste ainsi faible par rapport aux bases quotidiennes. Il peut donc y avoir une dépendance transversale. Les estimations de données de

panel peuvent aussi être sujettes à des erreurs de mesure (cas de valeurs aberrantes qui peuvent exister). Dans notre cas, le passage entre les valeurs et les volumes nous a contraint d'utiliser une proxy, le prix du PIB au lieu des prix d'exportation et d'importation, ce qui reste imparfait.

I. Le modèle d'estimation du commerce en volume des quatre pays

Dans le modèle classique du commerce extérieur (Marquez, 1990; Senhadji, 1997), les exportations de biens en volume[6] dépendent positivement (εx) du PIB mondial réel et négativement (-ηx) du taux de change réel de chaque pays exprimé par rapport à la France. Les importations en volume dépendant quant à elles positivement du PIB réel de chaque pays (εm) et positivement (ηm) du taux de change réel de chaque pays exprimé par rapport aux USA (hoooper, Johnson, & Marquez, 2000).

$$\text{Log } (XZ_{ij}^{t}) = \varepsilon x \; Y^{*t} - \eta x \; (P_j^t / e_j^t, Fr^t.PFr^t) + cste$$

$$\text{Log } (MZ_{ij}^{t}) = \varepsilon m \; Y_j^t + \eta m \; (P_j^t / e_j^t, US^t.PUS^t) + cste$$

Avec

- j représentant les quatre pays : Côte d'Ivoire, Égypte, Kenya et Nigeria ;

- εx: l'élasticité-revenu à l'exportation ;

- ηx : l'élasticité-prix à l'exportation ;

- εm: l'élasticité-revenu à l'importation ;

- ηm : l'élasticité-prix à l'importation ;

- XZ_{ij}^{t}: les exportations en volume du pays j pour 72 biens pour 53 années (calculées par les exportations de biens en valeur déflatées par le prix du PIB) ;
- Y^{*t} : le PIB mondial en volume pour chaque année t ;
- $(P_j^t/PFr^t.e_j^t)$: le prix du pays j par rapport au prix français à l'exportation pour les années t : une hausse de l'indice indique une perte de compétitivité ;
- $(P_j^t/PUS^t.e_j^t)$: le prix du pays j par rapport au prix américain à l'importation pour les années t : une hausse de l'indice indique une perte de compétitivité ;

[6] Ne disposant pas des volumes dans la base commerce du CEPII, nous avons déflaté les exportations de biens en valeur de la base commerce par les prix du PIB de chaque pays.

- $e_{j,Fr}^{t}$: le taux de change de l'euro par rapport à la monnaie du pays j sur les 53 années t ;
- $e_{j,US}^{t}$: le taux de change du dollar par rapport à la monnaie du pays j sur les 53 années t.

II. Les résultats obtenus en matière d'élasticité revenu et prix

II.1 *Sous TSP : Prévision du modèle final*

Tableau 1 : Conclusion des estimations sur des 4 pays de 1967- 2019 en données de panel

	X	M
Côte d'Ivoire	**SI**	**FE**
Égypte	**SI**	**FE**
Kenya	**SI**	**SI**
Nigeria	**SI**	**FE**

Avec

- X : exportations
- M : importations
- FE : modèle à effets fixes – individuel (within)
- SI : varying slopes and intercepts (variations à 2 niveaux : produits et temps)

Interprétation :

- **X :** pour les exportations, le modèle à conserver aura deux composantes (l'une à effets individuels et l'autre à effets temporels). Donc ***within* à deux temps**.
- **M :** pour les importations, à l'exception du Kenya, ça sera des modèles ***within*** à effets fixes individuels avec présence d'hétéroscédasticité (le test de Wald modifié est nécessaire pour tester les corrélations inter et intra individus). Cependant, cela n'exclut pas une éventuelle présence temporel (à vérifier).

II.2 *Sous STATA :*

Tableau 2 : Estimation des exportations des 4 pays de 1967- 2019
(*Within à 2 Temps*)

	εx	ηx	R^2
Côte d'Ivoire	**0.150**	**-1.722**	**0.894**
Égypte	**-0.156**	**0.128**	**0.913**
Kenya	**-0.027**	**-0.212**	**0.888**
Nigeria	**-0.379**	**-0.234**	**0.945**

Interprétation :

- Les coefficients sont tous significatifs avec de fortes distributions des variables explicatives du modèle d'étude.
- Malgré une progression à la hausse des taux de change ces dernières décennies, les pays, à l'exception de l'Égypte (perte), connaissent un gain de compétitivité-prix relativement faible sur l'ensemble de la période étudiée (seule la Côte d'Ivoire se démarque avec une meilleure élasticité).
- La Côte d'Ivoire, se voit augmenter ses exportations de 0.15% suite à une hausse du PIB mondial de 1% (ceteris paribus). L'élasticité-revenu négative de ces 3 autres pays indiquerait que ces pays n'exportent généralement que des biens inferieurs ou de première nécessité. Cela sous-entend une ambiguïté pour ces pays dont l'économie dépend fortement des hydrocarbures ou le tourisme qui se rapprochent des biens de luxe (car les quantités demandées et prix ne cessent d'augmenter à travers le temps).
- Il se peut que ces économies ne soient pas alignées sur le PIB mondial comme indicateur de la demande internationale.
- Une autre solution serait de sectionner l'étude en deux grandes périodes car ces pays présentaient une stationnarité du TCR jusqu'en 1989. Donc une période de (1967-1989) et une autre de (1990-2019).

Tableau 3.1 : Estimation des importations de 1967- 2019
Modèle à effet fixe individuel (*One-way FE*)

	εm	ηm	R^2
Côte d'Ivoire	**-0.0189**	**-1.297**	**0.874**
Égypte	**-0.197**	**-0.027**	**0.780**
Nigeria	**-1.179**	**-0.173**	**0.883**

Interprétation :

- ✓ Là encore, tous nos coefficients sont significatifs avec un coefficient de détermination R^2 particulièrement élevé.
- ✓ Ces économies présentent un comportement atypique sur l'ensemble de la période d'étude car ses résultats sont aux antipodes des normes habituelles. Si après estimations par grandes périodes, le résultat venait à être identique, alors ça serait la naissance d'un nouveau paradoxe qui s'intitulera : « *paradoxe des économies inverses* ».

Tableau 3.2 : Estimation des importations de 1967- 2019
Modèle *within* à effet fixe temporel

	εm	ηm	R^2
Côte d'Ivoire	**0.041 (*ns*)**	**-2.286**	**0.337**
Égypte	**-0.099**	**0.048**	**0.449**
Nigeria	**-0.147**	**-0.337**	**0.541**

**ns = non significatif*

Interprétation :

- Les coefficients sont tous significatifs à l'exception de l'élasticité-revenu de la Côte d'Ivoire avec un R^2 relativement faible.
- Nous avons eu raison de vérifier l'éventuelle présence d'effets temporels.
- Par contre l'élasticité-prix de l'Égypte rentre dans les normes.

Tableau 3.3 : Estimation des importations de 1967- 2019
(*Within à 2 Temps*)

	εm	ηm	R^2
Côte d'Ivoire	**0.116**	**-2.222**	**0.927**
Égypte	**-0.190**	**0.108**	**0.823**
Kenya	**-0.293**	**-0.449**	**0.841**
Nigeria	**-0.122**	**-0.298**	**0.934**

Interprétation :

- Les irrégularités persistent toujours malgré le semblant de conformité des importations de la Côte d'Ivoire et de l'Égypte.
- Une appréciation du franc CFA par rapport au prix français aurait un impact négatif sur les importations ivoiriennes et une augmentation du revenu national, augmente la demande globale.
- Une appréciation de la monnaie nationale augmenterait le pouvoir d'achat des Égyptiens par contre une augmentation du revenu national baisse les importations (ça sous-entend un sentiment de nationalisme, c'est-à-dire qu'ils ont une préférence pour les produits locaux : contradictoire pour un pays qui est premier importateur du blé et qui dépend fortement de l'importation).
- Le Kenya et le Nigeria restent, pour le moment, fidèles au paradoxe des économies inversées.

Tableau 4.1 : Synthèse des signes de la partition de 1967- 1989
(Avec Test de *Wald modifié*)

	εx	ηx	εm	ηm
Côte d'Ivoire	+	-	+	-
Égypte	-	-	-	+
Kenya	+	-	-	-
Nigeria	-	-	-	-

Interprétation :

- On a une légère amélioration, car le Kenya vient de rejoindre la Côte d'Ivoire en termes de conformité lors des exportations. Par contre, l'Égypte et le Nigéria sont semi-conforment (ou semi-inversés par rapport à notre paradoxe) car leurs élasticité-revenus d'exportation n'ont pas le bon signe ;
- A l'importation, les économies du Kenya et du Nigeria restent inversées (les deux élasticités ont toutes le signe inverse) ; celles de la Côte d'Ivoire et de l'Égypte sont toutes semi-inverses avec respectivement un signe inverse pour l'élasticité-prix de la Côte d'Ivoire et l'élasticité-revenu de l'Égypte.
- De ce fait, ce caractère atypique de ces pays confirme bien notre « *paradoxe des économies inverses*».

Tableau 4.2 : Synthèse des signes de la partition de 1990- 2019
(Avec Test de *Wald modifié*)

	εx	ηx	εm	ηm
Côte d'Ivoire	+	-	-	-
Égypte	-	+	-	-
Kenya	-	-	-	-
Nigeria	-	-	-	-

Interprétation :

- A l'export, la Côte d'Ivoire reste conforme (EC), le Kenya et le Nigeria semi-conforme (ESI) et l'Égypte inversée (EI) ;
- A l'import, on dira que toutes ces économies sont victimes du paradoxe des économies inverses.

Conclusion

Les réalités économique et socio-politique sont suffisamment ressassées par le facteur temporel des produits d'exportation et importation de ces pays. Cela se confirme par l'allure du TCR qui n'a cessé de subir des chocs liés à des politiques de dépréciation monétaires, de crise de la dette des PVD, de crises pétrolières et de problèmes de politique interne. Cependant, nous avons pu observer que ces réalités restaient confinées dans deux grandes périodes : une première qui date de l'avènement des indépendances à la fin de la guerre froide (1960-1989) et celle d'après (1990-2019).

En effet, malgré ces irrégularités, la Cote d'Ivoire se démarque avec une politique économique alignée sur les normes internationales. De ce fait, elle réalise des gains de compétitivité-prix suite à la dépréciation du franc CFA et augmentation de son chiffre de vente suite à une amélioration du revenu mondial. De même qu'une augmentation de son produit intérieur est en parfaite connivence avec la hausse des envies nationales de ses citoyens. Cette situation est pareille pour les exportations du Kenya pendant la première période. Et, pour ce qu'il en est de la seconde période et de ses importations sur l'ensemble de la période, elle fait face au « paradoxe des économies inverses » évoqué. Cela pourrait s'expliquer du fait de son déficit extérieur et sa forte dépendance de l'étranger (notamment de sa diaspora qui est un acteur majeur de son économie et qui s'élève à plus de 2,7 millions personnes).

L'Égypte et le Nigeria sont de plein fouet frappés d'irrégularités malgré leur fort taux de croissance économique, la forte démographie qui les définit et la diversité économique (cas de l'Égypte qui est connue pour être l'une des économies les plus diversifiée du continent). Cela est en majeur partie dû au manque de redistribution des richesses ou gains de croissance dans les autres secteurs économiques (notamment informel qui représente plus 75% des bénéfices hors pétrole du Nigeria).

Un des facteur les plus plausibles est que l'aléa des modèles économétriques tels que définis renferme en son sein des variables explicatives qui serviraient de pivot aux conjonctures auxquelles font face ces économies. Les économies africaines ne sont pas assez modélisables par ces modèles standards car ses réalités socio-politique et culturelle restent aux antipodes des normes occidentales.

Une des solutions serait de définir ou normaliser une sorte de variable synthétique incluant le niveau de corruption, les barrières à l'exploitation (car la plupart subissent les prix sur le marché international), la fuite des capitaux au profit d'une élite, l'exploitation illégale des ressources qui sont d'ailleurs source de guerres et d'instabilités politiques, le manque de transparence et de collecte de données fiables dont sont victimes voire caractérisées la majorité des économies africaines.

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Annexes

Côte d'Ivoire :

```
. xi: regress LEXPORT LDM LTCR_FR_PPA  i.YEAR i.PRODUCTS , noconstant
i.YEAR          _IYEAR_1967-2019    (naturally coded; _IYEAR_1967 omitted)
i.PRODUCTS      _IPRODUCTS_1-72     (naturally coded; _IPRODUCTS_1 omitted)
note: _IYEAR_2018 omitted because of collinearity

Source |      SS        df      MS     Number of obs   =     3,735
-------------+------------------------------   F(124, 3611)    =    304.58
Model |  62558.1346      124  504.501086   Prob > F        =    0.0000
Residual |  5981.17538    3,611  1.65637645   R-squared       =    0.9127
-------------+------------------------------   Adj R-squared   =    0.9097
Total |    68539.31    3,735  18.3505515   Root MSE        =     1.287

------------------------------------------------------------------------------
LEXPORT |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
LDM |  -.1563205   .0115555   -13.53   0.000    -.1789764   -.1336646
LTCR_FR_PPA |   .128391   .0442803     2.90   0.004     .0415741    .215208
_IYEAR_1968 |  -.013788   .2207281    -0.06   0.950    -.4465523    .4189762
_IYEAR_1969 |  -.1798891   .2217264    -0.81   0.417    -.6146105    .2548323
_IYEAR_1970 |  -.5405756   .2252129    -2.40   0.016    -.9821329   -.0990184
_IYEAR_1971 |  -.6058578   .2255453    -2.69   0.007    -1.048067    -.163649
_IYEAR_1972 |   -.584812   .2237997    -2.61   0.009    -1.023598   -.1460256
_IYEAR_1973 |  -.5224192   .2246052    -2.33   0.020    -.9627848   -.0820535
_IYEAR_1974 |  -.2575144   .2268023    -1.14   0.256    -.7021878    .187159
_IYEAR_1975 |  -.1882286   .2225963    -0.85   0.398    -.6246555    .2481984
_IYEAR_1976 |   -.387864   .2218871    -1.75   0.081    -.8229005    .0471724
_IYEAR_1977 |   -.315197   .2213225    -1.42   0.154    -.7491266    .1187326
_IYEAR_1978 |  -.1313473   .2169229    -0.61   0.545     -.556651    .2939564
_IYEAR_1979 |  -.4946096   .2045347    -2.42   0.016    -.8956246   -.0935946
_IYEAR_1980 |  -.7981522   .2022698    -3.95   0.000    -1.194727   -.4015778
_IYEAR_1981 |  -.7648254   .2065853    -3.70   0.000    -1.169861   -.3597899
_IYEAR_1982 |  -1.125479   .2089226    -5.39   0.000    -1.535097    -.715861
_IYEAR_1983 |  -1.317496   .2112252    -6.24   0.000    -1.731628    -.903363
_IYEAR_1984 |  -1.245505   .2118027    -5.88   0.000     -1.66077   -.8302399
_IYEAR_1985 |  -1.477847   .2116421    -6.98   0.000    -1.892797   -1.062897
_IYEAR_1986 |  -1.274281   .2061296    -6.18   0.000    -1.678423   -.8701393
```

_IYEAR_1987	-.7803259	.2042487	-3.82	0.000	-1.18078	-.3798716
_IYEAR_1988	-.2433178	.2033091	-1.20	0.231	-.6419299	.1552944
_IYEAR_1989	-.2071638	.2017119	-1.03	0.304	-.6026445	.1883169
_IYEAR_1990	-.0902552	.1912391	-0.47	0.637	-.4652026	.2846923
_IYEAR_1991	.3268893	.1883416	1.74	0.083	-.0423771	.6961558
_IYEAR_1992	.2443428	.1881442	1.30	0.194	-.1245367	.6132223
_IYEAR_1993	.0455287	.1873257	0.24	0.808	-.3217459	.4128034
_IYEAR_1994	.0684038	.1873808	0.37	0.715	-.2989788	.4357865
_IYEAR_1995	-.1882976	.1875113	-1.00	0.315	-.5559362	.179341
_IYEAR_1996	-.4243015	.1876466	-2.26	0.024	-.7922055	-.0563975
_IYEAR_1997	-.5579896	.188625	-2.96	0.003	-.9278116	-.1881675
_IYEAR_1998	-.6632502	.1887296	-3.51	0.000	-1.033277	-.293223
_IYEAR_1999	-.5646397	.1888543	-2.99	0.003	-.9349113	-.194368
_IYEAR_2000	-.6588888	.1881843	-3.50	0.000	-1.027847	-.2899306
_IYEAR_2001	-.5111138	.1881561	-2.72	0.007	-.8800166	-.1422109
_IYEAR_2002	-.0005754	.1884486	-0.00	0.998	-.3700517	.3689009
_IYEAR_2003	.3311999	.1906305	1.74	0.082	-.0425543	.7049541
_IYEAR_2004	.5779734	.1920565	3.01	0.003	.2014234	.9545234
_IYEAR_2005	.6993957	.1918693	3.65	0.000	.3232127	1.075579
_IYEAR_2006	.589081	.1924043	3.06	0.002	.2118489	.966313
_IYEAR_2007	.476198	.1936103	2.46	0.014	.0966016	.8557943
_IYEAR_2008	.5090407	.1938379	2.63	0.009	.128998	.8890833
_IYEAR_2009	.3207518	.1942647	1.65	0.099	-.0601276	.7016312
_IYEAR_2010	.1285798	.1943746	0.66	0.508	-.2525152	.5096748
_IYEAR_2011	.1193719	.1956162	0.61	0.542	-.2641574	.5029013
_IYEAR_2012	-.2828498	.19526	-1.45	0.148	-.6656807	.099981
_IYEAR_2013	-.34493	.1974991	-1.75	0.081	-.732151	.042291
_IYEAR_2014	-.4976742	.1982652	-2.51	0.012	-.8863972	-.1089512
_IYEAR_2015	-.6509419	.1975318	-3.30	0.001	-1.038227	-.2636569
_IYEAR_2016	-.7605129	.2017806	-3.77	0.000	-1.156128	-.3648976
_IYEAR_2017	.0487779	.2128049	0.23	0.819	-.3684518	.4660077
_IYEAR_2018	0	(omitted)				
_IYEAR_2019	-.242863	.2131163	-1.14	0.255	-.6607034	.1749773
_IPRODUCTS_2	-.9853093	.2500095	-3.94	0.000	-1.475483	-.4951353
_IPRODUCTS_3	-.6096123	.2500095	-2.44	0.015	-1.099786	-.1194383
_IPRODUCTS_4	1.522977	.2500095	6.09	0.000	1.032803	2.013151
_IPRODUCTS_5	-.9279197	.2500095	-3.71	0.000	-1.418094	-.4377457
_IPRODUCTS_6	1.7564	.2500095	7.03	0.000	1.266226	2.246574
_IPRODUCTS_7	3.123737	.2500095	12.49	0.000	2.633563	3.613911
_IPRODUCTS_8	1.860342	.2500095	7.44	0.000	1.370168	2.350516
_IPRODUCTS_9	1.865038	.2500095	7.46	0.000	1.374864	2.355212
_IPRODUCTS_10	1.743175	.2500095	6.97	0.000	1.253001	2.233349
_IPRODUCTS_11	.9734148	.2500095	3.89	0.000	.4832408	1.463589
_IPRODUCTS_12	-1.900244	.2500095	-7.60	0.000	-2.390418	-1.41007

_IPRODUCTS_13	.6051106	.2500095	2.42	0.016	.1149366	1.095285
_IPRODUCTS_14	-.5699128	.2500095	-2.28	0.023	-1.060087	-.0797388
_IPRODUCTS_15	-.0065199	.2500095	-0.03	0.979	-.4966939	.4836541
_IPRODUCTS_16	-.222479	.2500095	-0.89	0.374	-.712653	.267695
_IPRODUCTS_17	-.9930321	.2500095	-3.97	0.000	-1.483206	-.5028581
_IPRODUCTS_18	.9923357	.2500095	3.97	0.000	.5021617	1.48251
_IPRODUCTS_19	-.0924034	.2500095	-0.37	0.712	-.5825774	.3977706
_IPRODUCTS_20	-4.114096	.2500095	-16.46	0.000	-4.60427	-3.623922
_IPRODUCTS_21	-3.376056	.2500095	-13.50	0.000	-3.86623	-2.885882
_IPRODUCTS_22	-1.557212	.2500095	-6.23	0.000	-2.047386	-1.067038
_IPRODUCTS_23	-1.346111	.2500095	-5.38	0.000	-1.836285	-.8559374
_IPRODUCTS_24	-3.826713	.2500095	-15.31	0.000	-4.316887	-3.336539
_IPRODUCTS_25	-.6436107	.2500095	-2.57	0.010	-1.133785	-.1534367
_IPRODUCTS_26	-4.740865	.2500095	-18.96	0.000	-5.231039	-4.250691
_IPRODUCTS_27	-3.185086	.2500095	-12.74	0.000	-3.67526	-2.694912
_IPRODUCTS_28	-3.773422	.2512265	-15.02	0.000	-4.265982	-3.280862
_IPRODUCTS_29	-1.966697	.2500095	-7.87	0.000	-2.456871	-1.476523
_IPRODUCTS_30	-1.040163	.2500095	-4.16	0.000	-1.530337	-.5499892
_IPRODUCTS_31	-2.229362	.2500095	-8.92	0.000	-2.719536	-1.739188
_IPRODUCTS_32	-1.549622	.2500095	-6.20	0.000	-2.039796	-1.059448
_IPRODUCTS_33	-1.635984	.2500095	-6.54	0.000	-2.126158	-1.14581
_IPRODUCTS_34	.4643394	.2500095	1.86	0.063	-.0258346	.9545134
_IPRODUCTS_35	-2.152244	.2500095	-8.61	0.000	-2.642418	-1.66207
_IPRODUCTS_36	-2.155115	.2500095	-8.62	0.000	-2.645289	-1.664941
_IPRODUCTS_37	-1.192064	.2500095	-4.77	0.000	-1.682238	-.7018904
_IPRODUCTS_38	-2.499102	.2500095	-10.00	0.000	-2.989276	-2.008928
_IPRODUCTS_39	.0054827	.2500095	0.02	0.983	-.4846913	.4956567
_IPRODUCTS_40	-.3313896	.2500095	-1.33	0.185	-.8215636	.1587844
_IPRODUCTS_41	.8708644	.2500095	3.48	0.001	.3806904	1.361038
_IPRODUCTS_42	-.3291531	.2500095	-1.32	0.188	-.8193271	.1610209
_IPRODUCTS_43	-.6190189	.2500095	-2.48	0.013	-1.109193	-.1288449
_IPRODUCTS_44	1.563669	.2500095	6.25	0.000	1.073495	2.053843
_IPRODUCTS_45	.7615145	.2500095	3.05	0.002	.2713405	1.251688
_IPRODUCTS_46	-1.932539	.2500095	-7.73	0.000	-2.422713	-1.442365
_IPRODUCTS_47	.1812719	.2500095	0.73	0.468	-.3089021	.6714459
_IPRODUCTS_48	-1.161615	.2500095	-4.65	0.000	-1.651789	-.6714407
_IPRODUCTS_49	-2.531094	.2537863	-9.97	0.000	-3.028673	-2.033515
_IPRODUCTS_50	-.3031392	.2500095	-1.21	0.225	-.7933132	.1870348
_IPRODUCTS_51	.9377507	.2500095	3.75	0.000	.4475767	1.427925
_IPRODUCTS_52	-2.90856	.2579788	-11.27	0.000	-3.414359	-2.402761
_IPRODUCTS_53	4.634451	.2500095	18.54	0.000	4.144277	5.124625
_IPRODUCTS_54	-.8959332	.26266	-3.41	0.001	-1.41091	-.3809565
_IPRODUCTS_55	-.8103108	.2537863	-3.19	0.001	-1.30789	-.312732
_IPRODUCTS_56	3.493756	.2500095	13.97	0.000	3.003582	3.98393

```
_IPRODUCTS_57 |  -.843496   .4132723    -2.04   0.041    -1.653766   -.0332257
_IPRODUCTS_58 |  1.382186   .2500095     5.53   0.000     .8920118    1.87236
_IPRODUCTS_59 |  3.151013   .2500095    12.60   0.000     2.660839    3.641187
_IPRODUCTS_60 |  3.165636   .2500095    12.66   0.000     2.675462     3.65581
_IPRODUCTS_61 | -.9834489   .2500095    -3.93   0.000    -1.473623   -.4932749
_IPRODUCTS_62 | -.7217995   .2500095    -2.89   0.004    -1.211973   -.2316255
_IPRODUCTS_63 | -.8428079   .2500095    -3.37   0.001    -1.332982   -.3526339
_IPRODUCTS_64 | -3.201296   .2500095   -12.80   0.000     -3.69147   -2.711122
_IPRODUCTS_65 |  1.302744   .2500095     5.21   0.000     .8125703    1.792918
_IPRODUCTS_66 |  1.262868   .2500095     5.05   0.000     .7726942    1.753042
_IPRODUCTS_67 |  -.182901   .2500095    -0.73   0.464     -.673075    .307273
_IPRODUCTS_68 |  .2810079   .2500095     1.12   0.261    -.2091661    .7711819
_IPRODUCTS_69 | -.6263272   .2500095    -2.51   0.012    -1.116501   -.1361532
_IPRODUCTS_70 | -.3816067   .2500095    -1.53   0.127    -.8717807    .1085673
_IPRODUCTS_71 | -2.303555   .2807302    -8.21   0.000    -2.853961    -1.75315
_IPRODUCTS_72 |   1.71463   .2500095     6.86   0.000     1.224456    2.204804
------------------------------------------------------------------------------

. xtgls LEXPORT LDM LTCR_FR_PPA i.YEAR i.PRODUCTS, noconstant
note: 2019.YEAR omitted because of collinearity

Cross-sectional time-series FGLS regression

Coefficients:  generalized least squares
Panels:        homoskedastic
Correlation:   no autocorrelation

Estimated covariances      =         1        Number of obs      =     3,735
Estimated autocorrelations =         0        Number of groups   =        72
Estimated coefficients     =       124        Obs per group:
                                              min =        12
                                              avg =    51.875
                                              max =        53
Wald chi2(124)     =  39065.00
Log likelihood     = -6179.084        Prob > chi2        =    0.0000

------------------------------------------------------------------------------
LEXPORT |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
LDM |  -.1638222   .0113474   -14.44   0.000    -.1860627   -.1415817
LTCR_FR_PPA |  .0808642   .0441567     1.83   0.067    -.0056814    .1674098
            |
YEAR |
       1968  |  -.0161999   .2170506    -0.07   0.941    -.4416113    .4092115
```

1969 | -.1851065 .2180532 -0.85 0.396 -.612483 .2422699
1970 | -.5488194 .2215044 -2.48 0.013 -.98296 -.1146788
1971 | -.614214 .2218321 -2.77 0.006 -1.048997 -.179431
1972 | -.5889733 .2200839 -2.68 0.007 -1.02033 -.1576168
1973 | -.5256341 .2208687 -2.38 0.017 -.9585288 -.0927393
1974 | -.266225 .2230713 -1.19 0.233 -.7034366 .1709867
1975 | -.186843 .2188602 -0.85 0.393 -.615801 .242115
1976 | -.387554 .2181705 -1.78 0.076 -.8151603 .0400522
1977 | -.3130931 .2176025 -1.44 0.150 -.7395862 .1133999
1978 | -.1229167 .2132327 -0.58 0.564 -.5408451 .2950117
1979 | -.4549859 .2008898 -2.26 0.024 -.8487226 -.0612491
1980 | -.754268 .198647 -3.80 0.000 -1.143609 -.3649271
1981 | -.7298871 .2029237 -3.60 0.000 -1.12761 -.3321639
1982 | -1.096201 .205247 -5.34 0.000 -1.498478 -.6939248
1983 | -1.293301 .2075362 -6.23 0.000 -1.700064 -.8865375
1984 | -1.223819 .2081167 -5.88 0.000 -1.63172 -.8159178
1985 | -1.455342 .207954 -7.00 0.000 -1.862924 -1.04776
1986 | -1.238041 .2024676 -6.11 0.000 -1.63487 -.8412117
1987 | -.7365106 .2005907 -3.67 0.000 -1.129661 -.34336
1988 | -.1984443 .1996617 -0.99 0.320 -.589774 .1928855
1989 | -.1548947 .1980713 -0.78 0.434 -.5431073 .233318
1990 | -.0014046 .1877704 -0.01 0.994 -.3694277 .3666186
1991 | .4476857 .1850688 2.42 0.016 .0849575 .810414
1992 | .3722936 .1849263 2.01 0.044 .0098447 .7347425
1993 | .1724784 .184112 0.94 0.349 -.1883744 .5333312
1994 | .1976886 .1841824 1.07 0.283 -.1633023 .5586795
1995 | -.0524649 .1843631 -0.28 0.776 -.4138099 .3088801
1996 | -.2877309 .1844997 -1.56 0.119 -.6493437 .0738818
1997 | -.4259953 .1854201 -2.30 0.022 -.789412 -.0625786
1998 | -.5306922 .1855253 -2.86 0.004 -.8943151 -.1670693
1999 | -.4325414 .1856414 -2.33 0.020 -.7963919 -.0686908
2000 | -.5310793 .1849451 -2.87 0.004 -.8935651 -.1685935
2001 | -.3775594 .1849622 -2.04 0.041 -.7400788 -.0150401
2002 | .1422563 .1853303 0.77 0.443 -.2209845 .505497
2003 | .4964028 .1877135 2.64 0.008 .128491 .8643145
2004 | .7513712 .189212 3.97 0.000 .3805224 1.12222
2005 | .8711171 .1890019 4.61 0.000 .5006801 1.241554
2006 | .7632382 .1895536 4.03 0.000 .39172 1.134756
2007 | .6561898 .19081 3.44 0.001 .282209 1.030171
2008 | .6940089 .191099 3.63 0.000 .3194618 1.068556
2009 | .5076775 .1915465 2.65 0.008 .1322533 .8831017
2010 | .3155853 .1916501 1.65 0.100 -.060042 .6912127
2011 | .3113355 .1929365 1.61 0.107 -.066813 .6894841
2012 | -.0925868 .1925584 -0.48 0.631 -.4699944 .2848207

2013 | -.1460979 .19488 -0.75 0.453 -.5280557 .23586
2014 | -.2962514 .1956677 -1.51 0.130 -.679753 .0872502
2015 | -.452375 .1949004 -2.32 0.020 -.8343727 -.0703774
2016 | -.5477202 .1992895 -2.75 0.006 -.9383204 -.15712
2017 | .2909241 .2105995 1.38 0.167 -.1218434 .7036915
2018 | .2460844 .2123282 1.16 0.246 -.1700713 .6622401
2019 | 0 (omitted)
|
PRODUCTS |
2 | -.9853093 .2458244 -4.01 0.000 -1.467116 -.5035022
3 | -.6096123 .2458244 -2.48 0.013 -1.091419 -.1278052
4 | 1.522977 .2458244 6.20 0.000 1.04117 2.004784
5 | -.9279197 .2458244 -3.77 0.000 -1.409727 -.4461127
6 | 1.7564 .2458244 7.14 0.000 1.274593 2.238207
7 | 3.123737 .2458244 12.71 0.000 2.64193 3.605544
8 | 1.860342 .2458244 7.57 0.000 1.378535 2.342149
9 | 1.865038 .2458244 7.59 0.000 1.383231 2.346845
10 | 1.743175 .2458244 7.09 0.000 1.261368 2.224982
11 | .9734148 .2458244 3.96 0.000 .4916078 1.455222
12 | -1.900244 .2458244 -7.73 0.000 -2.382051 -1.418437
13 | .6051106 .2458244 2.46 0.014 .1233036 1.086918
14 | -.5699128 .2458244 -2.32 0.020 -1.05172 -.0881058
15 | -.0065199 .2458244 -0.03 0.979 -.4883269 .4752871
16 | -.222479 .2458244 -0.91 0.365 -.7042861 .259328
17 | -.9930321 .2458244 -4.04 0.000 -1.474839 -.511225
18 | .9923357 .2458244 4.04 0.000 .5105287 1.474143
19 | -.0924034 .2458244 -0.38 0.707 -.5742104 .3894036
20 | -4.114096 .2458244 -16.74 0.000 -4.595903 -3.632289
21 | -3.376056 .2458244 -13.73 0.000 -3.857863 -2.894249
22 | -1.557212 .2458244 -6.33 0.000 -2.039019 -1.075405
23 | -1.346111 .2458244 -5.48 0.000 -1.827918 -.8643044
24 | -3.826713 .2458244 -15.57 0.000 -4.308521 -3.344906
25 | -.6436107 .2458244 -2.62 0.009 -1.125418 -.1618037
26 | -4.740865 .2458244 -19.29 0.000 -5.222672 -4.259058
27 | -3.185086 .2458244 -12.96 0.000 -3.666893 -2.703279
28 | -3.773422 .247021 -15.28 0.000 -4.257574 -3.289269
29 | -1.966697 .2458244 -8.00 0.000 -2.448504 -1.48489
30 | -1.040163 .2458244 -4.23 0.000 -1.52197 -.5583562
31 | -2.229362 .2458244 -9.07 0.000 -2.711169 -1.747555
32 | -1.549622 .2458244 -6.30 0.000 -2.031429 -1.067815
33 | -1.635984 .2458244 -6.66 0.000 -2.117791 -1.154177
34 | .4643394 .2458244 1.89 0.059 -.0174677 .9461464
35 | -2.152244 .2458244 -8.76 0.000 -2.634051 -1.670437
36 | -2.155115 .2458244 -8.77 0.000 -2.636922 -1.673308

```
37 | -1.192064  .2458244   -4.85   0.000   -1.673871   -.7102574
38 | -2.499102  .2458244  -10.17   0.000   -2.980909   -2.017294
39 |  .0054827  .2458244    0.02   0.982   -.4763243    .4872897
40 | -.3313896  .2458244   -1.35   0.178   -.8131967    .1504174
41 |  .8708644  .2458244    3.54   0.000    .3890573    1.352671
42 | -.3291531  .2458244   -1.34   0.181   -.8109601    .1526539
43 | -.6190189  .2458244   -2.52   0.012   -1.100826   -.1372118
44 |  1.563669  .2458244    6.36   0.000    1.081862    2.045476
45 |  .7615145  .2458244    3.10   0.002    .2797075    1.243321
46 | -1.932539  .2458244   -7.86   0.000   -2.414346   -1.450732
47 |  .1812719  .2458244    0.74   0.461   -.3005351    .6630789
48 | -1.161615  .2458244   -4.73   0.000   -1.643422   -.6798076
49 | -2.531094   .249538  -10.14   0.000    -3.02018   -2.042009
50 | -.3031392  .2458244   -1.23   0.218   -.7849462    .1786678
51 |  .9377507  .2458244    3.81   0.000    .4559437    1.419558
52 |  -2.90856  .2536603  -11.47   0.000   -3.405725   -2.411395
53 |  4.634451  .2458244   18.85   0.000    4.152644    5.116258
54 | -.8959332  .2582631   -3.47   0.001    -1.40212   -.3897468
55 | -.8103108   .249538   -3.25   0.001   -1.299396   -.3212254
56 |  3.493756  .2458244   14.21   0.000    3.011949    3.975563
57 |  -.843496  .4063542   -2.08   0.038   -1.639936   -.0470565
58 |  1.382186  .2458244    5.62   0.000    .9003787    1.863993
59 |  3.151013  .2458244   12.82   0.000    2.669206     3.63282
60 |  3.165636  .2458244   12.88   0.000    2.683829    3.647443
61 | -.9834489  .2458244   -4.00   0.000   -1.465256   -.5016418
62 | -.7217995  .2458244   -2.94   0.003   -1.203607   -.2399925
63 | -.8428079  .2458244   -3.43   0.001   -1.324615   -.3610009
64 | -3.201296  .2458244  -13.02   0.000   -3.683103   -2.719489
65 |  1.302744  .2458244    5.30   0.000    .8209373    1.784551
66 |  1.262868  .2458244    5.14   0.000    .7810612    1.744675
67 |  -.182901  .2458244   -0.74   0.457    -.664708     .298906
68 |  .2810079  .2458244    1.14   0.253   -.2007991    .7628149
69 | -.6263272  .2458244   -2.55   0.011   -1.108134   -.1445202
70 | -.3816067  .2458244   -1.55   0.121   -.8634137    .1002003
71 | -2.303555  .2760308   -8.35   0.000   -2.844566   -1.762545
72 |   1.71463  .2458244    6.98   0.000    1.232823    2.196437
------------------------------------------------------------------------------------------------------

. xi: regress LIMPORT LPIB LTCR_USA_PPA  i.YEAR i.PRODUCTS , noconstant
i.YEAR            _IYEAR_1967-2019    (naturally coded; _IYEAR_1967 omitted)
i.PRODUCTS        _IPRODUCTS_1-72     (naturally coded; _IPRODUCTS_1 omitted)
note: _IYEAR_2018 omitted because of collinearity

      Source |       SS       df       MS     Number of obs   =     3,748
-------------+------------------------------  F(124, 3624)    =    136.20
```

```
      Model |  13229.3597      124  106.688384   Prob > F      =    0.0000
   Residual |  2838.74785    3,624  .783318942   R-squared     =    0.8233
-------------+----------------------------------  Adj R-squared  =    0.8173
      Total |  16068.1075    3,748  4.28711513   Root MSE      =    .88505

------------------------------------------------------------------------------
     LIMPORT |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        LPIB |  -.1898562   .0112306   -16.91   0.000    -.211875   -.1678373
 LTCR_USA_PPA |   .1081959   .0288237     3.75   0.000     .0516835    .1647082
  _IYEAR_1968 |  -.1228629   .1505905    -0.82   0.415    -.4181135    .1723878
  _IYEAR_1969 |  -.0444533   .1502691    -0.30   0.767    -.3390737    .2501671
  _IYEAR_1970 |  -.2152895   .1493813    -1.44   0.150    -.5081693    .0775904
  _IYEAR_1971 |   -.385074   .1492795    -2.58   0.010    -.6777541   -.0923939
  _IYEAR_1972 |  -.4789909   .1501681    -3.19   0.001    -.7734132   -.1845685
  _IYEAR_1973 |  -.4148522    .151338    -2.74   0.006    -.7115682   -.1181362
  _IYEAR_1974 |   .5535575   .1512786     3.66   0.000     .2569578    .8501573
  _IYEAR_1975 |   .8072937    .149936     5.38   0.000     .5133263    1.101261
  _IYEAR_1976 |   .8346567    .148376     5.63   0.000     .5437479    1.125566
  _IYEAR_1977 |    1.04315   .1478134     7.06   0.000     .7533446    1.332956
  _IYEAR_1978 |   1.275035   .1479935     8.62   0.000     .9848765    1.565194
  _IYEAR_1979 |   .9430269    .140065     6.73   0.000     .6684128    1.217641
  _IYEAR_1980 |   .9753477   .1390399     7.01   0.000     .7027435    1.247952
  _IYEAR_1981 |   1.183041   .1386225     8.53   0.000     .9112547    1.454826
  _IYEAR_1982 |   .7370169   .1369578     5.38   0.000     .4684949    1.005539
  _IYEAR_1983 |   .6786804   .1369895     4.95   0.000     .4100963    .9472646
  _IYEAR_1984 |   .6553173   .1369112     4.79   0.000     .3868866     .923748
  _IYEAR_1985 |   .2254257   .1374471     1.64   0.101    -.0440557    .4949071
  _IYEAR_1986 |   .1862856   .1374099     1.36   0.175    -.0831229     .455694
  _IYEAR_1987 |   .2532279   .1374461     1.84   0.066    -.0162515    .5227073
  _IYEAR_1988 |   .5438425   .1374289     3.96   0.000     .2743968    .8132883
  _IYEAR_1989 |    .294413   .1348432     2.18   0.029     .030037    .5587891
  _IYEAR_1990 |   .3111078   .1313769     2.37   0.018     .0535278    .5686879
  _IYEAR_1991 |   .5894252    .129485     4.55   0.000     .3355544    .8432959
  _IYEAR_1992 |   .3776354   .1296179     2.91   0.004     .1235042    .6317666
  _IYEAR_1993 |   .3932965   .1297147     3.03   0.002     .1389754    .6476177
  _IYEAR_1994 |   .3135737   .1298484     2.41   0.016     .0589905    .5681569
  _IYEAR_1995 |   .1799419   .1293867     1.39   0.164    -.073736     .4336199
  _IYEAR_1996 |   .0697641   .1301854     0.54   0.592    -.1854799    .3250082
  _IYEAR_1997 |  -.1278036    .129757    -0.98   0.325    -.3822077    .1266005
  _IYEAR_1998 |   .0293639   .1299592     0.23   0.821    -.2254365    .2841642
  _IYEAR_1999 |  -.0445341   .1301853    -0.34   0.732    -.2997779    .2107096
  _IYEAR_2000 |  -.2389392   .1305353    -1.83   0.067    -.4948691    .0169907
  _IYEAR_2001 |  -.1739504   .1308556    -1.33   0.184    -.4305083    .0826076
```

_IYEAR_2002	-.1790787	.1312873	-1.36	0.173	-.4364831	.0783256
_IYEAR_2003	-.0285231	.132436	-0.22	0.829	-.2881795	.2311334
_IYEAR_2004	.4657443	.1328964	3.50	0.000	.2051851	.7263034
_IYEAR_2005	.4693039	.1322655	3.55	0.000	.2099816	.7286262
_IYEAR_2006	.4195317	.1332128	3.15	0.002	.1583521	.6807113
_IYEAR_2007	.3144251	.133674	2.35	0.019	.0523413	.5765089
_IYEAR_2008	.3405698	.1336413	2.55	0.011	.0785501	.6025895
_IYEAR_2009	-.0779147	.1343688	-0.58	0.562	-.3413606	.1855312
_IYEAR_2010	-.0871739	.1348338	-0.65	0.518	-.3515315	.1771837
_IYEAR_2011	-.2453716	.1352717	-1.81	0.070	-.5105878	.0198445
_IYEAR_2012	-.5116716	.1355083	-3.78	0.000	-.7773517	-.2459915
_IYEAR_2013	-.5705099	.136524	-4.18	0.000	-.8381815	-.3028383
_IYEAR_2014	-.4750812	.1369126	-3.47	0.001	-.7435147	-.2066478
_IYEAR_2015	-.6399477	.1378739	-4.64	0.000	-.9102658	-.3696296
_IYEAR_2016	-.7465881	.1411808	-5.29	0.000	-1.02339	-.4697864
_IYEAR_2017	-.1329823	.1480099	-0.90	0.369	-.4231733	.1572087
_IYEAR_2018	0	(omitted)				
_IYEAR_2019	-.3658448	.1485035	-2.46	0.014	-.6570035	-.0746861
_IPRODUCTS_2	.950506	.1719279	5.53	0.000	.6134209	1.287591
_IPRODUCTS_3	.7191153	.1719279	4.18	0.000	.3820302	1.0562
_IPRODUCTS_4	3.012165	.1719279	17.52	0.000	2.67508	3.34925
_IPRODUCTS_5	1.860262	.1719279	10.82	0.000	1.523177	2.197347
_IPRODUCTS_6	1.722979	.1719279	10.02	0.000	1.385894	2.060064
_IPRODUCTS_7	2.412547	.1719279	14.03	0.000	2.075462	2.749632
_IPRODUCTS_8	.6804949	.1719279	3.96	0.000	.3434098	1.01758
_IPRODUCTS_9	.2748631	.1719279	1.60	0.110	-.062222	.6119482
_IPRODUCTS_10	.4853061	.1719279	2.82	0.005	.1482211	.8223912
_IPRODUCTS_11	.0860806	.1719279	0.50	0.617	-.2510045	.4231657
_IPRODUCTS_12	1.032073	.1719279	6.00	0.000	.6949883	1.369158
_IPRODUCTS_13	-.2293775	.1719279	-1.33	0.182	-.5664626	.1077076
_IPRODUCTS_14	2.424417	.1719279	14.10	0.000	2.087332	2.761502
_IPRODUCTS_15	.217532	.1719279	1.27	0.206	-.119553	.5546171
_IPRODUCTS_16	1.3742	.1719279	7.99	0.000	1.037115	1.711285
_IPRODUCTS_17	1.132808	.1719279	6.59	0.000	.7957224	1.469893
_IPRODUCTS_18	2.560398	.1719279	14.89	0.000	2.223312	2.897483
_IPRODUCTS_19	3.12608	.1719279	18.18	0.000	2.788995	3.463165
_IPRODUCTS_20	.650297	.1719279	3.78	0.000	.3132119	.987382
_IPRODUCTS_21	1.390998	.1719279	8.09	0.000	1.053913	1.728083
_IPRODUCTS_22	2.309134	.1719279	13.43	0.000	1.972049	2.646219
_IPRODUCTS_23	2.948281	.1719279	17.15	0.000	2.611196	3.285366
_IPRODUCTS_24	.313112	.1719279	1.82	0.069	-.0239731	.6501971
_IPRODUCTS_25	1.989676	.1719279	11.57	0.000	1.65259	2.326761
_IPRODUCTS_26	-.3024632	.1719279	-1.76	0.079	-.6395483	.0346218
_IPRODUCTS_27	.1220893	.1719279	0.71	0.478	-.2149958	.4591744

_IPRODUCTS_28	-.2343033	.1719279	-1.36	0.173	-.5713884	.1027818
_IPRODUCTS_29	.8508395	.1719279	4.95	0.000	.5137544	1.187925
_IPRODUCTS_30	2.499513	.1719279	14.54	0.000	2.162428	2.836598
_IPRODUCTS_31	1.342353	.1719279	7.81	0.000	1.005268	1.679438
_IPRODUCTS_32	.8011418	.1719279	4.66	0.000	.4640567	1.138227
_IPRODUCTS_33	1.811271	.1719279	10.54	0.000	1.474186	2.148356
_IPRODUCTS_34	2.64455	.1719279	15.38	0.000	2.307465	2.981635
_IPRODUCTS_35	2.055328	.1719279	11.95	0.000	1.718243	2.392413
_IPRODUCTS_36	2.352531	.1719279	13.68	0.000	2.015446	2.689616
_IPRODUCTS_37	2.667198	.1719279	15.51	0.000	2.330112	3.004283
_IPRODUCTS_38	.6903573	.1719279	4.02	0.000	.3532723	1.027442
_IPRODUCTS_39	2.44625	.1719279	14.23	0.000	2.109165	2.783335
_IPRODUCTS_40	1.228961	.1719279	7.15	0.000	.8918756	1.566046
_IPRODUCTS_41	1.395835	.1719279	8.12	0.000	1.05875	1.73292
_IPRODUCTS_42	2.13539	.1719279	12.42	0.000	1.798305	2.472475
_IPRODUCTS_43	1.835911	.1719279	10.68	0.000	1.498826	2.172996
_IPRODUCTS_44	1.908348	.1719279	11.10	0.000	1.571263	2.245433
_IPRODUCTS_45	2.199759	.1719279	12.79	0.000	1.862674	2.536844
_IPRODUCTS_46	.5615855	.1719279	3.27	0.001	.2245005	.8986706
_IPRODUCTS_47	2.580654	.1719279	15.01	0.000	2.243569	2.917739
_IPRODUCTS_48	1.589191	.1719279	9.24	0.000	1.252106	1.926277
_IPRODUCTS_49	.5531454	.1719279	3.22	0.001	.2160603	.8902305
_IPRODUCTS_50	-.1964327	.1719279	-1.14	0.253	-.5335178	.1406524
_IPRODUCTS_51	.4475233	.1719279	2.60	0.009	.1104383	.7846084
_IPRODUCTS_52	.943357	.1719279	5.49	0.000	.6062719	1.280442
_IPRODUCTS_53	1.031713	.1883524	5.48	0.000	.6624255	1.401
_IPRODUCTS_54	.7181541	.1719279	4.18	0.000	.381069	1.055239
_IPRODUCTS_55	-2.665269	.1727644	-15.43	0.000	-3.003994	-2.326544
_IPRODUCTS_56	2.446319	.1719279	14.23	0.000	2.109234	2.783404
_IPRODUCTS_57	-4.708968	.3066092	-15.36	0.000	-5.310112	-4.107824
_IPRODUCTS_58	3.641775	.1719279	21.18	0.000	3.30469	3.97886
_IPRODUCTS_59	2.988974	.1719279	17.39	0.000	2.651888	3.326059
_IPRODUCTS_60	2.719152	.1719279	15.82	0.000	2.382067	3.056237
_IPRODUCTS_61	1.106227	.1719279	6.43	0.000	.7691415	1.443312
_IPRODUCTS_62	2.977348	.1719279	17.32	0.000	2.640263	3.314433
_IPRODUCTS_63	1.98554	.1719279	11.55	0.000	1.648455	2.322625
_IPRODUCTS_64	.4464548	.1719279	2.60	0.009	.1093697	.7835399
_IPRODUCTS_65	.8540021	.1719279	4.97	0.000	.516917	1.191087
_IPRODUCTS_66	1.6503	.1719279	9.60	0.000	1.313215	1.987385
_IPRODUCTS_67	1.009689	.1719279	5.87	0.000	.6726037	1.346774
_IPRODUCTS_68	-.5721897	.1719279	-3.33	0.001	-.9092748	-.2351046
_IPRODUCTS_69	.3373852	.1719279	1.96	0.050	.0003001	.6744703
_IPRODUCTS_70	-.4571226	.1719279	-2.66	0.008	-.7942077	-.1200375
_IPRODUCTS_71	-3.165266	.1806256	-17.52	0.000	-3.519404	-2.811128

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_IPRODUCTS_72 |   2.52632   .1719279    14.69   0.000    2.189235    2.863405
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. xtgls LIMPORT LPIB LTCR_USA_PPA i.YEAR i.PRODUCTS, noconstant
note: 2019.YEAR omitted because of collinearity

Cross-sectional time-series FGLS regression

Coefficients:  generalized least squares
Panels:        homoskedastic
Correlation:   no autocorrelation

Estimated covariances     =         1        Number of obs    =     3,748
Estimated autocorrelations =        0        Number of groups =        72
Estimated coefficients    =       124        Obs per group:
                                                          min =        10
                                                          avg =   52.05556
                                                          max =        53
                                              Wald chi2(124)   =  17466.73
Log likelihood            = -4797.473        Prob > chi2      =    0.0000

------------------------------------------------------------------------------
   LIMPORT |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------+------------------------------------------------------------------
      LPIB |  -.2149807   .0110151   -19.52   0.000    -.2365699   -.1933915
LTCR_USA_PPA |   .0454785   .0284378     1.60   0.110    -.0102586    .1012156
           |
      YEAR |
      1968 |  -.1272262   .1480833    -0.86   0.390     -.417464    .1630117
      1969 |   -.046212   .1477643    -0.31   0.754    -.3358248    .2434008
      1970 |  -.2120603    .146886    -1.44   0.149    -.4999515    .0758309
      1971 |  -.3803834   .1467842    -2.59   0.010    -.6680751   -.0926916
      1972 |  -.4748707   .1476586    -3.22   0.001    -.7642763   -.1854652
      1973 |  -.4166996   .1488155    -2.80   0.005    -.7083726   -.1250266
      1974 |   .5523516   .1487565     3.71   0.000     .2607943    .8439089
      1975 |   .8137377   .1474278     5.52   0.000     .5247846    1.102691
      1976 |   .8487623   .1458853     5.82   0.000     .5628323    1.134692
      1977 |   1.061993   .1453268     7.31   0.000     .7771578    1.346829
      1978 |    1.29777   .1454997     8.92   0.000     1.012596    1.582944
      1979 |   1.004189   .1376684     7.29   0.000     .7343641    1.274014
      1980 |   1.045052    .136653     7.65   0.000     .7772176    1.312887
      1981 |   1.257403   .1362384     9.23   0.000     .9903802    1.524425
      1982 |    .820818   .1345937     6.10   0.000     .5570192    1.084617
      1983 |   .7640353   .1346232     5.68   0.000     .5001787    1.027892
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        1984 |  .7444592   .1345424     5.53   0.000     .4807609    1.008158
        1985 |  .3169511   .1350674     2.35   0.019     .0522238    .5816784
        1986 |  .2797478    .135029     2.07   0.038     .015096    .5443997
        1987 |   .347861   .1350632     2.58   0.010     .083142     .61258
        1988 |    .64058   .1350442     4.74   0.000    .3758982    .9052618
        1989 |  .4065028   .1324926     3.07   0.002     .146822    .6661835
        1990 |   .463329   .1290748     3.59   0.000    .2103471    .7163109
        1991 |  .7869339   .1272271     6.19   0.000    .5375734    1.036294
        1992 |  .5803855   .1273589     4.56   0.000    .3307667    .8300043
        1993 |  .5974336   .1274537     4.69   0.000    .3476289    .8472383
        1994 |  .5192633   .1275844     4.07   0.000    .2692026    .7693241
        1995 |  .3880874   .1271295     3.05   0.002    .1389182    .6372565
        1996 |  .2798501   .1279143     2.19   0.029    .0291426    .5305576
        1997 |  .0841996   .1274915     0.66   0.509   -.1656791    .3340783
        1998 |  .2433697    .127689     1.91   0.057   -.0068962    .4936356
        1999 |  .1718561   .1279103     1.34   0.179   -.0788435    .4225556
        2000 | -.0182583   .1282545    -0.14   0.887   -.2696324    .2331159
        2001 |  .0576121   .1285763     0.45   0.654   -.1943927     .309617
        2002 |  .0612829   .1290074     0.48   0.635   -.1915669    .3141327
        2003 |  .2292994    .130153     1.76   0.078   -.0257958    .4843947
        2004 |  .7283483   .1306089     5.58   0.000    .4723596    .9843369
        2005 |  .7292111   .1299827     5.61   0.000    .4744498    .9839724
        2006 |  .6829908   .1309146     5.22   0.000    .4264028    .9395787
        2007 |  .5816554   .1313684     4.43   0.000     .324178    .8391328
        2008 |  .6116571   .1313364     4.66   0.000    .3542425    .8690717
        2009 |   .200077   .1320573     1.52   0.130   -.0587506    .4589046
        2010 |  .1945084   .1325161     1.47   0.142   -.0652184    .4542352
        2011 |  .0402576   .1329506     0.30   0.762   -.2203208    .3008361
        2012 | -.2242141   .1331843    -1.68   0.092   -.4852506    .0368224
        2013 | -.2743862   .1341934    -2.04   0.041   -.5374004   -.0113719
        2014 | -.1761331   .1345775    -1.31   0.191   -.4399002    .0876341
        2015 | -.3339256    .13553    -2.46   0.014   -.5995595   -.0682916
        2016 | -.4212703   .1388081    -3.03   0.002   -.6933292   -.1492114
        2017 |  .2304305   .1455843     1.58   0.113   -.0549095    .5157704
        2018 |  .3660555   .1461103     2.51   0.012    .0796845    .6524265
        2019 |          0  (omitted)
             |
    PRODUCTS |
           2 |   .950506   .1690599     5.62   0.000    .6191546    1.281857
           3 |  .7191153   .1690599     4.25   0.000     .387764    1.050467
           4 |  3.012165   .1690599    17.82   0.000    2.680814    3.343516
           5 |  1.860262   .1690599    11.00   0.000    1.528911    2.191614
           6 |  1.722979   .1690599    10.19   0.000    1.391628     2.05433
           7 |  2.412547   .1690599    14.27   0.000    2.081195    2.743898
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8	.6804949	.1690599	4.03	0.000	.3491436	1.011846
9	.2748631	.1690599	1.63	0.104	-.0564883	.6062145
10	.4853061	.1690599	2.87	0.004	.1539548	.8166575
11	.0860806	.1690599	0.51	0.611	-.2452708	.417432
12	1.032073	.1690599	6.10	0.000	.700722	1.363425
13	-.2293775	.1690599	-1.36	0.175	-.5607289	.1019738
14	2.424417	.1690599	14.34	0.000	2.093065	2.755768
15	.217532	.1690599	1.29	0.198	-.1138193	.5488834
16	1.3742	.1690599	8.13	0.000	1.042849	1.705551
17	1.132808	.1690599	6.70	0.000	.8014562	1.464159
18	2.560398	.1690599	15.14	0.000	2.229046	2.891749
19	3.12608	.1690599	18.49	0.000	2.794729	3.457431
20	.650297	.1690599	3.85	0.000	.3189456	.9816483
21	1.390998	.1690599	8.23	0.000	1.059647	1.72235
22	2.309134	.1690599	13.66	0.000	1.977783	2.640486
23	2.948281	.1690599	17.44	0.000	2.61693	3.279633
24	.313112	.1690599	1.85	0.064	-.0182394	.6444634
25	1.989676	.1690599	11.77	0.000	1.658324	2.321027
26	-.3024632	.1690599	-1.79	0.074	-.6338146	.0288881
27	.1220893	.1690599	0.72	0.470	-.2092621	.4534407
28	-.2343033	.1690599	-1.39	0.166	-.5656547	.0970481
29	.8508395	.1690599	5.03	0.000	.5194881	1.182191
30	2.499513	.1690599	14.78	0.000	2.168161	2.830864
31	1.342353	.1690599	7.94	0.000	1.011002	1.673705
32	.8011418	.1690599	4.74	0.000	.4697905	1.132493
33	1.811271	.1690599	10.71	0.000	1.47992	2.142623
34	2.64455	.1690599	15.64	0.000	2.313199	2.975902
35	2.055328	.1690599	12.16	0.000	1.723977	2.38668
36	2.352531	.1690599	13.92	0.000	2.02118	2.683883
37	2.667198	.1690599	15.78	0.000	2.335846	2.998549
38	.6903573	.1690599	4.08	0.000	.359006	1.021709
39	2.44625	.1690599	14.47	0.000	2.114899	2.777602
40	1.228961	.1690599	7.27	0.000	.8976093	1.560312
41	1.395835	.1690599	8.26	0.000	1.064484	1.727187
42	2.13539	.1690599	12.63	0.000	1.804038	2.466741
43	1.835911	.1690599	10.86	0.000	1.50456	2.167262
44	1.908348	.1690599	11.29	0.000	1.576996	2.239699
45	2.199759	.1690599	13.01	0.000	1.868408	2.531111
46	.5615855	.1690599	3.32	0.001	.2302342	.8929369
47	2.580654	.1690599	15.26	0.000	2.249303	2.912005
48	1.589191	.1690599	9.40	0.000	1.25784	1.920543
49	.5531454	.1690599	3.27	0.001	.221794	.8844967
50	-.1964327	.1690599	-1.16	0.245	-.5277841	.1349187
51	.4475233	.1690599	2.65	0.008	.116172	.7788747

```
      52 |   .943357   .1690599    5.58   0.000    .6120056    1.274708
      53 |   1.031713   .1852104    5.57   0.000    .6687069    1.394718
      54 |   .7181541   .1690599    4.25   0.000    .3868027    1.049505
      55 |  -2.665269   .1698825  -15.69   0.000   -2.998232   -2.332305
      56 |   2.446319   .1690599   14.47   0.000    2.114967     2.77767
      57 |  -4.708968   .3014946  -15.62   0.000   -5.299886   -4.118049
      58 |   3.641775   .1690599   21.54   0.000    3.310423    3.973126
      59 |   2.988974   .1690599   17.68   0.000    2.657622    3.320325
      60 |   2.719152   .1690599   16.08   0.000    2.387801    3.050504
      61 |   1.106227   .1690599    6.54   0.000    .7748752    1.437578
      62 |   2.977348   .1690599   17.61   0.000    2.645996    3.308699
      63 |    1.98554   .1690599   11.74   0.000    1.654188    2.316891
      64 |   .4464548   .1690599    2.64   0.008    .1151035    .7778062
      65 |   .8540021   .1690599    5.05   0.000    .5226507    1.185353
      66 |    1.6503   .1690599    9.76   0.000    1.318949    1.981652
      67 |   1.009689   .1690599    5.97   0.000    .6783375     1.34104
      68 |  -.5721897   .1690599   -3.38   0.001    -.903541   -.2408383
      69 |   .3373852   .1690599    2.00   0.046    .0060339    .6687366
      70 |  -.4571226   .1690599   -2.70   0.007   -.7884739   -.1257712
      71 |  -3.165266   .1776125  -17.82   0.000    -3.51338   -2.817152
      72 |   2.52632   .1690599   14.94   0.000    2.194969    2.857672
------------------------------------------------------------------------------

. xi: regress LEXPORT LDM LTCR_FR_PPA  i.YEAR i.PRODUCTS , noconstant

i.YEAR          _IYEAR_1967-1989    (naturally coded; _IYEAR_1967 omitted)

i.PRODUCTS      _IPRODUCTS_1-72     (naturally coded; _IPRODUCTS_1 omitted)

note: LTCR_FR_PPA omitted because of collinearity

note: _IPRODUCTS_57 omitted because of collinearity


      Source |       SS       df       MS     Number of obs   =     1,609
-------------+------------------------------  F(93, 1516)     =    171.27
       Model |  17024.3981       93  183.058045  Prob > F        =    0.0000
    Residual |  1620.33038    1,516  1.06881951  R-squared       =    0.9131
-------------+------------------------------  Adj R-squared   =    0.9078
       Total |  18644.7285    1,609  11.5877741  Root MSE        =    1.0338


------------------------------------------------------------------------------
     LEXPORT |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         LDM |  -.0507243   .0146085    -3.47   0.001    -.0793794   -.0220693
  LTCR_FR_PPA |          0  (omitted)
```

_IYEAR_1968	-.0526758	.1757255	-0.30	0.764	-.3973666	.2920151
_IYEAR_1969	-.0002692	.17602	-0.00	0.999	-.3455377	.3449993
_IYEAR_1970	.2006324	.1762973	1.14	0.255	-.1451801	.5464448
_IYEAR_1971	-.0217409	.1786226	-0.12	0.903	-.3721145	.3286326
_IYEAR_1972	.2968918	.1781991	1.67	0.096	-.052651	.6464346
_IYEAR_1973	.281378	.176541	1.59	0.111	-.0649124	.6276684
_IYEAR_1974	.3945059	.1773722	2.22	0.026	.0465849	.7424269
_IYEAR_1975	.0831225	.1767964	0.47	0.638	-.263669	.4299139
_IYEAR_1976	-.2429568	.1765458	-1.38	0.169	-.5892567	.1033431
_IYEAR_1977	-.2092484	.1786772	-1.17	0.242	-.5597291	.1412323
_IYEAR_1978	-.7812095	.1770041	-4.41	0.000	-1.128408	-.4340108
_IYEAR_1979	-.806998	.1772265	-4.55	0.000	-1.154633	-.4593628
_IYEAR_1980	-.6422172	.1773395	-3.62	0.000	-.9900739	-.2943605
_IYEAR_1981	-.3698167	.1774543	-2.08	0.037	-.7178987	-.0217348
_IYEAR_1982	-.1530977	.1781347	-0.86	0.390	-.5025143	.196319
_IYEAR_1983	-.205387	.1776396	-1.16	0.248	-.5538323	.1430584
_IYEAR_1984	.029638	.1778659	0.17	0.868	-.3192513	.3785273
_IYEAR_1985	.043436	.1780454	0.24	0.807	-.3058055	.3926775
_IYEAR_1986	-.3113103	.1782503	-1.75	0.081	-.6609537	.0383331
_IYEAR_1987	-.4513023	.1784508	-2.53	0.012	-.8013389	-.1012656
_IYEAR_1988	-.5072939	.1786956	-2.84	0.005	-.8578106	-.1567772
_IYEAR_1989	-.3110604	.1788925	-1.74	0.082	-.6619634	.0398426
_IPRODUCTS_2	-3.621799	.304862	-11.88	0.000	-4.219795	-3.023803
_IPRODUCTS_3	-2.71897	.304862	-8.92	0.000	-3.316966	-2.120974
_IPRODUCTS_4	-1.301597	.304862	-4.27	0.000	-1.899593	-.7036013
_IPRODUCTS_5	-1.898486	.304862	-6.23	0.000	-2.496482	-1.300491
_IPRODUCTS_6	-.9642644	.304862	-3.16	0.002	-1.56226	-.3662685
_IPRODUCTS_7	1.700922	.304862	5.58	0.000	1.102927	2.298918
_IPRODUCTS_8	-.5231778	.304862	-1.72	0.086	-1.121174	.0748181
_IPRODUCTS_9	-2.378748	.304862	-7.80	0.000	-2.976744	-1.780752
_IPRODUCTS_10	-1.211441	.304862	-3.97	0.000	-1.809437	-.6134447
_IPRODUCTS_11	-.3645895	.304862	-1.20	0.232	-.9625855	.2334064
_IPRODUCTS_12	1.396824	.304862	4.58	0.000	.7988284	1.99482
_IPRODUCTS_13	-2.928912	.304862	-9.61	0.000	-3.526908	-2.330917
_IPRODUCTS_14	-.400981	.304862	-1.32	0.189	-.998977	.1970149
_IPRODUCTS_15	-1.945238	.304862	-6.38	0.000	-2.543234	-1.347242

_IPRODUCTS_16	-1.216186	.304862	-3.99	0.000	-1.814182	-.6181904
_IPRODUCTS_17	-1.110343	.304862	-3.64	0.000	-1.708339	-.5123471
_IPRODUCTS_18	-.3555085	.304862	-1.17	0.244	-.9535044	.2424874
_IPRODUCTS_19	-1.176414	.304862	-3.86	0.000	-1.774409	-.5784176
_IPRODUCTS_20	-1.792775	.304862	-5.88	0.000	-2.390771	-1.194779
_IPRODUCTS_21	-3.060976	.304862	-10.04	0.000	-3.658972	-2.46298
_IPRODUCTS_22	-.2604304	.304862	-0.85	0.393	-.8584264	.3375655
_IPRODUCTS_23	-1.618309	.304862	-5.31	0.000	-2.216305	-1.020313
_IPRODUCTS_24	-5.63038	.3083558	-18.26	0.000	-6.235229	-5.02553
_IPRODUCTS_25	-1.794337	.304862	-5.89	0.000	-2.392333	-1.196341
_IPRODUCTS_26	-5.695483	.308358	-18.47	0.000	-6.300337	-5.09063
_IPRODUCTS_27	-4.086791	.304862	-13.41	0.000	-4.684787	-3.488795
_IPRODUCTS_28	-5.440358	.3083588	-17.64	0.000	-6.045213	-4.835503
_IPRODUCTS_29	-3.610511	.304862	-11.84	0.000	-4.208507	-3.012515
_IPRODUCTS_30	-2.039532	.304862	-6.69	0.000	-2.637528	-1.441536
_IPRODUCTS_31	-2.916943	.304862	-9.57	0.000	-3.514939	-2.318947
_IPRODUCTS_32	-4.618101	.304862	-15.15	0.000	-5.216097	-4.020105
_IPRODUCTS_33	-2.305913	.304862	-7.56	0.000	-2.903909	-1.707917
_IPRODUCTS_34	-1.071804	.304862	-3.52	0.000	-1.6698	-.4738079
_IPRODUCTS_35	-2.629826	.304862	-8.63	0.000	-3.227821	-2.03183
_IPRODUCTS_36	-.7192984	.304862	-2.36	0.018	-1.317294	-.1213024
_IPRODUCTS_37	.0254815	.304862	0.08	0.933	-.5725144	.6234774
_IPRODUCTS_38	-1.323609	.304862	-4.34	0.000	-1.921605	-.725613
_IPRODUCTS_39	-1.225608	.304862	-4.02	0.000	-1.823604	-.6276121
_IPRODUCTS_40	-2.073052	.304862	-6.80	0.000	-2.671048	-1.475056
_IPRODUCTS_41	.6561729	.304862	2.15	0.032	.058177	1.254169
_IPRODUCTS_42	-1.261884	.304862	-4.14	0.000	-1.85988	-.6638886
_IPRODUCTS_43	-1.364063	.304862	-4.47	0.000	-1.962059	-.7660673
_IPRODUCTS_44	.495229	.304862	1.62	0.104	-.1027669	1.093225
_IPRODUCTS_45	-2.089242	.304862	-6.85	0.000	-2.687238	-1.491247
_IPRODUCTS_46	-5.219638	.304862	-17.12	0.000	-5.817634	-4.621642
_IPRODUCTS_47	-.4953745	.304862	-1.62	0.104	-1.09337	.1026214
_IPRODUCTS_48	-2.343073	.304862	-7.69	0.000	-2.941069	-1.745077
_IPRODUCTS_49	-1.407268	.304862	-4.62	0.000	-2.005264	-.8092718
_IPRODUCTS_50	-.712919	.304862	-2.34	0.019	-1.310915	-.1149231
_IPRODUCTS_51	-1.865484	.304862	-6.12	0.000	-2.46348	-1.267488

```
_IPRODUCTS_52 | -5.498894   .3162511   -17.39   0.000    -6.11923   -4.878558
_IPRODUCTS_53 | -4.926029   .3256367   -15.13   0.000   -5.564775   -4.287283
_IPRODUCTS_54 | -2.799168    .304862    -9.18   0.000   -3.397164   -2.201172
_IPRODUCTS_55 | -5.502193   .3162504   -17.40   0.000   -6.122528   -4.881859
_IPRODUCTS_56 |  2.514543    .304862     8.25   0.000    1.916547    3.112539
_IPRODUCTS_57 |         0  (omitted)
_IPRODUCTS_58 | -2.117763    .304862    -6.95   0.000   -2.715759   -1.519767
_IPRODUCTS_59 |  5.288197    .304862    17.35   0.000    4.690201    5.886193
_IPRODUCTS_60 |  4.409927    .304862    14.47   0.000    3.811931    5.007923
_IPRODUCTS_61 | -1.759416    .304862    -5.77   0.000   -2.357412    -1.16142
_IPRODUCTS_62 |  1.862619    .304862     6.11   0.000    1.264623    2.460615
_IPRODUCTS_63 |  .7868612    .304862     2.58   0.010    .1888652    1.384857
_IPRODUCTS_64 |   1.27658    .304862     4.19   0.000    .6785845    1.874576
_IPRODUCTS_65 |  2.320565    .304862     7.61   0.000    1.722569    2.918561
_IPRODUCTS_66 |  2.987935    .304862     9.80   0.000    2.389939    3.585931
_IPRODUCTS_67 | -.0433642    .304862    -0.14   0.887   -.6413602    .5546317
_IPRODUCTS_68 | -.2846504    .304862    -0.93   0.351   -.8826464    .3133455
_IPRODUCTS_69 |   -1.0175    .304862    -3.34   0.001   -1.615496   -.4195046
_IPRODUCTS_70 |  -.016403    .304862    -0.05   0.957   -.6143989     .581593
_IPRODUCTS_71 | -2.925982   .3594507    -8.14   0.000   -3.631055   -2.220909
_IPRODUCTS_72 |  .5746312    .304862     1.88   0.060   -.0233648    1.172627
------------------------------------------------------------------------------

. xtgls LEXPORT LDM LTCR_FR_PPA i.YEAR i.PRODUCTS, noconstant
note: 1989.YEAR omitted because of collinearity

Cross-sectional time-series FGLS regression

Coefficients:  generalized least squares
Panels:        homoskedastic
Correlation:   no autocorrelation

Estimated covariances      =         1        Number of obs      =     1,609
Estimated autocorrelations =         0        Number of groups   =        71
Estimated coefficients     =        93        Obs per group:
                                                          min =        13
```

avg = 22.66197

max = 23

Wald chi2(93) = 16905.35

Log likelihood = -2288.717 Prob > chi2 = 0.0000

LEXPORT	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]
LDM	.5663619	.3505863	1.62	0.106	-.1207746 1.253498
LTCR_FR_PPA	-5.052616	2.820559	-1.79	0.073	-10.58081 .4755791
YEAR					
1968	.3179481	.1891398	1.68	0.093	-.052759 .6886552
1969	.4389357	.2152454	2.04	0.041	.0170625 .860809
1970	.7784361	.2767514	2.81	0.005	.2360133 1.320859
1971	.7158771	.3563153	2.01	0.045	.017512 1.414242
1972	1.014618	.3456957	2.94	0.003	.3370669 1.692169
1973	.9477016	.3187053	2.97	0.003	.3230507 1.572353
1974	1.041762	.3095202	3.37	0.001	.4351136 1.64841
1975	1.164196	.5347933	2.18	0.029	.1160206 2.212372
1976	1.178791	.7190588	1.64	0.101	-.2305383 2.58812
1977	1.404878	.8247538	1.70	0.088	-.21161 3.021366
1978	1.126608	.9858513	1.14	0.253	-.8056246 3.058842
1979	1.020207	.9411651	1.08	0.278	-.8244429 2.864857
1980	.5073784	.5704506	0.89	0.374	-.6106842 1.625441
1981	.8876535	.628742	1.41	0.158	-.3446582 2.119965
1982	.9847123	.5641441	1.75	0.081	-.1209898 2.090414
1983	.6542229	.4158496	1.57	0.116	-.1608274 1.469273
1984	.6511188	.2950619	2.21	0.027	.0728081 1.22943
1985	.7872294	.3557973	2.21	0.027	.0898795 1.484579
1986	.4564508	.3678827	1.24	0.215	-.2645861 1.177488
1987	.1502033	.2851038	0.53	0.598	-.40859 .7089965
1988	-.1080298	.197116	-0.55	0.584	-.49437 .2783104
1989	0 (omitted)				
PRODUCTS					

2	-3.621799	.2959204	-12.24	0.000	-4.201792	-3.041806
3	-2.71897	.2959204	-9.19	0.000	-3.298963	-2.138977
4	-1.301597	.2959204	-4.40	0.000	-1.88159	-.721604
5	-1.898486	.2959204	-6.42	0.000	-2.47848	-1.318493
6	-.9642644	.2959204	-3.26	0.001	-1.544258	-.3842711
7	1.700922	.2959204	5.75	0.000	1.120929	2.280916
8	-.5231778	.2959204	-1.77	0.077	-1.103171	.0568154
9	-2.378748	.2959204	-8.04	0.000	-2.958741	-1.798755
10	-1.211441	.2959204	-4.09	0.000	-1.791434	-.6314474
11	-.3645895	.2959204	-1.23	0.218	-.9445828	.2154037
12	1.396824	.2959204	4.72	0.000	.8168311	1.976818
13	-2.928912	.2959204	-9.90	0.000	-3.508906	-2.348919
14	-.400981	.2959204	-1.36	0.175	-.9809743	.1790122
15	-1.945238	.2959204	-6.57	0.000	-2.525231	-1.365245
16	-1.216186	.2959204	-4.11	0.000	-1.79618	-.6361931
17	-1.110343	.2959204	-3.75	0.000	-1.690336	-.5303497
18	-.3555085	.2959204	-1.20	0.230	-.9355017	.2244847
19	-1.176414	.2959204	-3.98	0.000	-1.756407	-.5964203
20	-1.792775	.2959204	-6.06	0.000	-2.372768	-1.212782
21	-3.060976	.2959204	-10.34	0.000	-3.640969	-2.480982
22	-.2604304	.2959204	-0.88	0.379	-.8404237	.3195628
23	-1.618309	.2959204	-5.47	0.000	-2.198302	-1.038316
24	-5.63038	.2993117	-18.81	0.000	-6.21702	-5.043739
25	-1.794337	.2959204	-6.06	0.000	-2.37433	-1.214344
26	-5.695483	.2993138	-19.03	0.000	-6.282127	-5.108839
27	-4.086791	.2959204	-13.81	0.000	-4.666784	-3.506798
28	-5.440358	.2993146	-18.18	0.000	-6.027004	-4.853713
29	-3.610511	.2959204	-12.20	0.000	-4.190504	-3.030518
30	-2.039532	.2959204	-6.89	0.000	-2.619525	-1.459539
31	-2.916943	.2959204	-9.86	0.000	-3.496936	-2.33695
32	-4.618101	.2959204	-15.61	0.000	-5.198095	-4.038108
33	-2.305913	.2959204	-7.79	0.000	-2.885907	-1.72592
34	-1.071804	.2959204	-3.62	0.000	-1.651797	-.4918105
35	-2.629826	.2959204	-8.89	0.000	-3.209819	-2.049832
36	-.7192984	.2959204	-2.43	0.015	-1.299292	-.1393051
37	.0254815	.2959204	0.09	0.931	-.5545118	.6054747

38	-1.323609	.2959204	-4.47	0.000	-1.903602	-.7436157
39	-1.225608	.2959204	-4.14	0.000	-1.805601	-.6456148
40	-2.073052	.2959204	-7.01	0.000	-2.653046	-1.493059
41	.6561729	.2959204	2.22	0.027	.0761797	1.236166
42	-1.261884	.2959204	-4.26	0.000	-1.841878	-.6818912
43	-1.364063	.2959204	-4.61	0.000	-1.944057	-.78407
44	.495229	.2959204	1.67	0.094	-.0847643	1.075222
45	-2.089242	.2959204	-7.06	0.000	-2.669236	-1.509249
46	-5.219638	.2959204	-17.64	0.000	-5.799631	-4.639645
47	-.4953745	.2959204	-1.67	0.094	-1.075368	.0846188
48	-2.343073	.2959204	-7.92	0.000	-2.923066	-1.76308
49	-1.407268	.2959204	-4.76	0.000	-1.987261	-.8272745
50	-.712919	.2959204	-2.41	0.016	-1.292912	-.1329258
51	-1.865484	.2959204	-6.30	0.000	-2.445478	-1.285491
52	-5.498894	.3069755	-17.91	0.000	-6.100555	-4.897233
53	-4.926029	.3160858	-15.58	0.000	-5.545546	-4.306512
54	-2.799168	.2959204	-9.46	0.000	-3.379161	-2.219175
55	-5.502193	.3069748	-17.92	0.000	-6.103853	-4.900534
56	2.514543	.2959204	8.50	0.000	1.93455	3.094536
57	0	(omitted)				
58	-2.117763	.2959204	-7.16	0.000	-2.697756	-1.537769
59	5.288197	.2959204	17.87	0.000	4.708204	5.86819
60	4.409927	.2959204	14.90	0.000	3.829934	4.98992
61	-1.759416	.2959204	-5.95	0.000	-2.339409	-1.179422
62	1.862619	.2959204	6.29	0.000	1.282625	2.442612
63	.7868612	.2959204	2.66	0.008	.2068679	1.366854
64	1.27658	.2959204	4.31	0.000	.6965871	1.856574
65	2.320565	.2959204	7.84	0.000	1.740572	2.900558
66	2.987935	.2959204	10.10	0.000	2.407942	3.567929
67	-.0433642	.2959204	-0.15	0.883	-.6233575	.536629
68	-.2846504	.2959204	-0.96	0.336	-.8646437	.2953428
69	-1.0175	.2959204	-3.44	0.001	-1.597494	-.4375073
70	-.016403	.2959204	-0.06	0.956	-.5963962	.5635903
71	-2.925982	.348908	-8.39	0.000	-3.609829	-2.242135
72	.5746312	.2959204	1.94	0.052	-.0053621	1.154624

Égypte :

```
. xi: regress LEXPORT LDM LTCR_FR_PPA  i.YEAR i.PRODUCTS , noconstant
i.YEAR          _IYEAR_1967-2019    (naturally coded; _IYEAR_1967 omitted)
i.PRODUCTS      _IPRODUCTS_1-72     (naturally coded; _IPRODUCTS_1 omitted)
note: _IYEAR_2018 omitted because of collinearity

      Source |       SS       df       MS      Number of obs   =     3,735
-------------+------------------------------   F(124, 3611)    =    304.58
       Model |  62558.1346     124  504.501086   Prob > F        =    0.0000
    Residual |  5981.17538   3,611  1.65637645   R-squared       =    0.9127
-------------+------------------------------   Adj R-squared   =    0.9097
       Total |   68539.31   3,735  18.3505515   Root MSE        =     1.287

------------------------------------------------------------------------------
     LEXPORT |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         LDM |  -.1563205   .0115555   -13.53   0.000    -.1789764   -.1336646
  LTCR_FR_PPA |    .128391   .0442803     2.90   0.004     .0415741    .215208
  _IYEAR_1968 |   -.013788   .2207281    -0.06   0.950    -.4465523    .4189762
  _IYEAR_1969 |  -.1798891   .2217264    -0.81   0.417    -.6146105    .2548323
  _IYEAR_1970 |  -.5405756   .2252129    -2.40   0.016    -.9821329   -.0990184
  _IYEAR_1971 |  -.6058578   .2255453    -2.69   0.007    -1.048067    -.163649
  _IYEAR_1972 |   -.584812   .2237997    -2.61   0.009    -1.023598   -.1460256
  _IYEAR_1973 |  -.5224192   .2246052    -2.33   0.020    -.9627848   -.0820535
  _IYEAR_1974 |  -.2575144   .2268023    -1.14   0.256    -.7021878    .187159
  _IYEAR_1975 |  -.1882286   .2225963    -0.85   0.398    -.6246555    .2481984
  _IYEAR_1976 |   -.387864   .2218871    -1.75   0.081    -.8229005    .0471724
  _IYEAR_1977 |   -.315197   .2213225    -1.42   0.154    -.7491266    .1187326
  _IYEAR_1978 |  -.1313473   .2169229    -0.61   0.545     -.556651    .2939564
  _IYEAR_1979 |  -.4946096   .2045347    -2.42   0.016    -.8956246   -.0935946
  _IYEAR_1980 |  -.7981522   .2022698    -3.95   0.000    -1.194727   -.4015778
  _IYEAR_1981 |  -.7648254   .2065853    -3.70   0.000    -1.169861   -.3597899
  _IYEAR_1982 |  -1.125479   .2089226    -5.39   0.000    -1.535097    -.715861
  _IYEAR_1983 |  -1.317496   .2112252    -6.24   0.000    -1.731628    -.903363
  _IYEAR_1984 |  -1.245505   .2118027    -5.88   0.000     -1.66077   -.8302399
  _IYEAR_1985 |  -1.477847   .2116421    -6.98   0.000    -1.892797   -1.062897
  _IYEAR_1986 |  -1.274281   .2061296    -6.18   0.000    -1.678423   -.8701393
  _IYEAR_1987 |  -.7803259   .2042487    -3.82   0.000     -1.18078   -.3798716
  _IYEAR_1988 |  -.2433178   .2033091    -1.20   0.231    -.6419299    .1552944
  _IYEAR_1989 |  -.2071638   .2017119    -1.03   0.304    -.6026445    .1883169
  _IYEAR_1990 |  -.0902552   .1912391    -0.47   0.637    -.4652026    .2846923
```

_IYEAR_1991	.3268893	.1883416	1.74	0.083	-.0423771	.6961558
_IYEAR_1992	.2443428	.1881442	1.30	0.194	-.1245367	.6132223
_IYEAR_1993	.0455287	.1873257	0.24	0.808	-.3217459	.4128034
_IYEAR_1994	.0684038	.1873808	0.37	0.715	-.2989788	.4357865
_IYEAR_1995	-.1882976	.1875113	-1.00	0.315	-.5559362	.179341
_IYEAR_1996	-.4243015	.1876466	-2.26	0.024	-.7922055	-.0563975
_IYEAR_1997	-.5579896	.188625	-2.96	0.003	-.9278116	-.1881675
_IYEAR_1998	-.6632502	.1887296	-3.51	0.000	-1.033277	-.293223
_IYEAR_1999	-.5646397	.1888543	-2.99	0.003	-.9349113	-.194368
_IYEAR_2000	-.6588888	.1881843	-3.50	0.000	-1.027847	-.2899306
_IYEAR_2001	-.5111138	.1881561	-2.72	0.007	-.8800166	-.1422109
_IYEAR_2002	-.0005754	.1884486	-0.00	0.998	-.3700517	.3689009
_IYEAR_2003	.3311999	.1906305	1.74	0.082	-.0425543	.7049541
_IYEAR_2004	.5779734	.1920565	3.01	0.003	.2014234	.9545234
_IYEAR_2005	.6993957	.1918693	3.65	0.000	.3232127	1.075579
_IYEAR_2006	.589081	.1924043	3.06	0.002	.2118489	.966313
_IYEAR_2007	.476198	.1936103	2.46	0.014	.0966016	.8557943
_IYEAR_2008	.5090407	.1938379	2.63	0.009	.128998	.8890833
_IYEAR_2009	.3207518	.1942647	1.65	0.099	-.0601276	.7016312
_IYEAR_2010	.1285798	.1943746	0.66	0.508	-.2525152	.5096748
_IYEAR_2011	.1193719	.1956162	0.61	0.542	-.2641574	.5029013
_IYEAR_2012	-.2828498	.19526	-1.45	0.148	-.6656807	.099981
_IYEAR_2013	-.34493	.1974991	-1.75	0.081	-.732151	.042291
_IYEAR_2014	-.4976742	.1982652	-2.51	0.012	-.8863972	-.1089512
_IYEAR_2015	-.6509419	.1975318	-3.30	0.001	-1.038227	-.2636569
_IYEAR_2016	-.7605129	.2017806	-3.77	0.000	-1.156128	-.3648976
_IYEAR_2017	.0487779	.2128049	0.23	0.819	-.3684518	.4660077
_IYEAR_2018	0	(omitted)				
_IYEAR_2019	-.242863	.2131163	-1.14	0.255	-.6607034	.1749773
_IPRODUCTS_2	-.9853093	.2500095	-3.94	0.000	-1.475483	-.4951353
_IPRODUCTS_3	-.6096123	.2500095	-2.44	0.015	-1.099786	-.1194383
_IPRODUCTS_4	1.522977	.2500095	6.09	0.000	1.032803	2.013151
_IPRODUCTS_5	-.9279197	.2500095	-3.71	0.000	-1.418094	-.4377457
_IPRODUCTS_6	1.7564	.2500095	7.03	0.000	1.266226	2.246574
_IPRODUCTS_7	3.123737	.2500095	12.49	0.000	2.633563	3.613911
_IPRODUCTS_8	1.860342	.2500095	7.44	0.000	1.370168	2.350516
_IPRODUCTS_9	1.865038	.2500095	7.46	0.000	1.374864	2.355212
_IPRODUCTS_10	1.743175	.2500095	6.97	0.000	1.253001	2.233349
_IPRODUCTS_11	.9734148	.2500095	3.89	0.000	.4832408	1.463589
_IPRODUCTS_12	-1.900244	.2500095	-7.60	0.000	-2.390418	-1.41007
_IPRODUCTS_13	.6051106	.2500095	2.42	0.016	.1149366	1.095285
_IPRODUCTS_14	-.5699128	.2500095	-2.28	0.023	-1.060087	-.0797388
_IPRODUCTS_15	-.0065199	.2500095	-0.03	0.979	-.4966939	.4836541
_IPRODUCTS_16	-.222479	.2500095	-0.89	0.374	-.712653	.267695

_IPRODUCTS_17	-.9930321	.2500095	-3.97	0.000	-1.483206	-.5028581
_IPRODUCTS_18	.9923357	.2500095	3.97	0.000	.5021617	1.48251
_IPRODUCTS_19	-.0924034	.2500095	-0.37	0.712	-.5825774	.3977706
_IPRODUCTS_20	-4.114096	.2500095	-16.46	0.000	-4.60427	-3.623922
_IPRODUCTS_21	-3.376056	.2500095	-13.50	0.000	-3.86623	-2.885882
_IPRODUCTS_22	-1.557212	.2500095	-6.23	0.000	-2.047386	-1.067038
_IPRODUCTS_23	-1.346111	.2500095	-5.38	0.000	-1.836285	-.8559374
_IPRODUCTS_24	-3.826713	.2500095	-15.31	0.000	-4.316887	-3.336539
_IPRODUCTS_25	-.6436107	.2500095	-2.57	0.010	-1.133785	-.1534367
_IPRODUCTS_26	-4.740865	.2500095	-18.96	0.000	-5.231039	-4.250691
_IPRODUCTS_27	-3.185086	.2500095	-12.74	0.000	-3.67526	-2.694912
_IPRODUCTS_28	-3.773422	.2512265	-15.02	0.000	-4.265982	-3.280862
_IPRODUCTS_29	-1.966697	.2500095	-7.87	0.000	-2.456871	-1.476523
_IPRODUCTS_30	-1.040163	.2500095	-4.16	0.000	-1.530337	-.5499892
_IPRODUCTS_31	-2.229362	.2500095	-8.92	0.000	-2.719536	-1.739188
_IPRODUCTS_32	-1.549622	.2500095	-6.20	0.000	-2.039796	-1.059448
_IPRODUCTS_33	-1.635984	.2500095	-6.54	0.000	-2.126158	-1.14581
_IPRODUCTS_34	.4643394	.2500095	1.86	0.063	-.0258346	.9545134
_IPRODUCTS_35	-2.152244	.2500095	-8.61	0.000	-2.642418	-1.66207
_IPRODUCTS_36	-2.155115	.2500095	-8.62	0.000	-2.645289	-1.664941
_IPRODUCTS_37	-1.192064	.2500095	-4.77	0.000	-1.682238	-.7018904
_IPRODUCTS_38	-2.499102	.2500095	-10.00	0.000	-2.989276	-2.008928
_IPRODUCTS_39	.0054827	.2500095	0.02	0.983	-.4846913	.4956567
_IPRODUCTS_40	-.3313896	.2500095	-1.33	0.185	-.8215636	.1587844
_IPRODUCTS_41	.8708644	.2500095	3.48	0.001	.3806904	1.361038
_IPRODUCTS_42	-.3291531	.2500095	-1.32	0.188	-.8193271	.1610209
_IPRODUCTS_43	-.6190189	.2500095	-2.48	0.013	-1.109193	-.1288449
_IPRODUCTS_44	1.563669	.2500095	6.25	0.000	1.073495	2.053843
_IPRODUCTS_45	.7615145	.2500095	3.05	0.002	.2713405	1.251688
_IPRODUCTS_46	-1.932539	.2500095	-7.73	0.000	-2.422713	-1.442365
_IPRODUCTS_47	.1812719	.2500095	0.73	0.468	-.3089021	.6714459
_IPRODUCTS_48	-1.161615	.2500095	-4.65	0.000	-1.651789	-.6714407
_IPRODUCTS_49	-2.531094	.2537863	-9.97	0.000	-3.028673	-2.033515
_IPRODUCTS_50	-.3031392	.2500095	-1.21	0.225	-.7933132	.1870348
_IPRODUCTS_51	.9377507	.2500095	3.75	0.000	.4475767	1.427925
_IPRODUCTS_52	-2.90856	.2579788	-11.27	0.000	-3.414359	-2.402761
_IPRODUCTS_53	4.634451	.2500095	18.54	0.000	4.144277	5.124625
_IPRODUCTS_54	-.8959332	.26266	-3.41	0.001	-1.41091	-.3809565
_IPRODUCTS_55	-.8103108	.2537863	-3.19	0.001	-1.30789	-.312732
_IPRODUCTS_56	3.493756	.2500095	13.97	0.000	3.003582	3.98393
_IPRODUCTS_57	-.843496	.4132723	-2.04	0.041	-1.653766	-.0332257
_IPRODUCTS_58	1.382186	.2500095	5.53	0.000	.8920118	1.87236
_IPRODUCTS_59	3.151013	.2500095	12.60	0.000	2.660839	3.641187
_IPRODUCTS_60	3.165636	.2500095	12.66	0.000	2.675462	3.65581

```
_IPRODUCTS_61 | -.9834489  .2500095   -3.93  0.000   -1.473623  -.4932749
_IPRODUCTS_62 | -.7217995  .2500095   -2.89  0.004   -1.211973  -.2316255
_IPRODUCTS_63 | -.8428079  .2500095   -3.37  0.001   -1.332982  -.3526339
_IPRODUCTS_64 | -3.201296  .2500095  -12.80  0.000    -3.69147  -2.711122
_IPRODUCTS_65 |  1.302744  .2500095    5.21  0.000    .8125703   1.792918
_IPRODUCTS_66 |  1.262868  .2500095    5.05  0.000    .7726942   1.753042
_IPRODUCTS_67 |  -.182901  .2500095   -0.73  0.464    -.673075    .307273
_IPRODUCTS_68 |  .2810079  .2500095    1.12  0.261   -.2091661   .7711819
_IPRODUCTS_69 | -.6263272  .2500095   -2.51  0.012   -1.116501  -.1361532
_IPRODUCTS_70 | -.3816067  .2500095   -1.53  0.127   -.8717807   .1085673
_IPRODUCTS_71 | -2.303555  .2807302   -8.21  0.000   -2.853961   -1.75315
_IPRODUCTS_72 |   1.71463  .2500095    6.86  0.000    1.224456   2.204804
------------------------------------------------------------------------------

. xtgls LEXPORT LDM LTCR_FR_PPA i.YEAR i.PRODUCTS, noconstant
note: 2019.YEAR omitted because of collinearity

Cross-sectional time-series FGLS regression

Coefficients:  generalized least squares
Panels:        homoskedastic
Correlation:   no autocorrelation

Estimated covariances     =       1        Number of obs    =     3,735
Estimated autocorrelations =       0        Number of groups =        72
Estimated coefficients    =     124        Obs per group:
                                                 min =        12
                                                 avg =    51.875
                                                 max =        53
                                    Wald chi2(124)   =  39065.00
Log likelihood            = -6179.084        Prob > chi2      =    0.0000

------------------------------------------------------------------------------
    LEXPORT |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------+-----------------------------------------------------------------
        LDM |  -.1638222   .0113474   -14.44   0.000    -.1860627   -.1415817
 LTCR_FR_PPA |   .0808642   .0441567     1.83   0.067    -.0056814    .1674098
             |
       YEAR |
       1968  |  -.0161999   .2170506    -0.07   0.941    -.4416113    .4092115
       1969  |  -.1851065   .2180532    -0.85   0.396     -.612483    .2422699
       1970  |  -.5488194   .2215044    -2.48   0.013      -.98296   -.1146788
       1971  |   -.614214   .2218321    -2.77   0.006    -1.048997    -.179431
       1972  |  -.5889733   .2200839    -2.68   0.007     -1.02033   -.1576168
```

1973 | -.5256341 .2208687 -2.38 0.017 -.9585288 -.0927393
1974 | -.266225 .2230713 -1.19 0.233 -.7034366 .1709867
1975 | -.186843 .2188602 -0.85 0.393 -.615801 .242115
1976 | -.387554 .2181705 -1.78 0.076 -.8151603 .0400522
1977 | -.3130931 .2176025 -1.44 0.150 -.7395862 .1133999
1978 | -.1229167 .2132327 -0.58 0.564 -.5408451 .2950117
1979 | -.4549859 .2008898 -2.26 0.024 -.8487226 -.0612491
1980 | -.754268 .198647 -3.80 0.000 -1.143609 -.3649271
1981 | -.7298871 .2029237 -3.60 0.000 -1.12761 -.3321639
1982 | -1.096201 .205247 -5.34 0.000 -1.498478 -.6939248
1983 | -1.293301 .2075362 -6.23 0.000 -1.700064 -.8865375
1984 | -1.223819 .2081167 -5.88 0.000 -1.63172 -.8159178
1985 | -1.455342 .207954 -7.00 0.000 -1.862924 -1.04776
1986 | -1.238041 .2024676 -6.11 0.000 -1.63487 -.8412117
1987 | -.7365106 .2005907 -3.67 0.000 -1.129661 -.34336
1988 | -.1984443 .1996617 -0.99 0.320 -.589774 .1928855
1989 | -.1548947 .1980713 -0.78 0.434 -.5431073 .233318
1990 | -.0014046 .1877704 -0.01 0.994 -.3694277 .3666186
1991 | .4476857 .1850688 2.42 0.016 .0849575 .810414
1992 | .3722936 .1849263 2.01 0.044 .0098447 .7347425
1993 | .1724784 .184112 0.94 0.349 -.1883744 .5333312
1994 | .1976886 .1841824 1.07 0.283 -.1633023 .5586795
1995 | -.0524649 .1843631 -0.28 0.776 -.4138099 .3088801
1996 | -.2877309 .1844997 -1.56 0.119 -.6493437 .0738818
1997 | -.4259953 .1854201 -2.30 0.022 -.789412 -.0625786
1998 | -.5306922 .1855253 -2.86 0.004 -.8943151 -.1670693
1999 | -.4325414 .1856414 -2.33 0.020 -.7963919 -.0686908
2000 | -.5310793 .1849451 -2.87 0.004 -.8935651 -.1685935
2001 | -.3775594 .1849622 -2.04 0.041 -.7400788 -.0150401
2002 | .1422563 .1853303 0.77 0.443 -.2209845 .505497
2003 | .4964028 .1877135 2.64 0.008 .128491 .8643145
2004 | .7513712 .189212 3.97 0.000 .3805224 1.12222
2005 | .8711171 .1890019 4.61 0.000 .5006801 1.241554
2006 | .7632382 .1895536 4.03 0.000 .39172 1.134756
2007 | .6561898 .19081 3.44 0.001 .282209 1.030171
2008 | .6940089 .191099 3.63 0.000 .3194618 1.068556
2009 | .5076775 .1915465 2.65 0.008 .1322533 .8831017
2010 | .3155853 .1916501 1.65 0.100 -.060042 .6912127
2011 | .3113355 .1929365 1.61 0.107 -.066813 .6894841
2012 | -.0925868 .1925584 -0.48 0.631 -.4699944 .2848207
2013 | -.1460979 .19488 -0.75 0.453 -.5280557 .23586
2014 | -.2962514 .1956677 -1.51 0.130 -.679753 .0872502
2015 | -.452375 .1949004 -2.32 0.020 -.8343727 -.0703774
2016 | -.5477202 .1992895 -2.75 0.006 -.9383204 -.15712

```
  2017 |  .2909241   .2105995     1.38   0.167    -.1218434    .7036915
  2018 |  .2460844   .2123282     1.16   0.246    -.1700713    .6622401
  2019 |          0  (omitted)
       |
PRODUCTS |
     2 |  -.9853093   .2458244    -4.01   0.000    -1.467116   -.5035022
     3 |  -.6096123   .2458244    -2.48   0.013    -1.091419   -.1278052
     4 |   1.522977   .2458244     6.20   0.000     1.04117    2.004784
     5 |  -.9279197   .2458244    -3.77   0.000    -1.409727   -.4461127
     6 |    1.7564   .2458244     7.14   0.000     1.274593    2.238207
     7 |   3.123737   .2458244    12.71   0.000     2.64193    3.605544
     8 |   1.860342   .2458244     7.57   0.000     1.378535    2.342149
     9 |   1.865038   .2458244     7.59   0.000     1.383231    2.346845
    10 |   1.743175   .2458244     7.09   0.000     1.261368    2.224982
    11 |   .9734148   .2458244     3.96   0.000     .4916078    1.455222
    12 |  -1.900244   .2458244    -7.73   0.000    -2.382051   -1.418437
    13 |   .6051106   .2458244     2.46   0.014     .1233036    1.086918
    14 |  -.5699128   .2458244    -2.32   0.020     -1.05172   -.0881058
    15 |  -.0065199   .2458244    -0.03   0.979    -.4883269    .4752871
    16 |   -.222479   .2458244    -0.91   0.365    -.7042861     .259328
    17 |  -.9930321   .2458244    -4.04   0.000    -1.474839    -.511225
    18 |   .9923357   .2458244     4.04   0.000     .5105287    1.474143
    19 |  -.0924034   .2458244    -0.38   0.707    -.5742104    .3894036
    20 |  -4.114096   .2458244   -16.74   0.000    -4.595903   -3.632289
    21 |  -3.376056   .2458244   -13.73   0.000    -3.857863   -2.894249
    22 |  -1.557212   .2458244    -6.33   0.000    -2.039019   -1.075405
    23 |  -1.346111   .2458244    -5.48   0.000    -1.827918   -.8643044
    24 |  -3.826713   .2458244   -15.57   0.000    -4.308521   -3.344906
    25 |  -.6436107   .2458244    -2.62   0.009    -1.125418   -.1618037
    26 |  -4.740865   .2458244   -19.29   0.000    -5.222672   -4.259058
    27 |  -3.185086   .2458244   -12.96   0.000    -3.666893   -2.703279
    28 |  -3.773422    .247021   -15.28   0.000    -4.257574   -3.289269
    29 |  -1.966697   .2458244    -8.00   0.000    -2.448504    -1.48489
    30 |  -1.040163   .2458244    -4.23   0.000     -1.52197   -.5583562
    31 |  -2.229362   .2458244    -9.07   0.000    -2.711169   -1.747555
    32 |  -1.549622   .2458244    -6.30   0.000    -2.031429   -1.067815
    33 |  -1.635984   .2458244    -6.66   0.000    -2.117791   -1.154177
    34 |   .4643394   .2458244     1.89   0.059    -.0174677    .9461464
    35 |  -2.152244   .2458244    -8.76   0.000    -2.634051   -1.670437
    36 |  -2.155115   .2458244    -8.77   0.000    -2.636922   -1.673308
    37 |  -1.192064   .2458244    -4.85   0.000    -1.673871   -.7102574
    38 |  -2.499102   .2458244   -10.17   0.000    -2.980909   -2.017294
    39 |   .0054827   .2458244     0.02   0.982    -.4763243    .4872897
    40 |  -.3313896   .2458244    -1.35   0.178    -.8131967    .1504174
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      41 |  .8708644   .2458244     3.54   0.000     .3890573    1.352671
      42 | -.3291531   .2458244    -1.34   0.181    -.8109601    .1526539
      43 | -.6190189   .2458244    -2.52   0.012    -1.100826   -.1372118
      44 |  1.563669   .2458244     6.36   0.000     1.081862    2.045476
      45 |  .7615145   .2458244     3.10   0.002     .2797075    1.243321
      46 | -1.932539   .2458244    -7.86   0.000    -2.414346   -1.450732
      47 |  .1812719   .2458244     0.74   0.461    -.3005351    .6630789
      48 | -1.161615   .2458244    -4.73   0.000    -1.643422   -.6798076
      49 | -2.531094    .249538   -10.14   0.000     -3.02018   -2.042009
      50 | -.3031392   .2458244    -1.23   0.218    -.7849462    .1786678
      51 |  .9377507   .2458244     3.81   0.000     .4559437    1.419558
      52 |  -2.90856   .2536603   -11.47   0.000    -3.405725   -2.411395
      53 |  4.634451   .2458244    18.85   0.000     4.152644    5.116258
      54 | -.8959332   .2582631    -3.47   0.001     -1.40212   -.3897468
      55 | -.8103108    .249538    -3.25   0.001    -1.299396   -.3212254
      56 |  3.493756   .2458244    14.21   0.000     3.011949    3.975563
      57 |  -.843496   .4063542    -2.08   0.038    -1.639936   -.0470565
      58 |  1.382186   .2458244     5.62   0.000     .9003787    1.863993
      59 |  3.151013   .2458244    12.82   0.000     2.669206     3.63282
      60 |  3.165636   .2458244    12.88   0.000     2.683829    3.647443
      61 | -.9834489   .2458244    -4.00   0.000    -1.465256   -.5016418
      62 | -.7217995   .2458244    -2.94   0.003    -1.203607   -.2399925
      63 | -.8428079   .2458244    -3.43   0.001    -1.324615   -.3610009
      64 | -3.201296   .2458244   -13.02   0.000    -3.683103   -2.719489
      65 |  1.302744   .2458244     5.30   0.000     .8209373    1.784551
      66 |  1.262868   .2458244     5.14   0.000     .7810612    1.744675
      67 |  -.182901   .2458244    -0.74   0.457     -.664708     .298906
      68 |  .2810079   .2458244     1.14   0.253    -.2007991    .7628149
      69 | -.6263272   .2458244    -2.55   0.011    -1.108134   -.1445202
      70 | -.3816067   .2458244    -1.55   0.121    -.8634137    .1002003
      71 | -2.303555   .2760308    -8.35   0.000    -2.844566   -1.762545
      72 |   1.71463   .2458244     6.98   0.000     1.232823    2.196437
------------------------------------------------------------------------------

. xi: regress LIMPORT LPIB LTCR_USA_PPA  i.YEAR i.PRODUCTS , noconstant
i.YEAR            _IYEAR_1967-2019    (naturally coded; _IYEAR_1967 omitted)
i.PRODUCTS        _IPRODUCTS_1-72     (naturally coded; _IPRODUCTS_1 omitted)
note: _IYEAR_2018 omitted because of collinearity

      Source |       SS       df       MS      Number of obs   =     3,748
-------------+------------------------------   F(124, 3624)    =    136.20
       Model |  13229.3597      124  106.688384   Prob > F        =    0.0000
    Residual |  2838.74785    3,624  .783318942   R-squared       =    0.8233
-------------+------------------------------   Adj R-squared   =    0.8173
       Total |  16068.1075    3,748  4.28711513   Root MSE        =    .88505
```

LIMPORT	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
LPIB	-.1898562	.0112306	-16.91	0.000	-.211875	-.1678373
LTCR_USA_PPA	.1081959	.0288237	3.75	0.000	.0516835	.1647082
_IYEAR_1968	-.1228629	.1505905	-0.82	0.415	-.4181135	.1723878
_IYEAR_1969	-.0444533	.1502691	-0.30	0.767	-.3390737	.2501671
_IYEAR_1970	-.2152895	.1493813	-1.44	0.150	-.5081693	.0775904
_IYEAR_1971	-.385074	.1492795	-2.58	0.010	-.6777541	-.0923939
_IYEAR_1972	-.4789909	.1501681	-3.19	0.001	-.7734132	-.1845685
_IYEAR_1973	-.4148522	.151338	-2.74	0.006	-.7115682	-.1181362
_IYEAR_1974	.5535575	.1512786	3.66	0.000	.2569578	.8501573
_IYEAR_1975	.8072937	.149936	5.38	0.000	.5133263	1.101261
_IYEAR_1976	.8346567	.148376	5.63	0.000	.5437479	1.125566
_IYEAR_1977	1.04315	.1478134	7.06	0.000	.7533446	1.332956
_IYEAR_1978	1.275035	.1479935	8.62	0.000	.9848765	1.565194
_IYEAR_1979	.9430269	.140065	6.73	0.000	.6684128	1.217641
_IYEAR_1980	.9753477	.1390399	7.01	0.000	.7027435	1.247952
_IYEAR_1981	1.183041	.1386225	8.53	0.000	.9112547	1.454826
_IYEAR_1982	.7370169	.1369578	5.38	0.000	.4684949	1.005539
_IYEAR_1983	.6786804	.1369895	4.95	0.000	.4100963	.9472646
_IYEAR_1984	.6553173	.1369112	4.79	0.000	.3868866	.923748
_IYEAR_1985	.2254257	.1374471	1.64	0.101	-.0440557	.4949071
_IYEAR_1986	.1862856	.1374099	1.36	0.175	-.0831229	.455694
_IYEAR_1987	.2532279	.1374461	1.84	0.066	-.0162515	.5227073
_IYEAR_1988	.5438425	.1374289	3.96	0.000	.2743968	.8132883
_IYEAR_1989	.294413	.1348432	2.18	0.029	.030037	.5587891
_IYEAR_1990	.3111078	.1313769	2.37	0.018	.0535278	.5686879
_IYEAR_1991	.5894252	.129485	4.55	0.000	.3355544	.8432959
_IYEAR_1992	.3776354	.1296179	2.91	0.004	.1235042	.6317666
_IYEAR_1993	.3932965	.1297147	3.03	0.002	.1389754	.6476177
_IYEAR_1994	.3135737	.1298484	2.41	0.016	.0589905	.5681569
_IYEAR_1995	.1799419	.1293867	1.39	0.164	-.073736	.4336199
_IYEAR_1996	.0697641	.1301854	0.54	0.592	-.1854799	.3250082
_IYEAR_1997	-.1278036	.129757	-0.98	0.325	-.3822077	.1266005
_IYEAR_1998	.0293639	.1299592	0.23	0.821	-.2254365	.2841642
_IYEAR_1999	-.0445341	.1301853	-0.34	0.732	-.2997779	.2107096
_IYEAR_2000	-.2389392	.1305353	-1.83	0.067	-.4948691	.0169907
_IYEAR_2001	-.1739504	.1308556	-1.33	0.184	-.4305083	.0826076
_IYEAR_2002	-.1790787	.1312873	-1.36	0.173	-.4364831	.0783256
_IYEAR_2003	-.0285231	.132436	-0.22	0.829	-.2881795	.2311334
_IYEAR_2004	.4657443	.1328964	3.50	0.000	.2051851	.7263034
_IYEAR_2005	.4693039	.1322655	3.55	0.000	.2099816	.7286262
_IYEAR_2006	.4195317	.1332128	3.15	0.002	.1583521	.6807113

_IYEAR_2007	.3144251	.133674	2.35	0.019	.0523413	.5765089
_IYEAR_2008	.3405698	.1336413	2.55	0.011	.0785501	.6025895
_IYEAR_2009	-.0779147	.1343688	-0.58	0.562	-.3413606	.1855312
_IYEAR_2010	-.0871739	.1348338	-0.65	0.518	-.3515315	.1771837
_IYEAR_2011	-.2453716	.1352717	-1.81	0.070	-.5105878	.0198445
_IYEAR_2012	-.5116716	.1355083	-3.78	0.000	-.7773517	-.2459915
_IYEAR_2013	-.5705099	.136524	-4.18	0.000	-.8381815	-.3028383
_IYEAR_2014	-.4750812	.1369126	-3.47	0.001	-.7435147	-.2066478
_IYEAR_2015	-.6399477	.1378739	-4.64	0.000	-.9102658	-.3696296
_IYEAR_2016	-.7465881	.1411808	-5.29	0.000	-1.02339	-.4697864
_IYEAR_2017	-.1329823	.1480099	-0.90	0.369	-.4231733	.1572087
_IYEAR_2018	0 (omitted)					
_IYEAR_2019	-.3658448	.1485035	-2.46	0.014	-.6570035	-.0746861
_IPRODUCTS_2	.950506	.1719279	5.53	0.000	.6134209	1.287591
_IPRODUCTS_3	.7191153	.1719279	4.18	0.000	.3820302	1.0562
_IPRODUCTS_4	3.012165	.1719279	17.52	0.000	2.67508	3.34925
_IPRODUCTS_5	1.860262	.1719279	10.82	0.000	1.523177	2.197347
_IPRODUCTS_6	1.722979	.1719279	10.02	0.000	1.385894	2.060064
_IPRODUCTS_7	2.412547	.1719279	14.03	0.000	2.075462	2.749632
_IPRODUCTS_8	.6804949	.1719279	3.96	0.000	.3434098	1.01758
_IPRODUCTS_9	.2748631	.1719279	1.60	0.110	-.062222	.6119482
_IPRODUCTS_10	.4853061	.1719279	2.82	0.005	.1482211	.8223912
_IPRODUCTS_11	.0860806	.1719279	0.50	0.617	-.2510045	.4231657
_IPRODUCTS_12	1.032073	.1719279	6.00	0.000	.6949883	1.369158
_IPRODUCTS_13	-.2293775	.1719279	-1.33	0.182	-.5664626	.1077076
_IPRODUCTS_14	2.424417	.1719279	14.10	0.000	2.087332	2.761502
_IPRODUCTS_15	.217532	.1719279	1.27	0.206	-.119553	.5546171
_IPRODUCTS_16	1.3742	.1719279	7.99	0.000	1.037115	1.711285
_IPRODUCTS_17	1.132808	.1719279	6.59	0.000	.7957224	1.469893
_IPRODUCTS_18	2.560398	.1719279	14.89	0.000	2.223312	2.897483
_IPRODUCTS_19	3.12608	.1719279	18.18	0.000	2.788995	3.463165
_IPRODUCTS_20	.650297	.1719279	3.78	0.000	.3132119	.987382
_IPRODUCTS_21	1.390998	.1719279	8.09	0.000	1.053913	1.728083
_IPRODUCTS_22	2.309134	.1719279	13.43	0.000	1.972049	2.646219
_IPRODUCTS_23	2.948281	.1719279	17.15	0.000	2.611196	3.285366
_IPRODUCTS_24	.313112	.1719279	1.82	0.069	-.0239731	.6501971
_IPRODUCTS_25	1.989676	.1719279	11.57	0.000	1.65259	2.326761
_IPRODUCTS_26	-.3024632	.1719279	-1.76	0.079	-.6395483	.0346218
_IPRODUCTS_27	.1220893	.1719279	0.71	0.478	-.2149958	.4591744
_IPRODUCTS_28	-.2343033	.1719279	-1.36	0.173	-.5713884	.1027818
_IPRODUCTS_29	.8508395	.1719279	4.95	0.000	.5137544	1.187925
_IPRODUCTS_30	2.499513	.1719279	14.54	0.000	2.162428	2.836598
_IPRODUCTS_31	1.342353	.1719279	7.81	0.000	1.005268	1.679438
_IPRODUCTS_32	.8011418	.1719279	4.66	0.000	.4640567	1.138227

_IPRODUCTS_33	1.811271	.1719279	10.54	0.000	1.474186	2.148356
_IPRODUCTS_34	2.64455	.1719279	15.38	0.000	2.307465	2.981635
_IPRODUCTS_35	2.055328	.1719279	11.95	0.000	1.718243	2.392413
_IPRODUCTS_36	2.352531	.1719279	13.68	0.000	2.015446	2.689616
_IPRODUCTS_37	2.667198	.1719279	15.51	0.000	2.330112	3.004283
_IPRODUCTS_38	.6903573	.1719279	4.02	0.000	.3532723	1.027442
_IPRODUCTS_39	2.44625	.1719279	14.23	0.000	2.109165	2.783335
_IPRODUCTS_40	1.228961	.1719279	7.15	0.000	.8918756	1.566046
_IPRODUCTS_41	1.395835	.1719279	8.12	0.000	1.05875	1.73292
_IPRODUCTS_42	2.13539	.1719279	12.42	0.000	1.798305	2.472475
_IPRODUCTS_43	1.835911	.1719279	10.68	0.000	1.498826	2.172996
_IPRODUCTS_44	1.908348	.1719279	11.10	0.000	1.571263	2.245433
_IPRODUCTS_45	2.199759	.1719279	12.79	0.000	1.862674	2.536844
_IPRODUCTS_46	.5615855	.1719279	3.27	0.001	.2245005	.8986706
_IPRODUCTS_47	2.580654	.1719279	15.01	0.000	2.243569	2.917739
_IPRODUCTS_48	1.589191	.1719279	9.24	0.000	1.252106	1.926277
_IPRODUCTS_49	.5531454	.1719279	3.22	0.001	.2160603	.8902305
_IPRODUCTS_50	-.1964327	.1719279	-1.14	0.253	-.5335178	.1406524
_IPRODUCTS_51	.4475233	.1719279	2.60	0.009	.1104383	.7846084
_IPRODUCTS_52	.943357	.1719279	5.49	0.000	.6062719	1.280442
_IPRODUCTS_53	1.031713	.1883524	5.48	0.000	.6624255	1.401
_IPRODUCTS_54	.7181541	.1719279	4.18	0.000	.381069	1.055239
_IPRODUCTS_55	-2.665269	.1727644	-15.43	0.000	-3.003994	-2.326544
_IPRODUCTS_56	2.446319	.1719279	14.23	0.000	2.109234	2.783404
_IPRODUCTS_57	-4.708968	.3066092	-15.36	0.000	-5.310112	-4.107824
_IPRODUCTS_58	3.641775	.1719279	21.18	0.000	3.30469	3.97886
_IPRODUCTS_59	2.988974	.1719279	17.39	0.000	2.651888	3.326059
_IPRODUCTS_60	2.719152	.1719279	15.82	0.000	2.382067	3.056237
_IPRODUCTS_61	1.106227	.1719279	6.43	0.000	.7691415	1.443312
_IPRODUCTS_62	2.977348	.1719279	17.32	0.000	2.640263	3.314433
_IPRODUCTS_63	1.98554	.1719279	11.55	0.000	1.648455	2.322625
_IPRODUCTS_64	.4464548	.1719279	2.60	0.009	.1093697	.7835399
_IPRODUCTS_65	.8540021	.1719279	4.97	0.000	.516917	1.191087
_IPRODUCTS_66	1.6503	.1719279	9.60	0.000	1.313215	1.987385
_IPRODUCTS_67	1.009689	.1719279	5.87	0.000	.6726037	1.346774
_IPRODUCTS_68	-.5721897	.1719279	-3.33	0.001	-.9092748	-.2351046
_IPRODUCTS_69	.3373852	.1719279	1.96	0.050	.0003001	.6744703
_IPRODUCTS_70	-.4571226	.1719279	-2.66	0.008	-.7942077	-.1200375
_IPRODUCTS_71	-3.165266	.1806256	-17.52	0.000	-3.519404	-2.811128
_IPRODUCTS_72	2.52632	.1719279	14.69	0.000	2.189235	2.863405

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. xtgls LIMPORT LPIB LTCR_USA_PPA i.YEAR i.PRODUCTS, noconstant
note: 2019.YEAR omitted because of collinearity

Cross-sectional time-series FGLS regression

Coefficients:  generalized least squares
Panels:        homoskedastic
Correlation:   no autocorrelation

Estimated covariances     =         1        Number of obs    =     3,748
Estimated autocorrelations =        0        Number of groups =        72
Estimated coefficients    =       124        Obs per group:
                                                 min =        10
                                                 avg =   52.05556
                                                 max =        53
                                    Wald chi2(124)   =   17466.73
Log likelihood            = -4797.473        Prob > chi2      =    0.0000

------------------------------------------------------------------------------
   LIMPORT |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------+------------------------------------------------------------------
      LPIB |  -.2149807   .0110151   -19.52   0.000    -.2365699   -.1933915
LTCR_USA_PPA |   .0454785   .0284378     1.60   0.110    -.0102586    .1012156
           |
      YEAR |
      1968 |  -.1272262   .1480833    -0.86   0.390     -.417464    .1630117
      1969 |   -.046212   .1477643    -0.31   0.754    -.3358248    .2434008
      1970 |  -.2120603    .146886    -1.44   0.149    -.4999515    .0758309
      1971 |  -.3803834   .1467842    -2.59   0.010    -.6680751   -.0926916
      1972 |  -.4748707   .1476586    -3.22   0.001    -.7642763   -.1854652
      1973 |  -.4166996   .1488155    -2.80   0.005    -.7083726   -.1250266
      1974 |   .5523516   .1487565     3.71   0.000     .2607943    .8439089
      1975 |   .8137377   .1474278     5.52   0.000     .5247846    1.102691
      1976 |   .8487623   .1458853     5.82   0.000     .5628323    1.134692
      1977 |   1.061993   .1453268     7.31   0.000     .7771578    1.346829
      1978 |    1.29777   .1454997     8.92   0.000     1.012596    1.582944
      1979 |   1.004189   .1376684     7.29   0.000     .7343641    1.274014
      1980 |   1.045052    .136653     7.65   0.000     .7772176    1.312887
      1981 |   1.257403   .1362384     9.23   0.000     .9903802    1.524425
      1982 |    .820818   .1345937     6.10   0.000     .5570192    1.084617
      1983 |   .7640353   .1346232     5.68   0.000     .5001787    1.027892
      1984 |   .7444592   .1345424     5.53   0.000     .4807609    1.008158
      1985 |   .3169511   .1350674     2.35   0.019     .0522238    .5816784
      1986 |   .2797478    .135029     2.07   0.038     .015096    .5443997
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 1987 |   .347861  .1350632    2.58  0.010    .083142    .61258
 1988 |    .64058  .1350442    4.74  0.000    .3758982   .9052618
 1989 |  .4065028  .1324926    3.07  0.002     .146822   .6661835
 1990 |   .463329  .1290748    3.59  0.000    .2103471   .7163109
 1991 |  .7869339  .1272271    6.19  0.000    .5375734   1.036294
 1992 |  .5803855  .1273589    4.56  0.000    .3307667   .8300043
 1993 |  .5974336  .1274537    4.69  0.000    .3476289   .8472383
 1994 |  .5192633  .1275844    4.07  0.000    .2692026   .7693241
 1995 |  .3880874  .1271295    3.05  0.002    .1389182   .6372565
 1996 |  .2798501  .1279143    2.19  0.029    .0291426   .5305576
 1997 |  .0841996  .1274915    0.66  0.509   -.1656791   .3340783
 1998 |  .2433697   .127689    1.91  0.057   -.0068962   .4936356
 1999 |  .1718561  .1279103    1.34  0.179   -.0788435   .4225556
 2000 | -.0182583  .1282545   -0.14  0.887   -.2696324   .2331159
 2001 |  .0576121  .1285763    0.45  0.654   -.1943927    .309617
 2002 |  .0612829  .1290074    0.48  0.635   -.1915669   .3141327
 2003 |  .2292994   .130153    1.76  0.078   -.0257958   .4843947
 2004 |  .7283483  .1306089    5.58  0.000    .4723596   .9843369
 2005 |  .7292111  .1299827    5.61  0.000    .4744498   .9839724
 2006 |  .6829908  .1309146    5.22  0.000    .4264028   .9395787
 2007 |  .5816554  .1313684    4.43  0.000     .324178   .8391328
 2008 |  .6116571  .1313364    4.66  0.000    .3542425   .8690717
 2009 |   .200077  .1320573    1.52  0.130   -.0587506   .4589046
 2010 |  .1945084  .1325161    1.47  0.142   -.0652184   .4542352
 2011 |  .0402576  .1329506    0.30  0.762   -.2203208   .3008361
 2012 | -.2242141  .1331843   -1.68  0.092   -.4852506   .0368224
 2013 | -.2743862  .1341934   -2.04  0.041   -.5374004  -.0113719
 2014 | -.1761331  .1345775   -1.31  0.191   -.4399002   .0876341
 2015 | -.3339256   .13553   -2.46  0.014   -.5995595  -.0682916
 2016 | -.4212703  .1388081   -3.03  0.002   -.6933292  -.1492114
 2017 |  .2304305  .1455843    1.58  0.113   -.0549095   .5157704
 2018 |  .3660555  .1461103    2.51  0.012    .0796845   .6524265
 2019 |          0  (omitted)
      |
PRODUCTS |
   2 |   .950506  .1690599    5.62  0.000    .6191546   1.281857
   3 |  .7191153  .1690599    4.25  0.000     .387764   1.050467
   4 |  3.012165  .1690599   17.82  0.000    2.680814   3.343516
   5 |  1.860262  .1690599   11.00  0.000    1.528911   2.191614
   6 |  1.722979  .1690599   10.19  0.000    1.391628    2.05433
   7 |  2.412547  .1690599   14.27  0.000    2.081195   2.743898
   8 |  .6804949  .1690599    4.03  0.000    .3491436   1.011846
   9 |  .2748631  .1690599    1.63  0.104   -.0564883   .6062145
  10 |  .4853061  .1690599    2.87  0.004    .1539548   .8166575
```

11	.0860806	.1690599	0.51	0.611	-.2452708	.417432
12	1.032073	.1690599	6.10	0.000	.700722	1.363425
13	-.2293775	.1690599	-1.36	0.175	-.5607289	.1019738
14	2.424417	.1690599	14.34	0.000	2.093065	2.755768
15	.217532	.1690599	1.29	0.198	-.1138193	.5488834
16	1.3742	.1690599	8.13	0.000	1.042849	1.705551
17	1.132808	.1690599	6.70	0.000	.8014562	1.464159
18	2.560398	.1690599	15.14	0.000	2.229046	2.891749
19	3.12608	.1690599	18.49	0.000	2.794729	3.457431
20	.650297	.1690599	3.85	0.000	.3189456	.9816483
21	1.390998	.1690599	8.23	0.000	1.059647	1.72235
22	2.309134	.1690599	13.66	0.000	1.977783	2.640486
23	2.948281	.1690599	17.44	0.000	2.61693	3.279633
24	.313112	.1690599	1.85	0.064	-.0182394	.6444634
25	1.989676	.1690599	11.77	0.000	1.658324	2.321027
26	-.3024632	.1690599	-1.79	0.074	-.6338146	.0288881
27	.1220893	.1690599	0.72	0.470	-.2092621	.4534407
28	-.2343033	.1690599	-1.39	0.166	-.5656547	.0970481
29	.8508395	.1690599	5.03	0.000	.5194881	1.182191
30	2.499513	.1690599	14.78	0.000	2.168161	2.830864
31	1.342353	.1690599	7.94	0.000	1.011002	1.673705
32	.8011418	.1690599	4.74	0.000	.4697905	1.132493
33	1.811271	.1690599	10.71	0.000	1.47992	2.142623
34	2.64455	.1690599	15.64	0.000	2.313199	2.975902
35	2.055328	.1690599	12.16	0.000	1.723977	2.38668
36	2.352531	.1690599	13.92	0.000	2.02118	2.683883
37	2.667198	.1690599	15.78	0.000	2.335846	2.998549
38	.6903573	.1690599	4.08	0.000	.359006	1.021709
39	2.44625	.1690599	14.47	0.000	2.114899	2.777602
40	1.228961	.1690599	7.27	0.000	.8976093	1.560312
41	1.395835	.1690599	8.26	0.000	1.064484	1.727187
42	2.13539	.1690599	12.63	0.000	1.804038	2.466741
43	1.835911	.1690599	10.86	0.000	1.50456	2.167262
44	1.908348	.1690599	11.29	0.000	1.576996	2.239699
45	2.199759	.1690599	13.01	0.000	1.868408	2.531111
46	.5615855	.1690599	3.32	0.001	.2302342	.8929369
47	2.580654	.1690599	15.26	0.000	2.249303	2.912005
48	1.589191	.1690599	9.40	0.000	1.25784	1.920543
49	.5531454	.1690599	3.27	0.001	.221794	.8844967
50	-.1964327	.1690599	-1.16	0.245	-.5277841	.1349187
51	.4475233	.1690599	2.65	0.008	.116172	.7788747
52	.943357	.1690599	5.58	0.000	.6120056	1.274708
53	1.031713	.1852104	5.57	0.000	.6687069	1.394718
54	.7181541	.1690599	4.25	0.000	.3868027	1.049505

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      55 | -2.665269  .1698825  -15.69  0.000   -2.998232  -2.332305
      56 |  2.446319  .1690599   14.47  0.000    2.114967   2.77767
      57 | -4.708968  .3014946  -15.62  0.000   -5.299886  -4.118049
      58 |  3.641775  .1690599   21.54  0.000    3.310423   3.973126
      59 |  2.988974  .1690599   17.68  0.000    2.657622   3.320325
      60 |  2.719152  .1690599   16.08  0.000    2.387801   3.050504
      61 |  1.106227  .1690599    6.54  0.000    .7748752   1.437578
      62 |  2.977348  .1690599   17.61  0.000    2.645996   3.308699
      63 |   1.98554  .1690599   11.74  0.000    1.654188   2.316891
      64 |  .4464548  .1690599    2.64  0.008    .1151035   .7778062
      65 |  .8540021  .1690599    5.05  0.000    .5226507   1.185353
      66 |   1.6503  .1690599    9.76  0.000    1.318949   1.981652
      67 |  1.009689  .1690599    5.97  0.000    .6783375    1.34104
      68 | -.5721897  .1690599   -3.38  0.001    -.903541  -.2408383
      69 |  .3373852  .1690599    2.00  0.046    .0060339   .6687366
      70 | -.4571226  .1690599   -2.70  0.007   -.7884739  -.1257712
      71 | -3.165266  .1776125  -17.82  0.000    -3.51338  -2.817152
      72 |   2.52632  .1690599   14.94  0.000    2.194969   2.857672
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Kenya :

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. xi: regress LEXPORT LDM LTCR_FR_PPA  i.YEAR i.PRODUCTS , noconstant
i.YEAR          _IYEAR_1967-2019    (naturally coded; _IYEAR_1967 omitted)
i.PRODUCTS      _IPRODUCTS_1-72     (naturally coded; _IPRODUCTS_1 omitted)
note: _IYEAR_2018 omitted because of collinearity

      Source |       SS       df       MS      Number of obs   =     3,686
-------------+------------------------------   F(124, 3562)    =    307.32
       Model |  40292.1248     124  324.936491   Prob > F        =    0.0000
    Residual |  3766.22097   3,562  1.05733323   R-squared       =    0.9145
-------------+------------------------------   Adj R-squared   =    0.9115
       Total |  44058.3458   3,686  11.9528882   Root MSE        =    1.0283

------------------------------------------------------------------------------
     LEXPORT |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         LDM |   -.0348511   .0094251    -3.70   0.000    -.0533302    -.016372
  LTCR_FR_PPA |   -.6429998   .0487798   -13.18   0.000     -.738639   -.5473606
```

_IYEAR_1968	.0303557	.1763473	0.17	0.863	-.3153962	.3761076
_IYEAR_1969	.0627848	.1789726	0.35	0.726	-.2881144	.4136839
_IYEAR_1970	-.3807438	.1824453	-2.09	0.037	-.7384517	-.023036
_IYEAR_1971	-.1937291	.1791574	-1.08	0.280	-.5449905	.1575323
_IYEAR_1972	.2645835	.1748131	1.51	0.130	-.0781603	.6073273
_IYEAR_1973	.2543615	.1719796	1.48	0.139	-.0828269	.59155
_IYEAR_1974	.2698458	.1728133	1.56	0.118	-.0689771	.6086688
_IYEAR_1975	-.1575061	.1691385	-0.93	0.352	-.4891242	.174112
_IYEAR_1976	-.1089708	.1694049	-0.64	0.520	-.4411112	.2231696
_IYEAR_1977	-.3997487	.1704212	-2.35	0.019	-.7338817	-.0656158
_IYEAR_1978	-.6588972	.1682309	-3.92	0.000	-.9887358	-.3290587
_IYEAR_1979	-.7047908	.165678	-4.25	0.000	-1.029624	-.3799576
_IYEAR_1980	-.7049164	.164327	-4.29	0.000	-1.027101	-.3827319
_IYEAR_1981	-.7553931	.1655719	-4.56	0.000	-1.080018	-.4307678
_IYEAR_1982	-.8287388	.166476	-4.98	0.000	-1.155137	-.5023409
_IYEAR_1983	-.7130043	.1648803	-4.32	0.000	-1.036274	-.389735
_IYEAR_1984	-.8331077	.1668037	-4.99	0.000	-1.160148	-.5060673
_IYEAR_1985	-.2874146	.1636358	-1.76	0.079	-.6082439	.0334146
_IYEAR_1986	-.1381181	.1593014	-0.87	0.386	-.4504491	.1742129
_IYEAR_1987	-.1981798	.1567457	-1.26	0.206	-.5055002	.1091407
_IYEAR_1988	-.1342967	.1549811	-0.87	0.386	-.4381574	.169564
_IYEAR_1989	.5306163	.1541832	3.44	0.001	.22832	.8329126
_IYEAR_1990	.9755489	.1519576	6.42	0.000	.6776162	1.273482
_IYEAR_1991	.6833684	.1526972	4.48	0.000	.3839857	.9827512
_IYEAR_1992	.7712405	.1508322	5.11	0.000	.4755142	1.066967
_IYEAR_1993	2.160723	.1534333	14.08	0.000	1.859897	2.461549
_IYEAR_1994	1.983385	.1519808	13.05	0.000	1.685407	2.281363
_IYEAR_1995	1.83149	.1538141	11.91	0.000	1.529918	2.133063
_IYEAR_1996	1.207707	.1541206	7.84	0.000	.9055339	1.509881
_IYEAR_1997	.9096282	.1538799	5.91	0.000	.6079265	1.21133
_IYEAR_1998	.8020049	.1526231	5.25	0.000	.5027675	1.101242
_IYEAR_1999	1.277388	.1535737	8.32	0.000	.976287	1.57849
_IYEAR_2000	.8371138	.1542861	5.43	0.000	.5346158	1.139612
_IYEAR_2001	1.052441	.153736	6.85	0.000	.7510212	1.35386
_IYEAR_2002	1.211381	.1535356	7.89	0.000	.9103548	1.512408
_IYEAR_2003	1.572871	.1559801	10.08	0.000	1.267052	1.878691

_IYEAR_2004	1.304572	.157379	8.29	0.000	.9960099	1.613134
_IYEAR_2005	1.592729	.157409	10.12	0.000	1.284108	1.901349
_IYEAR_2006	1.279664	.1575444	8.12	0.000	.9707774	1.58855
_IYEAR_2007	1.067961	.1585107	6.74	0.000	.7571796	1.378741
_IYEAR_2008	.867172	.1600252	5.42	0.000	.5534218	1.180922
_IYEAR_2009	1.177678	.1619728	7.27	0.000	.8601088	1.495246
_IYEAR_2010	1.160608	.1626828	7.13	0.000	.8416468	1.479568
_IYEAR_2011	1.442333	.1665209	8.66	0.000	1.115848	1.768819
_IYEAR_2012	1.030585	.1648799	6.25	0.000	.7073165	1.353853
_IYEAR_2013	.8240729	.1669592	4.94	0.000	.4967276	1.151418
_IYEAR_2014	.8610052	.16833	5.11	0.000	.5309722	1.191038
_IYEAR_2015	.6609778	.1678785	3.94	0.000	.3318301	.9901255
_IYEAR_2016	.6100654	.1702063	3.58	0.000	.2763537	.943777
_IYEAR_2017	.132028	.1716496	0.77	0.442	-.2045135	.4685694
_IYEAR_2018	0	(omitted)				
_IYEAR_2019	.2339818	.1730618	1.35	0.176	-.1053284	.573292
_IPRODUCTS_2	-3.169487	.1997483	-15.87	0.000	-3.561119	-2.777854
_IPRODUCTS_3	-1.886429	.1997483	-9.44	0.000	-2.278061	-1.494796
_IPRODUCTS_4	-.3907241	.1997483	-1.96	0.051	-.7823566	.0009083
_IPRODUCTS_5	-2.186089	.1997483	-10.94	0.000	-2.577721	-1.794456
_IPRODUCTS_6	-1.883801	.1997483	-9.43	0.000	-2.275433	-1.492168
_IPRODUCTS_7	-1.372825	.1997483	-6.87	0.000	-1.764457	-.9811925
_IPRODUCTS_8	-1.140212	.1997483	-5.71	0.000	-1.531845	-.7485797
_IPRODUCTS_9	-1.761948	.1997483	-8.82	0.000	-2.153581	-1.370316
_IPRODUCTS_10	-1.694845	.1997483	-8.48	0.000	-2.086478	-1.303213
_IPRODUCTS_11	.0004646	.1997483	0.00	0.998	-.3911679	.3920971
_IPRODUCTS_12	-1.754012	.1997483	-8.78	0.000	-2.145644	-1.36238
_IPRODUCTS_13	-2.122314	.1997483	-10.62	0.000	-2.513946	-1.730681
_IPRODUCTS_14	-.5501884	.1997483	-2.75	0.006	-.9418209	-.1585559
_IPRODUCTS_15	-1.6212	.1997483	-8.12	0.000	-2.012833	-1.229568
_IPRODUCTS_16	-1.076699	.1997483	-5.39	0.000	-1.468331	-.6850661
_IPRODUCTS_17	-1.741258	.1997483	-8.72	0.000	-2.132891	-1.349626
_IPRODUCTS_18	-.6878203	.1997483	-3.44	0.001	-1.079453	-.2961878
_IPRODUCTS_19	-2.516134	.1997483	-12.60	0.000	-2.907767	-2.124502
_IPRODUCTS_20	-3.893363	.1997483	-19.49	0.000	-4.284995	-3.50173
_IPRODUCTS_21	-4.516003	.1997483	-22.61	0.000	-4.907635	-4.12437

_IPRODUCTS_22	-3.131272	.1997483	-15.68	0.000	-3.522904	-2.739639
_IPRODUCTS_23	-2.223845	.1997483	-11.13	0.000	-2.615477	-1.832212
_IPRODUCTS_24	-6.48988	.2007201	-32.33	0.000	-6.883418	-6.096342
_IPRODUCTS_25	-1.927991	.1997483	-9.65	0.000	-2.319624	-1.536359
_IPRODUCTS_26	-6.729494	.2027666	-33.19	0.000	-7.127044	-6.331943
_IPRODUCTS_27	-4.278309	.1997483	-21.42	0.000	-4.669941	-3.886676
_IPRODUCTS_28	-4.089997	.2038438	-20.06	0.000	-4.48966	-3.690335
_IPRODUCTS_29	-4.642695	.1997483	-23.24	0.000	-5.034328	-4.251063
_IPRODUCTS_30	-2.319763	.1997483	-11.61	0.000	-2.711396	-1.928131
_IPRODUCTS_31	-3.0087	.1997483	-15.06	0.000	-3.400332	-2.617067
_IPRODUCTS_32	-4.837684	.1997483	-24.22	0.000	-5.229316	-4.446051
_IPRODUCTS_33	-3.676418	.1997483	-18.41	0.000	-4.068051	-3.284786
_IPRODUCTS_34	-1.427198	.1997483	-7.14	0.000	-1.81883	-1.035565
_IPRODUCTS_35	-3.25697	.1997483	-16.31	0.000	-3.648603	-2.865338
_IPRODUCTS_36	-3.625125	.1997483	-18.15	0.000	-4.016758	-3.233493
_IPRODUCTS_37	-2.279612	.1997483	-11.41	0.000	-2.671245	-1.88798
_IPRODUCTS_38	-4.926614	.1997483	-24.66	0.000	-5.318247	-4.534982
_IPRODUCTS_39	-1.790488	.1997483	-8.96	0.000	-2.182121	-1.398856
_IPRODUCTS_40	-.1191345	.1997483	-0.60	0.551	-.5107669	.272498
_IPRODUCTS_41	-1.177959	.1997483	-5.90	0.000	-1.569592	-.786327
_IPRODUCTS_42	-1.991712	.1997483	-9.97	0.000	-2.383344	-1.600079
_IPRODUCTS_43	-.958159	.1997483	-4.80	0.000	-1.349791	-.5665266
_IPRODUCTS_44	-.1658361	.1997483	-0.83	0.406	-.5574686	.2257964
_IPRODUCTS_45	-.5791072	.1997483	-2.90	0.004	-.9707397	-.1874748
_IPRODUCTS_46	-6.604397	.201726	-32.74	0.000	-6.999907	-6.208887
_IPRODUCTS_47	-.6751266	.1997483	-3.38	0.001	-1.066759	-.2834942
_IPRODUCTS_48	-2.103074	.1997483	-10.53	0.000	-2.494706	-1.711442
_IPRODUCTS_49	-4.273355	.1997483	-21.39	0.000	-4.664988	-3.881723
_IPRODUCTS_50	-1.401589	.1997483	-7.02	0.000	-1.793222	-1.009957
_IPRODUCTS_51	-.3584266	.1997483	-1.79	0.073	-.7500591	.0332058
_IPRODUCTS_52	-5.905736	.2017264	-29.28	0.000	-6.301247	-5.510225
_IPRODUCTS_53	-8.349203	.2468136	-33.83	0.000	-8.833114	-7.865293
_IPRODUCTS_54	-3.724944	.1997483	-18.65	0.000	-4.116576	-3.333311
_IPRODUCTS_55	-11.68372	.2436991	-47.94	0.000	-12.16152	-11.20591
_IPRODUCTS_56	1.560663	.1997483	7.81	0.000	1.169031	1.952296
_IPRODUCTS_57	-11.72134	1.044942	-11.22	0.000	-13.77009	-9.672598

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_IPRODUCTS_58 | -1.261103  .1997483   -6.31  0.000   -1.652735  -.8694704
_IPRODUCTS_59 |  3.111744  .1997483   15.58  0.000    2.720111   3.503376
_IPRODUCTS_60 |  1.610354  .1997483    8.06  0.000    1.218722   2.001986
_IPRODUCTS_61 | -2.075835  .1997483  -10.39  0.000   -2.467467  -1.684203
_IPRODUCTS_62 |  -.649395  .1997483   -3.25  0.001   -1.041027  -.2577625
_IPRODUCTS_63 | -.3933678  .1997483   -1.97  0.049   -.7850003  -.0017353
_IPRODUCTS_64 | -1.077689  .1997483   -5.40  0.000   -1.469322  -.6860569
_IPRODUCTS_65 |  .5260503  .1997483    2.63  0.008    .1344178   .9176828
_IPRODUCTS_66 | -.7809109  .1997483   -3.91  0.000   -1.172543  -.3892784
_IPRODUCTS_67 | -2.687849  .1997483  -13.46  0.000   -3.079482  -2.296217
_IPRODUCTS_68 | -.8537907  .1997483   -4.27  0.000   -1.245423  -.4621582
_IPRODUCTS_69 | -1.377992  .1997483   -6.90  0.000   -1.769625  -.9863597
_IPRODUCTS_70 | -1.391198  .1997483   -6.96  0.000   -1.782831  -.9995658
_IPRODUCTS_71 | -2.226152  .2155899  -10.33  0.000   -2.648844   -1.80346
_IPRODUCTS_72 | -.9194452  .1997483   -4.60  0.000   -1.311078  -.5278128
------------------------------------------------------------------------------

. xtgls LEXPORT LDM LTCR_FR_PPA i.YEAR i.PRODUCTS, noconstant
note: 2019.YEAR omitted because of collinearity

Cross-sectional time-series FGLS regression

Coefficients:  generalized least squares
Panels:        homoskedastic
Correlation:   no autocorrelation

Estimated covariances      =         1        Number of obs      =     3,686
Estimated autocorrelations =         0        Number of groups   =        72
Estimated coefficients     =       124        Obs per group:
                                                          min =         1
                                                          avg =   51.19444
                                                          max =        53
                                               Wald chi2(124)  =  39433.90
Log likelihood             = -5269.888        Prob > chi2     =    0.0000
```

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------------------------------------------------------------------------------
   LEXPORT |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       LDM |  -.0293559   .0092631    -3.17   0.002    -.0475111   -.0112006
 LTCR_FR_PPA |  -.5812748   .0482273   -12.05   0.000    -.6757985    -.486751
             |
      YEAR |
      1968 |   .0280002   .1733526     0.16   0.872    -.3117646     .367765
      1969 |   .0627631   .1759364     0.36   0.721     -.282066    .4075922
      1970 |  -.3703107   .1793664    -2.06   0.039    -.7218623   -.0187591
      1971 |  -.1928628   .1761193    -1.10   0.273    -.5380504    .1523247
      1972 |   .2523535   .1718332     1.47   0.142    -.0844334    .5891405
      1973 |   .2355547   .1690422     1.39   0.163    -.0957619    .5668713
      1974 |   .2545278   .1698643     1.50   0.134    -.0784002    .5874557
      1975 |  -.1828386   .1662452    -1.10   0.271    -.5086732    .1429961
      1976 |   -.134347   .1665069    -0.81   0.420    -.4606945    .1920005
      1977 |   -.426858   .1675053    -2.55   0.011    -.7551623   -.0985537
      1978 |  -.6888553   .1653508    -4.17   0.000    -1.012937   -.3647737
      1979 |   -.738919   .1628399    -4.54   0.000    -1.058079   -.4197587
      1980 |  -.7415069   .1615188    -4.59   0.000    -1.058078    -.424936
      1981 |  -.7904296   .1627353    -4.86   0.000    -1.109385   -.4714742
      1982 |  -.8631068   .1636243    -5.27   0.000    -1.183805   -.5424091
      1983 |  -.7506147   .1620629    -4.63   0.000    -1.068252   -.4329772
      1984 |  -.8675403   .1639532    -5.29   0.000    -1.188883   -.5461979
      1985 |  -.3299947   .1608408    -2.05   0.040    -.6452369   -.0147525
      1986 |  -.1990268   .1565826    -1.27   0.204    -.5059231    .1078694
      1987 |  -.2708859   .1540858    -1.76   0.079    -.5728886    .0311168
      1988 |  -.2133042    .152379    -1.40   0.162    -.5119617    .0853532
      1989 |   .4463423   .1516063     2.94   0.003     .1491993    .7434853
      1990 |   .8739581   .1494676     5.85   0.000     .5810069    1.166909
      1991 |   .5724002   .1502019     3.81   0.000     .2780099    .8667906
      1992 |   .6479901   .1484429     4.37   0.000     .3570473    .9389328
      1993 |   2.004658   .1511591    13.26   0.000     1.708391    2.300924
      1994 |   1.827904   .1497292    12.21   0.000      1.53444    2.121368
      1995 |   1.673211    .151509    11.04   0.000     1.376259    1.970163
      1996 |   1.042634   .1518473     6.87   0.000     .7450184    1.340249
```

```
 1997 |  .7518949   .1515689     4.96   0.000     .4548254    1.048964
 1998 |  .6432839   .1503748     4.28   0.000     .3485547    .9380132
 1999 |  1.112337   .1513438     7.35   0.000     .8157085    1.408965
 2000 |  .6777205   .1519741     4.46   0.000     .3798567    .9755842
 2001 |  .8919022   .1514755     5.89   0.000     .5950157    1.188789
 2002 |  1.047564   .1512969     6.92   0.000     .7510275    1.344101
 2003 |  1.398763   .1537196     9.10   0.000     1.097478    1.700048
 2004 |  1.120397   .1551921     7.22   0.000     .8162258    1.424568
 2005 |  1.408662   .1552196     9.08   0.000     1.104438    1.712887
 2006 |  1.095262   .1553532     7.05   0.000     .7907751    1.399748
 2007 |  .8795066   .1563263     5.63   0.000     .5731128     1.1859
 2008 |  .6725456   .1578523     4.26   0.000     .3631609    .9819304
 2009 |  .9756582   .1598133     6.10   0.000     .6624299    1.288886
 2010 |  .9561798   .1605249     5.96   0.000     .6415569    1.270803
 2011 |  1.225324   .1643767     7.45   0.000     .9031521    1.547497
 2012 |  .8188397    .162729     5.03   0.000     .4998968    1.137783
 2013 |  .6057786   .1648138     3.68   0.000     .2827494    .9288078
 2014 |  .6385996   .1661867     3.84   0.000     .3128797    .9643196
 2015 |  .4399509    .165733     2.65   0.008     .1151202    .7647816
 2016 |  .3841008   .1680056     2.29   0.022     .0548159    .7133857
 2017 | -.0980448   .1694492    -0.58   0.563    -.4301592    .2340696
 2018 | -.2344112   .1704382    -1.38   0.169    -.5684639    .0996415
 2019 |         0  (omitted)
      |
PRODUCTS |
   2 | -3.169487   .1963597   -16.14   0.000    -3.554345   -2.784629
   3 | -1.886429   .1963597    -9.61   0.000    -2.271287   -1.501571
   4 | -.3907241   .1963597    -1.99   0.047     -.775582   -.0058662
   5 | -2.186089   .1963597   -11.13   0.000    -2.570947   -1.801231
   6 | -1.883801   .1963597    -9.59   0.000    -2.268659   -1.498943
   7 | -1.372825   .1963597    -6.99   0.000    -1.757683   -.9879671
   8 | -1.140212   .1963597    -5.81   0.000     -1.52507   -.7553543
   9 | -1.761948   .1963597    -8.97   0.000    -2.146806    -1.37709
  10 | -1.694845   .1963597    -8.63   0.000    -2.079703   -1.309987
  11 |  .0004646   .1963597     0.00   0.998    -.3843933    .3853225
  12 | -1.754012   .1963597    -8.93   0.000     -2.13887   -1.369154
```

13 | -2.122314 .1963597 -10.81 0.000 -2.507172 -1.737456

14 | -.5501884 .1963597 -2.80 0.005 -.9350463 -.1653305

15 | -1.6212 .1963597 -8.26 0.000 -2.006058 -1.236342

16 | -1.076699 .1963597 -5.48 0.000 -1.461556 -.6918406

17 | -1.741258 .1963597 -8.87 0.000 -2.126116 -1.3564

18 | -.6878203 .1963597 -3.50 0.000 -1.072678 -.3029624

19 | -2.516134 .1963597 -12.81 0.000 -2.900992 -2.131276

20 | -3.893363 .1963597 -19.83 0.000 -4.278221 -3.508505

21 | -4.516003 .1963597 -23.00 0.000 -4.900861 -4.131145

22 | -3.131272 .1963597 -15.95 0.000 -3.516129 -2.746414

23 | -2.223845 .1963597 -11.33 0.000 -2.608703 -1.838987

24 | -6.48988 .1973151 -32.89 0.000 -6.87661 -6.10315

25 | -1.927991 .1963597 -9.82 0.000 -2.312849 -1.543133

26 | -6.729494 .1993268 -33.76 0.000 -7.120167 -6.33882

27 | -4.278309 .1963597 -21.79 0.000 -4.663167 -3.893451

28 | -4.089997 .2003858 -20.41 0.000 -4.482746 -3.697249

29 | -4.642695 .1963597 -23.64 0.000 -5.027553 -4.257837

30 | -2.319763 .1963597 -11.81 0.000 -2.704621 -1.934905

31 | -3.0087 .1963597 -15.32 0.000 -3.393557 -2.623842

32 | -4.837684 .1963597 -24.64 0.000 -5.222542 -4.452826

33 | -3.676418 .1963597 -18.72 0.000 -4.061276 -3.29156

34 | -1.427198 .1963597 -7.27 0.000 -1.812055 -1.04234

35 | -3.25697 .1963597 -16.59 0.000 -3.641828 -2.872113

36 | -3.625125 .1963597 -18.46 0.000 -4.009983 -3.240267

37 | -2.279612 .1963597 -11.61 0.000 -2.66447 -1.894754

38 | -4.926614 .1963597 -25.09 0.000 -5.311472 -4.541756

39 | -1.790488 .1963597 -9.12 0.000 -2.175346 -1.40563

40 | -.1191345 .1963597 -0.61 0.544 -.5039923 .2657234

41 | -1.177959 .1963597 -6.00 0.000 -1.562817 -.7931016

42 | -1.991712 .1963597 -10.14 0.000 -2.37657 -1.606854

43 | -.958159 .1963597 -4.88 0.000 -1.343017 -.5733011

44 | -.1658361 .1963597 -0.84 0.398 -.550694 .2190218

45 | -.5791072 .1963597 -2.95 0.003 -.9639651 -.1942494

46 | -6.604397 .1983039 -33.30 0.000 -6.993065 -6.215728

47 | -.6751266 .1963597 -3.44 0.001 -1.059985 -.2902687

48 | -2.103074 .1963597 -10.71 0.000 -2.487932 -1.718216

```
      49 | -4.273355  .1963597  -21.76  0.000   -4.658213  -3.888498
      50 | -1.401589  .1963597   -7.14  0.000   -1.786447  -1.016731
      51 | -.3584266  .1963597   -1.83  0.068   -.7432845   .0264312
      52 | -5.905736  .1983043  -29.78  0.000   -6.294405  -5.517066
      53 | -8.349203  .2426266  -34.41  0.000   -8.824743  -7.873664
      54 | -3.724944  .1963597  -18.97  0.000   -4.109802  -3.340086
      55 | -11.68372  .2395649  -48.77  0.000   -12.15325  -11.21418
      56 |  1.560663  .1963597   7.95  0.000    1.175805   1.945521
      57 | -11.72134  1.027216  -11.41  0.000   -13.73465  -9.708037
      58 | -1.261103  .1963597   -6.42  0.000   -1.645961   -.876245
      59 |  3.111744  .1963597   15.85  0.000    2.726886   3.496602
      60 |  1.610354  .1963597    8.20  0.000    1.225496   1.995212
      61 | -2.075835  .1963597  -10.57  0.000   -2.460693  -1.690977
      62 |  -.649395  .1963597   -3.31  0.001   -1.034253  -.2645371
      63 | -.3933678  .1963597   -2.00  0.045   -.7782257  -.0085099
      64 | -1.077689  .1963597   -5.49  0.000   -1.462547  -.6928315
      65 |  .5260503  .1963597    2.68  0.007    .1411924   .9109082
      66 | -.7809109  .1963597   -3.98  0.000   -1.165769   -.396053
      67 | -2.687849  .1963597  -13.69  0.000   -3.072707  -2.302991
      68 | -.8537907  .1963597   -4.35  0.000   -1.238649  -.4689328
      69 | -1.377992  .1963597   -7.02  0.000    -1.76285  -.9931343
      70 | -1.391198  .1963597   -7.08  0.000   -1.776056   -1.00634
      71 | -2.226152  .2119325  -10.50  0.000   -2.641532  -1.810771
      72 | -.9194452  .1963597   -4.68  0.000   -1.304303  -.5345873
------------------------------------------------------------------------------

. xi: regress LIMPORT LPIB LTCR_USA_PPA  i.YEAR i.PRODUCTS , noconstant
i.YEAR          _IYEAR_1967-2019    (naturally coded; _IYEAR_1967 omitted)
i.PRODUCTS      _IPRODUCTS_1-72     (naturally coded; _IPRODUCTS_1 omitted)
note: _IYEAR_2019 omitted because of collinearity

      Source |       SS       df       MS      Number of obs   =     3,762
-------------+------------------------------   F(124, 3638)    =    154.96
       Model |  15800.2456      124  127.421336   Prob > F        =    0.0000
    Residual |  2991.45358    3,638  .822279708   R-squared       =    0.8408
-------------+------------------------------   Adj R-squared   =    0.8354
       Total |  18791.6992    3,762  4.99513536   Root MSE        =    .9068
```

```
------------------------------------------------------------------------------
    LIMPORT |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
------------+-----------------------------------------------------------------
       LPIB |  -.2928796   .0131523   -22.27   0.000    -.3186662    -.267093
 LTCR_USA_PPA |  -.4488994   .0390971   -11.48   0.000    -.5255538   -.3722451
  _IYEAR_1968 |  -.0068714   .1515822    -0.05   0.964    -.304066    .2903231
  _IYEAR_1969 |  -.0324138   .1506554    -0.22   0.830    -.3277913    .2629636
  _IYEAR_1970 |   -.147521   .1515582    -0.97   0.330    -.4446685    .1496265
  _IYEAR_1971 |   .2643621   .1482736     1.78   0.075    -.0263456    .5550698
  _IYEAR_1972 |   .0468739   .1463911     0.32   0.749    -.2401429    .3338908
  _IYEAR_1973 |  -.0806972    .146779    -0.55   0.582    -.3684745    .2070802
  _IYEAR_1974 |   .0223885   .1456297     0.15   0.878    -.2631354    .3079124
  _IYEAR_1975 |  -.1564338   .1449535    -1.08   0.281     -.440632    .1277644
  _IYEAR_1976 |  -.2504881   .1432679    -1.75   0.080    -.5313815    .0304053
  _IYEAR_1977 |  -.2659387   .1428297    -1.86   0.063     -.545973    .0140955
  _IYEAR_1978 |  -.2299396   .1433045    -1.60   0.109    -.5109047    .0510255
  _IYEAR_1979 |  -.6511618   .1432731    -4.54   0.000    -.9320655   -.3702582
  _IYEAR_1980 |  -.4591053   .1425477    -3.22   0.001    -.7385867    -.179624
  _IYEAR_1981 |  -.3674947   .1394074    -2.64   0.008    -.6408191   -.0941702
  _IYEAR_1982 |  -.4420932   .1365195    -3.24   0.001    -.7097555    -.174431
  _IYEAR_1983 |   -.46528    .135915    -3.42   0.001    -.7317572   -.1988027
  _IYEAR_1984 |  -.1795131   .1344562    -1.34   0.182    -.4431302    .0841039
  _IYEAR_1985 |  -.1382133   .1339509    -1.03   0.302    -.4008396    .1244129
  _IYEAR_1986 |   -.199753   .1345829    -1.48   0.138    -.4636183    .0641124
  _IYEAR_1987 |  -.2079199   .1338397    -1.55   0.120    -.4703283    .0544885
  _IYEAR_1988 |   .0429867   .1333438     0.32   0.747    -.2184494    .3044228
  _IYEAR_1989 |   .3271542   .1325954     2.47   0.014     .0671854    .5871229
  _IYEAR_1990 |   .5118437    .132838     3.85   0.000     .2513994     .772288
  _IYEAR_1991 |   .4606779   .1331298     3.46   0.001     .1996616    .7216943
  _IYEAR_1992 |   .5994491   .1324228     4.53   0.000     .3398188    .8590794
  _IYEAR_1993 |   1.347439   .1344646    10.02   0.000     1.083805    1.611072
  _IYEAR_1994 |   1.209574   .1336234     9.05   0.000     .9475902    1.471559
  _IYEAR_1995 |   1.079479   .1334183     8.09   0.000     .8178966    1.341061
  _IYEAR_1996 |   .6132947   .1342689     4.57   0.000     .3500449    .8765445
  _IYEAR_1997 |   .6553674   .1335913     4.91   0.000     .3934462    .9172886
  _IYEAR_1998 |   .4122515   .1350931     3.05   0.002     .1473858    .6771172
```

_IYEAR_1999	.4777104	.135557	3.52	0.000	.2119351	.7434856
_IYEAR_2000	.5325968	.1359733	3.92	0.000	.2660052	.7991883
_IYEAR_2001	.757983	.1366778	5.55	0.000	.4900102	1.025956
_IYEAR_2002	.7661436	.1372289	5.58	0.000	.4970905	1.035197
_IYEAR_2003	.7435438	.1358109	5.47	0.000	.4772707	1.009817
_IYEAR_2004	1.457382	.1371701	10.62	0.000	1.188444	1.72632
_IYEAR_2005	.8766961	.1372242	6.39	0.000	.6076521	1.14574
_IYEAR_2006	.4550853	.1374207	3.31	0.001	.1856561	.7245145
_IYEAR_2007	.4495778	.1375598	3.27	0.001	.1798758	.7192799
_IYEAR_2008	.3536269	.1378577	2.57	0.010	.0833408	.623913
_IYEAR_2009	.3479026	.1397746	2.49	0.013	.0738583	.6219469
_IYEAR_2010	.5540552	.1411184	3.93	0.000	.2773761	.8307343
_IYEAR_2011	.8504486	.1434557	5.93	0.000	.569187	1.13171
_IYEAR_2012	.6547514	.1433359	4.57	0.000	.3737247	.935778
_IYEAR_2013	.5533982	.1444319	3.83	0.000	.2702226	.8365737
_IYEAR_2014	.5763904	.1453981	3.96	0.000	.2913206	.8614603
_IYEAR_2015	.3861963	.148313	2.60	0.009	.0954114	.6769812
_IYEAR_2016	.2852536	.1492324	1.91	0.056	-.007334	.5778411
_IYEAR_2017	.1220147	.1501934	0.81	0.417	-.172457	.4164864
_IYEAR_2018	.046766	.1507442	0.31	0.756	-.2487856	.3423175
_IYEAR_2019	0 (omitted)					
_IPRODUCTS_2	1.200405	.1761517	6.81	0.000	.8550394	1.545771
_IPRODUCTS_3	1.065138	.1761517	6.05	0.000	.7197721	1.410504
_IPRODUCTS_4	3.443907	.1761517	19.55	0.000	3.098541	3.789273
_IPRODUCTS_5	1.357998	.1761517	7.71	0.000	1.012632	1.703364
_IPRODUCTS_6	2.055347	.1761517	11.67	0.000	1.709981	2.400713
_IPRODUCTS_7	3.019203	.1761517	17.14	0.000	2.673837	3.364569
_IPRODUCTS_8	1.317859	.1761517	7.48	0.000	.9724932	1.663225
_IPRODUCTS_9	.7255022	.1761517	4.12	0.000	.3801363	1.070868
_IPRODUCTS_10	1.637558	.1761517	9.30	0.000	1.292192	1.982924
_IPRODUCTS_11	1.450984	.1761517	8.24	0.000	1.105619	1.79635
_IPRODUCTS_12	.0445316	.1761517	0.25	0.800	-.3008343	.3898975
_IPRODUCTS_13	.500331	.1761517	2.84	0.005	.1549651	.8456969
_IPRODUCTS_14	2.694373	.1761517	15.30	0.000	2.349008	3.039739
_IPRODUCTS_15	1.51351	.1761517	8.59	0.000	1.168144	1.858875
_IPRODUCTS_16	2.476138	.1761517	14.06	0.000	2.130772	2.821504

_IPRODUCTS_17	1.514004	.1761517	8.59	0.000	1.168638	1.85937
_IPRODUCTS_18	2.985257	.1761517	16.95	0.000	2.639892	3.330623
_IPRODUCTS_19	2.847595	.1761517	16.17	0.000	2.502229	3.192961
_IPRODUCTS_20	1.856137	.1761517	10.54	0.000	1.510771	2.201503
_IPRODUCTS_21	1.482091	.1761517	8.41	0.000	1.136725	1.827457
_IPRODUCTS_22	2.506255	.1761517	14.23	0.000	2.16089	2.851621
_IPRODUCTS_23	3.224908	.1761517	18.31	0.000	2.879542	3.570274
_IPRODUCTS_24	-.3528285	.1761517	-2.00	0.045	-.6981944	-.0074626
_IPRODUCTS_25	2.134712	.1761517	12.12	0.000	1.789346	2.480078
_IPRODUCTS_26	-.2983542	.1761517	-1.69	0.090	-.6437201	.0470117
_IPRODUCTS_27	.2679811	.1761517	1.52	0.128	-.0773848	.613347
_IPRODUCTS_28	-.2276575	.1761517	-1.29	0.196	-.5730234	.1177084
_IPRODUCTS_29	1.26013	.1761517	7.15	0.000	.9147641	1.605496
_IPRODUCTS_30	2.826469	.1761517	16.05	0.000	2.481103	3.171835
_IPRODUCTS_31	2.034531	.1761517	11.55	0.000	1.689165	2.379897
_IPRODUCTS_32	.8757407	.1761517	4.97	0.000	.5303748	1.221107
_IPRODUCTS_33	1.850432	.1761517	10.50	0.000	1.505066	2.195798
_IPRODUCTS_34	2.78349	.1761517	15.80	0.000	2.438124	3.128856
_IPRODUCTS_35	2.391922	.1761517	13.58	0.000	2.046556	2.737288
_IPRODUCTS_36	3.091768	.1761517	17.55	0.000	2.746402	3.437134
_IPRODUCTS_37	3.389472	.1761517	19.24	0.000	3.044106	3.734838
_IPRODUCTS_38	.0122338	.1761517	0.07	0.945	-.3331321	.3575997
_IPRODUCTS_39	3.068645	.1761517	17.42	0.000	2.723279	3.41401
_IPRODUCTS_40	1.683014	.1761517	9.55	0.000	1.337648	2.02838
_IPRODUCTS_41	2.710573	.1761517	15.39	0.000	2.365207	3.055939
_IPRODUCTS_42	2.074548	.1761517	11.78	0.000	1.729182	2.419914
_IPRODUCTS_43	2.117303	.1761517	12.02	0.000	1.771937	2.462668
_IPRODUCTS_44	2.292	.1761517	13.01	0.000	1.946634	2.637365
_IPRODUCTS_45	2.917772	.1761517	16.56	0.000	2.572406	3.263138
_IPRODUCTS_46	1.277021	.1761517	7.25	0.000	.931655	1.622387
_IPRODUCTS_47	3.143413	.1761517	17.84	0.000	2.798047	3.488779
_IPRODUCTS_48	2.015325	.1761517	11.44	0.000	1.669959	2.360691
_IPRODUCTS_49	-2.502074	.1770084	-14.14	0.000	-2.84912	-2.155029
_IPRODUCTS_50	-1.511216	.1761517	-8.58	0.000	-1.856582	-1.16585
_IPRODUCTS_51	.3939973	.1761517	2.24	0.025	.0486314	.7393632
_IPRODUCTS_52	.2737489	.1761517	1.55	0.120	-.071617	.6191148

```
_IPRODUCTS_53 |  2.662775   .1778949    14.97   0.000    2.313992    3.011559
_IPRODUCTS_54 | -1.996667   .1761517   -11.33   0.000   -2.342032   -1.651301
_IPRODUCTS_55 | -3.935215   .1761517   -22.34   0.000   -4.280581   -3.589849
_IPRODUCTS_56 |   3.74345   .1761517    21.25   0.000    3.398084    4.088816
_IPRODUCTS_57 | -1.072565   .2270532    -4.72   0.000   -1.517729   -.6274005
_IPRODUCTS_58 |  2.883145   .1761517    16.37   0.000     2.53778    3.228511
_IPRODUCTS_59 |  2.047777   .1761517    11.63   0.000    1.702411    2.393143
_IPRODUCTS_60 |  1.495143   .1761517     8.49   0.000    1.149777    1.840509
_IPRODUCTS_61 |  .5829032   .1761517     3.31   0.001    .2375373    .9282691
_IPRODUCTS_62 |  3.045667   .1761517    17.29   0.000    2.700301    3.391033
_IPRODUCTS_63 |  -.333114   .1761517    -1.89   0.059   -.6784799    .0122519
_IPRODUCTS_64 | -.9901353   .1761517    -5.62   0.000   -1.335501   -.6447694
_IPRODUCTS_65 |  1.088379   .1761517     6.18   0.000    .7430134    1.433745
_IPRODUCTS_66 |  2.158848   .1761517    12.26   0.000    1.813482    2.504214
_IPRODUCTS_67 | -.1312941   .1761517    -0.75   0.456    -.47666    .2140718
_IPRODUCTS_68 |  1.062044   .1761517     6.03   0.000    .7166782     1.40741
_IPRODUCTS_69 | -1.320225   .1761517    -7.49   0.000   -1.665591   -.9748588
_IPRODUCTS_70 | -.1884573   .1761517    -1.07   0.285   -.5338232    .1569086
_IPRODUCTS_71 | -6.509443   .2033608   -32.01   0.000   -6.908155   -6.11073
_IPRODUCTS_72 |  3.041079   .1761517    17.26   0.000    2.695713    3.386445
------------------------------------------------------------------------------

. xtgls LIMPORT LPIB LTCR_USA_PPA i.YEAR i.PRODUCTS, noconstant
note: 2019.YEAR omitted because of collinearity

Cross-sectional time-series FGLS regression

Coefficients:  generalized least squares
Panels:        homoskedastic
Correlation:   no autocorrelation

Estimated covariances     =         1        Number of obs    =     3,762
Estimated autocorrelations =        0        Number of groups =        72
Estimated coefficients    =       124        Obs per group:
                                                          min =        23
                                                          avg =     52.25
```

```
                                        max =        53
                                  Wald chi2(124)    =   19870.11
Log likelihood           = -4906.938        Prob > chi2      =     0.0000

------------------------------------------------------------------------------
   LIMPORT |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      LPIB |  -.2928796   .0129337   -22.64   0.000    -.3182292   -.2675299
LTCR_USA_PPA |  -.4488994   .0384473   -11.68   0.000    -.5242548    -.373544
             |
      YEAR |
      1968 |  -.0068714   .1490631    -0.05   0.963    -.2990297    .2852869
      1969 |  -.0324138   .1481517    -0.22   0.827    -.3227859    .2579582
      1970 |   -.147521   .1490395    -0.99   0.322    -.4396331    .1445911
      1971 |   .2643621   .1458095     1.81   0.070    -.0214193    .5501435
      1972 |   .0468739   .1439583     0.33   0.745    -.2352792     .329027
      1973 |  -.0806972   .1443398    -0.56   0.576    -.3635979    .2022035
      1974 |   .0223885   .1432095     0.16   0.876     -.258297     .303074
      1975 |  -.1564338   .1425446    -1.10   0.272     -.435816    .1229484
      1976 |  -.2504881    .140887    -1.78   0.075    -.5266215    .0256454
      1977 |  -.2659387   .1404561    -1.89   0.058    -.5412276    .0093501
      1978 |  -.2299396    .140923    -1.63   0.103    -.5061435    .0462643
      1979 |  -.6511618   .1408921    -4.62   0.000    -.9273053   -.3750183
      1980 |  -.4591053   .1401788    -3.28   0.001    -.7338506    -.18436
      1981 |  -.3674947   .1370906    -2.68   0.007    -.6361874    -.098802
      1982 |  -.4420932   .1342507    -3.29   0.001    -.7052197   -.1789667
      1983 |   -.46528   .1336563    -3.48   0.000    -.7272415   -.2033184
      1984 |  -.1795131   .1322217    -1.36   0.175     -.438663    .0796367
      1985 |  -.1382133   .1317248    -1.05   0.294    -.3963892    .1199625
      1986 |   -.199753   .1323463    -1.51   0.131    -.4591469     .059641
      1987 |  -.2079199   .1316155    -1.58   0.114    -.4658815    .0500418
      1988 |   .0429867   .1311278     0.33   0.743    -.2140191    .2999925
      1989 |   .3271542   .1303919     2.51   0.012     .0715908    .5827175
      1990 |   .5118437   .1306304     3.92   0.000     .2558128    .7678746
      1991 |   .4606779   .1309173     3.52   0.000     .2040847    .7172712
      1992 |   .5994491   .1302221     4.60   0.000     .3442184    .8546797
```

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 1993 |  1.347439   .13223   10.19  0.000    1.088272   1.606605
 1994 |  1.209574  .1314028    9.21  0.000    .9520297   1.467119
 1995 |  1.079479  .1312011    8.23  0.000    .8223293   1.336628
 1996 |  .6132947  .1320375    4.64  0.000    .3545059   .8720835
 1997 |  .6553674  .1313712    4.99  0.000    .3978846   .9128501
 1998 |  .4122515   .132848    3.10  0.002    .1518742   .6726289
 1999 |  .4777104  .1333042    3.58  0.000    .2164389   .7389818
 2000 |  .5325968  .1337136    3.98  0.000    .2705229   .7946706
 2001 |   .757983  .1344064    5.64  0.000    .4945513   1.021415
 2002 |  .7661436  .1349483    5.68  0.000    .5016498   1.030637
 2003 |  .7435438  .1335539    5.57  0.000    .4817829   1.005305
 2004 |  1.457382  .1348905   10.80  0.000    1.193001   1.721762
 2005 |  .8766961  .1349437    6.50  0.000    .6122112   1.141181
 2006 |  .4550853  .1351369    3.37  0.001    .1902218   .7199488
 2007 |  .4495778  .1352738    3.32  0.001    .1844461   .7147095
 2008 |  .3536269  .1355667    2.61  0.009    .0879211   .6193328
 2009 |  .3479026  .1374517    2.53  0.011    .0785022    .617303
 2010 |  .5540552  .1387732    3.99  0.000    .2820647   .8260457
 2011 |  .8504486  .1410717    6.03  0.000    .5739532   1.126944
 2012 |  .6547514  .1409538    4.65  0.000     .378487   .9310158
 2013 |  .5533982  .1420316    3.90  0.000    .2750213    .831775
 2014 |  .5763904  .1429817    4.03  0.000    .2961514   .8566295
 2015 |  .3861963  .1458483    2.65  0.008     .100339   .6720536
 2016 |  .2852536  .1467524    1.94  0.052   -.0023758   .5728829
 2017 |  .1220147  .1476974    0.83  0.409    -.167467   .4114963
 2018 |   .046766   .148239    0.32  0.752   -.2437772   .3373092
 2019 |          0  (omitted)
      |
PRODUCTS |
   2 |  1.200405  .1732243    6.93  0.000    .8608919   1.539919
   3 |  1.065138  .1732243    6.15  0.000    .7256246   1.404651
   4 |  3.443907  .1732243   19.88  0.000    3.104394    3.78342
   5 |  1.357998  .1732243    7.84  0.000    1.018485   1.697512
   6 |  2.055347  .1732243   11.87  0.000    1.715833    2.39486
   7 |  3.019203  .1732243   17.43  0.000     2.67969   3.358716
   8 |  1.317859  .1732243    7.61  0.000    .9783458   1.657373
```

9	.7255022	.1732243	4.19	0.000	.3859888	1.065016
10	1.637558	.1732243	9.45	0.000	1.298044	1.977071
11	1.450984	.1732243	8.38	0.000	1.111471	1.790498
12	.0445316	.1732243	0.26	0.797	-.2949818	.3840449
13	.500331	.1732243	2.89	0.004	.1608176	.8398443
14	2.694373	.1732243	15.55	0.000	2.35486	3.033887
15	1.51351	.1732243	8.74	0.000	1.173996	1.853023
16	2.476138	.1732243	14.29	0.000	2.136625	2.815651
17	1.514004	.1732243	8.74	0.000	1.17449	1.853517
18	2.985257	.1732243	17.23	0.000	2.645744	3.324771
19	2.847595	.1732243	16.44	0.000	2.508082	3.187109
20	1.856137	.1732243	10.72	0.000	1.516623	2.19565
21	1.482091	.1732243	8.56	0.000	1.142578	1.821604
22	2.506255	.1732243	14.47	0.000	2.166742	2.845769
23	3.224908	.1732243	18.62	0.000	2.885395	3.564421
24	-.3528285	.1732243	-2.04	0.042	-.6923419	-.0133152
25	2.134712	.1732243	12.32	0.000	1.795199	2.474225
26	-.2983542	.1732243	-1.72	0.085	-.6378676	.0411592
27	.2679811	.1732243	1.55	0.122	-.0715323	.6074944
28	-.2276575	.1732243	-1.31	0.189	-.5671709	.1118559
29	1.26013	.1732243	7.27	0.000	.9206167	1.599643
30	2.826469	.1732243	16.32	0.000	2.486956	3.165982
31	2.034531	.1732243	11.75	0.000	1.695018	2.374044
32	.8757407	.1732243	5.06	0.000	.5362273	1.215254
33	1.850432	.1732243	10.68	0.000	1.510918	2.189945
34	2.78349	.1732243	16.07	0.000	2.443976	3.123003
35	2.391922	.1732243	13.81	0.000	2.052409	2.731435
36	3.091768	.1732243	17.85	0.000	2.752254	3.431281
37	3.389472	.1732243	19.57	0.000	3.049959	3.728986
38	.0122338	.1732243	0.07	0.944	-.3272796	.3517472
39	3.068645	.1732243	17.71	0.000	2.729131	3.408158
40	1.683014	.1732243	9.72	0.000	1.343501	2.022528
41	2.710573	.1732243	15.65	0.000	2.371059	3.050086
42	2.074548	.1732243	11.98	0.000	1.735034	2.414061
43	2.117303	.1732243	12.22	0.000	1.777789	2.456816
44	2.292	.1732243	13.23	0.000	1.952486	2.631513

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      45 |  2.917772  .1732243    16.84  0.000    2.578259    3.257286
      46 |  1.277021  .1732243     7.37  0.000    .9375075    1.616534
      47 |  3.143413  .1732243    18.15  0.000    2.803899    3.482926
      48 |  2.015325  .1732243    11.63  0.000    1.675811    2.354838
      49 | -2.502074  .1740668   -14.37  0.000   -2.843239    -2.16091
      50 | -1.511216  .1732243    -8.72  0.000   -1.85073   -1.171703
      51 |  .3939973  .1732243     2.27  0.023    .0544839    .7335107
      52 |  .2737489  .1732243     1.58  0.114   -.0657645    .6132623
      53 |  2.662775  .1749385    15.22  0.000    2.319902    3.005649
      54 | -1.996667  .1732243   -11.53  0.000    -2.33618   -1.657153
      55 | -3.935215  .1732243   -22.72  0.000   -4.274728   -3.595702
      56 |   3.74345  .1732243    21.61  0.000    3.403937    4.082964
      57 | -1.072565  .2232799    -4.80  0.000   -1.510185   -.6349442
      58 |  2.883145  .1732243    16.64  0.000    2.543632    3.222659
      59 |  2.047777  .1732243    11.82  0.000    1.708263     2.38729
      60 |  1.495143  .1732243     8.63  0.000     1.15563    1.834657
      61 |  .5829032  .1732243     3.37  0.001    .2433898    .9224166
      62 |  3.045667  .1732243    17.58  0.000    2.706154     3.38518
      63 |  -.333114  .1732243    -1.92  0.054   -.6726274    .0063994
      64 | -.9901353  .1732243    -5.72  0.000   -1.329649   -.6506219
      65 |  1.088379  .1732243     6.28  0.000    .7488659    1.427893
      66 |  2.158848  .1732243    12.46  0.000    1.819335    2.498361
      67 | -.1312941  .1732243    -0.76  0.448   -.4708075    .2082192
      68 |  1.062044  .1732243     6.13  0.000    .7225308    1.401558
      69 | -1.320225  .1732243    -7.62  0.000   -1.659738   -.9807113
      70 | -.1884573  .1732243    -1.09  0.277   -.5279706    .1510561
      71 | -6.509443  .1999812   -32.55  0.000   -6.901398   -6.117487
      72 |  3.041079  .1732243    17.56  0.000    2.701566    3.380593
------------------------------------------------------------------------------

. xi: regress LEXPORT LDM LTCR_FR_PPA  i.YEAR i.PRODUCTS , noconstant
i.YEAR            _IYEAR_1967-1989    (naturally coded; _IYEAR_1967 omitted)
i.PRODUCTS        _IPRODUCTS_1-72     (naturally coded; _IPRODUCTS_1 omitted)
note: _IYEAR_1989 omitted because of collinearity
note: _IPRODUCTS_57 omitted because of collinearity

      Source |       SS       df       MS      Number of obs   =     1,574
-------------+------------------------------   F(93, 1481)     =    175.23
       Model |  16188.6587       93  174.071599   Prob > F        =    0.0000
    Residual |  1471.22789    1,481  .993401681   R-squared       =    0.9167
-------------+------------------------------   Adj R-squared   =    0.9115
```

```
    Total | 17659.8866    1,574  11.2197501   Root MSE      =    .9967

------------------------------------------------------------------------------
     LEXPORT |      Coef.   Std. Err.     t    P>|t|    [95% Conf. Interval]
-------------+----------------------------------------------------------------
         LDM |   .0389294   .0139554     2.79   0.005     .011555    .0663038
  LTCR_FR_PPA |  -.2590119    .128315    -2.02   0.044    -.5107104   -.0073134
  _IYEAR_1968 |   .0266579   .1694154     0.16   0.875    -.3056617    .3589775
  _IYEAR_1969 |   .0581511   .1735253     0.34   0.738    -.2822305    .3985327
  _IYEAR_1970 |   -.309181    .184706    -1.67   0.094    -.6714942    .0531323
  _IYEAR_1971 |  -.1968008   .1742561    -1.13   0.259    -.5386159    .1450144
  _IYEAR_1972 |   .1560671   .1625493     0.96   0.337    -.1627843    .4749185
  _IYEAR_1973 |    .116085   .1571894     0.74   0.460    -.1922526    .4244226
  _IYEAR_1974 |   .1079656   .1593614     0.68   0.498    -.2046324    .4205636
  _IYEAR_1975 |  -.3168855   .1526952    -2.08   0.038    -.6164073   -.0173637
  _IYEAR_1976 |  -.2708214   .1529064    -1.77   0.077    -.5707575    .0291147
  _IYEAR_1977 |  -.5901252   .1537282    -3.84   0.000    -.8916734   -.2885769
  _IYEAR_1978 |  -.8785674    .151149    -5.81   0.000    -1.175056   -.5820786
  _IYEAR_1979 |  -.9711908   .1485629    -6.54   0.000    -1.262607   -.6797748
  _IYEAR_1980 |  -.9711923   .1473171    -6.59   0.000    -1.260165   -.6822199
  _IYEAR_1981 |  -1.029003   .1484512    -6.93   0.000     -1.3202   -.7378065
  _IYEAR_1982 |   -1.05542   .1491901    -7.07   0.000    -1.348067   -.7627738
  _IYEAR_1983 |  -.9449773   .1477899    -6.39   0.000    -1.234877   -.6550774
  _IYEAR_1984 |  -1.047762    .149471    -7.01   0.000     -1.34096   -.7545647
  _IYEAR_1985 |  -.5530421   .1473451    -3.75   0.000    -.8420694   -.2640148
  _IYEAR_1986 |  -.5349706   .1517698    -3.52   0.000    -.8326772    -.237264
  _IYEAR_1987 |  -.6697565   .1589835    -4.21   0.000    -.9816133   -.3578997
  _IYEAR_1988 |  -.6308573   .1634778    -3.86   0.000     -.95153   -.3101845
  _IYEAR_1989 |          0  (omitted)
 _IPRODUCTS_2 | -4.124381   .2939094   -14.03   0.000    -4.700904   -3.547858
 _IPRODUCTS_3 | -2.416218   .2939094    -8.22   0.000    -2.992741   -1.839695
 _IPRODUCTS_4 | -1.572662   .2939094    -5.35   0.000    -2.149185   -.9961388
 _IPRODUCTS_5 |  -3.09981   .2939094   -10.55   0.000    -3.676333   -2.523287
 _IPRODUCTS_6 | -2.810331   .2939094    -9.56   0.000    -3.386854   -2.233808
 _IPRODUCTS_7 | -1.915878   .2939094    -6.52   0.000    -2.492401   -1.339355
 _IPRODUCTS_8 | -3.367631   .2939094   -11.46   0.000    -3.944154   -2.791108
 _IPRODUCTS_9 | -3.604282   .2939094   -12.26   0.000    -4.180805   -3.027759
_IPRODUCTS_10 | -2.824591   .2939094    -9.61   0.000    -3.401114   -2.248068
_IPRODUCTS_11 |  -.3834189   .2939094    -1.30   0.192    -.9599419    .1931042
_IPRODUCTS_12 | -1.909594   .2939094    -6.50   0.000    -2.486118   -1.333071
_IPRODUCTS_13 | -2.757141   .2939094    -9.38   0.000    -3.333664   -2.180618
_IPRODUCTS_14 |  -.8894061   .2939094    -3.03   0.003    -1.465929    -.312883
_IPRODUCTS_15 | -2.382793   .2939094    -8.11   0.000    -2.959316    -1.80627
_IPRODUCTS_16 |  -1.74941   .2939094    -5.95   0.000    -2.325933   -1.172887
_IPRODUCTS_17 | -1.873221   .2939094    -6.37   0.000    -2.449744   -1.296698
_IPRODUCTS_18 | -1.252347   .2939094    -4.26   0.000     -1.82887   -.6758237
_IPRODUCTS_19 | -3.362788   .2939094   -11.44   0.000    -3.939311   -2.786265
_IPRODUCTS_20 | -4.517816   .2939094   -15.37   0.000    -5.094339   -3.941293
_IPRODUCTS_21 |  -5.58598   .2939094   -19.01   0.000    -6.162503   -5.009456
_IPRODUCTS_22 | -4.028781   .2939094   -13.71   0.000    -4.605304   -3.452258
_IPRODUCTS_23 | -2.871974   .2939094    -9.77   0.000    -3.448497   -2.295451
_IPRODUCTS_24 | -7.250021   .2972785   -24.39   0.000    -7.833152   -6.666889
_IPRODUCTS_25 | -2.205038   .2939094    -7.50   0.000    -2.781561   -1.628515
_IPRODUCTS_26 | -8.304426   .3048912   -27.24   0.000     -8.90249   -7.706361
_IPRODUCTS_27 |  -4.75124   .2939094   -16.17   0.000    -5.327763   -4.174717
_IPRODUCTS_28 | -6.201504   .3092118   -20.06   0.000    -6.808044   -5.594964
_IPRODUCTS_29 | -6.216191   .2939094   -21.15   0.000    -6.792714   -5.639668
_IPRODUCTS_30 | -3.217653   .2939094   -10.95   0.000    -3.794176    -2.64113
_IPRODUCTS_31 | -4.562424   .2939094   -15.52   0.000    -5.138947   -3.985901
_IPRODUCTS_32 | -6.010467   .2939094   -20.45   0.000     -6.58699   -5.433944
_IPRODUCTS_33 | -4.848299   .2939094   -16.50   0.000    -5.424822   -4.271776
```

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_IPRODUCTS_34 | -1.935249  .2939094   -6.58  0.000   -2.511772  -1.358726
_IPRODUCTS_35 | -3.772282  .2939094  -12.83  0.000   -4.348805  -3.195759
_IPRODUCTS_36 | -4.783773  .2939094  -16.28  0.000   -5.360296   -4.20725
_IPRODUCTS_37 | -3.545256  .2939094  -12.06  0.000   -4.121779  -2.968733
_IPRODUCTS_38 | -5.073713  .2939094  -17.26  0.000   -5.650237   -4.49719
_IPRODUCTS_39 | -1.757758  .2939094   -5.98  0.000   -2.334281  -1.181235
_IPRODUCTS_40 | -.5193686  .2939094   -1.77  0.077   -1.095892   .0571544
_IPRODUCTS_41 | -1.392644  .2939094   -4.74  0.000   -1.969167  -.8161207
_IPRODUCTS_42 | -2.877323  .2939094   -9.79  0.000   -3.453846   -2.3008
_IPRODUCTS_43 | -.8285025  .2939094   -2.82  0.005   -1.405026  -.2519795
_IPRODUCTS_44 | -.9019054  .2939094   -3.07  0.002   -1.478428  -.3253823
_IPRODUCTS_45 | -1.224721  .2939094   -4.17  0.000   -1.801244  -.6481979
_IPRODUCTS_46 |  -8.90521   .300928  -29.59  0.000   -9.495501   -8.31492
_IPRODUCTS_47 | -1.907891  .2939094   -6.49  0.000   -2.484415  -1.331368
_IPRODUCTS_48 | -2.682858  .2939094   -9.13  0.000   -3.259381  -2.106335
_IPRODUCTS_49 | -4.701508  .2939094  -16.00  0.000   -5.278031  -4.124985
_IPRODUCTS_50 | -2.006913  .2939094   -6.83  0.000   -2.583436   -1.43039
_IPRODUCTS_51 | -.9208588  .2939094   -3.13  0.002   -1.497382  -.3443357
_IPRODUCTS_52 | -6.031998  .3009294  -20.04  0.000   -6.622291  -5.441704
_IPRODUCTS_53 | -6.014722  .5427086  -11.08  0.000   -7.079281  -4.950162
_IPRODUCTS_54 | -3.942849  .2939094  -13.42  0.000   -4.519372  -3.366326
_IPRODUCTS_55 | -13.47295  .4588514  -29.36  0.000   -14.37302  -12.57289
_IPRODUCTS_56 |  2.080188  .2939094    7.08  0.000    1.503665   2.656712
_IPRODUCTS_57 |        0  (omitted)
_IPRODUCTS_58 | -.8078431  .2939094   -2.75  0.006   -1.384366   -.23132
_IPRODUCTS_59 |  2.992135  .2939094   10.18  0.000    2.415612   3.568658
_IPRODUCTS_60 |  1.244116  .2939094    4.23  0.000    .667593   1.820639
_IPRODUCTS_61 |  -2.59006  .2939094   -8.81  0.000   -3.166583  -2.013537
_IPRODUCTS_62 | -1.498782  .2939094   -5.10  0.000   -2.075305  -.9222585
_IPRODUCTS_63 | -1.331618  .2939094   -4.53  0.000   -1.908141  -.7550945
_IPRODUCTS_64 | -1.091533  .2939094   -3.71  0.000   -1.668056  -.5150098
_IPRODUCTS_65 |  .0696869  .2939094    0.24  0.813   -.5068362   .64621
_IPRODUCTS_66 | -1.415982  .2939094   -4.82  0.000   -1.992505  -.8394587
_IPRODUCTS_67 | -1.834041  .2939094   -6.24  0.000   -2.410564  -1.257518
_IPRODUCTS_68 | -1.739716  .2939094   -5.92  0.000   -2.316239  -1.163193
_IPRODUCTS_69 | -2.945269  .2939094  -10.02  0.000   -3.521792  -2.368746
_IPRODUCTS_70 | -1.369676  .2939094   -4.66  0.000   -1.946199   -.793153
_IPRODUCTS_71 |  -2.75064  .3557547   -7.73  0.000   -3.448477  -2.052804
_IPRODUCTS_72 | -.9627333  .2939094   -3.28  0.001   -1.539256  -.3862102
------------------------------------------------------------------------------

. xtgls LEXPORT LDM LTCR_FR_PPA i.YEAR i.PRODUCTS, noconstant
note: 1989.YEAR omitted because of collinearity

Cross-sectional time-series FGLS regression

Coefficients:  generalized least squares
Panels:        homoskedastic
Correlation:   no autocorrelation

Estimated covariances     =         1        Number of obs    =     1,574
Estimated autocorrelations =        0        Number of groups =        71
Estimated coefficients    =        93        Obs per group:
                                               min =         4
                                               avg =   22.16901
                                               max =        23
                                  Wald chi2(93)    =  17319.51
Log likelihood            = -2180.269         Prob > chi2      =    0.0000
```

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------------------------------------------------------------------------------
   LEXPORT |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------+------------------------------------------------------------------
       LDM |   .0389294   .0135368     2.88   0.004     .0123977    .0654611
 LTCR_FR_PPA |  -.2590119   .1244665    -2.08   0.037    -.5029619    -.015062
           |
      YEAR |
      1968 |   .0266579   .1643342     0.16   0.871    -.2954312    .3487471
      1969 |   .0581511   .1683209     0.35   0.730    -.2717518     .388054
      1970 |   -.309181   .1791663    -1.73   0.084    -.6603404    .0419785
      1971 |  -.1968008   .1690298    -1.16   0.244    -.5280931    .1344915
      1972 |   .1560671   .1576741     0.99   0.322    -.1529684    .4651026
      1973 |    .116085   .1524749     0.76   0.446    -.1827604    .4149304
      1974 |   .1079656   .1545818     0.70   0.485    -.1950091    .4109403
      1975 |  -.3168855   .1481155    -2.14   0.032    -.6071865   -.0265845
      1976 |  -.2708214   .1483204    -1.83   0.068     -.561524    .0198811
      1977 |  -.5901252   .1491176    -3.96   0.000    -.8823903   -.2978601
      1978 |  -.8785674   .1466156    -5.99   0.000    -1.165929    -.591206
      1979 |  -.9711908   .1441071    -6.74   0.000    -1.253636   -.6887461
      1980 |  -.9711923   .1428987    -6.80   0.000    -1.251269    -.691116
      1981 |  -1.029003   .1439988    -7.15   0.000    -1.311236   -.7467711
      1982 |   -1.05542   .1447156    -7.29   0.000    -1.339058   -.7717829
      1983 |  -.9449773   .1433574    -6.59   0.000    -1.225953    -.664002
      1984 |  -1.047762    .144988    -7.23   0.000    -1.331934   -.7635908
      1985 |  -.5530421   .1429259    -3.87   0.000    -.8331716   -.2729125
      1986 |  -.5349706   .1472179    -3.63   0.000    -.8235123   -.2464289
      1987 |  -.6697565   .1542152    -4.34   0.000    -.9720128   -.3675002
      1988 |  -.6308573   .1585748    -3.98   0.000    -.9416581   -.3200565
      1989 |           0  (omitted)
           |
  PRODUCTS |
         2 |  -4.124381   .2850944   -14.47   0.000    -4.683156   -3.565606
         3 |  -2.416218   .2850944    -8.48   0.000    -2.974993   -1.857443
         4 |  -1.572662   .2850944    -5.52   0.000    -2.131437   -1.013887
         5 |   -3.09981   .2850944   -10.87   0.000    -3.658584   -2.541035
         6 |  -2.810331   .2850944    -9.86   0.000    -3.369106   -2.251556
         7 |  -1.915878   .2850944    -6.72   0.000    -2.474653   -1.357103
         8 |  -3.367631   .2850944   -11.81   0.000    -3.926406   -2.808857
         9 |  -3.604282   .2850944   -12.64   0.000    -4.163057   -3.045507
        10 |  -2.824591   .2850944    -9.91   0.000    -3.383366   -2.265816
        11 |  -.3834189   .2850944    -1.34   0.179    -.9421936    .1753559
        12 |  -1.909594   .2850944    -6.70   0.000    -2.468369    -1.35082
        13 |  -2.757141   .2850944    -9.67   0.000    -3.315915   -2.198366
        14 |  -.8894061   .2850944    -3.12   0.002    -1.448181   -.3306313
        15 |  -2.382793   .2850944    -8.36   0.000    -2.941568   -1.824018
        16 |   -1.74941   .2850944    -6.14   0.000    -2.308185   -1.190635
        17 |  -1.873221   .2850944    -6.57   0.000    -2.431996   -1.314446
        18 |  -1.252347   .2850944    -4.39   0.000    -1.811122    -.693572
        19 |  -3.362788   .2850944   -11.80   0.000    -3.921563   -2.804013
        20 |  -4.517816   .2850944   -15.85   0.000    -5.076591   -3.959042
        21 |   -5.58598   .2850944   -19.59   0.000    -6.144754   -5.027205
        22 |  -4.028781   .2850944   -14.13   0.000    -4.587556   -3.470006
        23 |  -2.871974   .2850944   -10.07   0.000    -3.430749    -2.3132
        24 |  -7.250021   .2883625   -25.14   0.000    -7.815201   -6.684841
        25 |  -2.205038   .2850944    -7.73   0.000    -2.763813   -1.646263
        26 |  -8.304426   .2957468   -28.08   0.000    -8.884079   -7.724773
        27 |   -4.75124   .2850944   -16.67   0.000    -5.310015   -4.192465
        28 |  -6.201504   .2999378   -20.68   0.000    -6.789371   -5.613637
        29 |  -6.216191   .2850944   -21.80   0.000    -6.774966   -5.657416
        30 |  -3.217653   .2850944   -11.29   0.000    -3.776428   -2.658878
        31 |  -4.562424   .2850944   -16.00   0.000    -5.121199   -4.003649
```

32	-6.010467	.2850944	-21.08	0.000	-6.569241	-5.451692
33	-4.848299	.2850944	-17.01	0.000	-5.407074	-4.289524
34	-1.935249	.2850944	-6.79	0.000	-2.494024	-1.376474
35	-3.772282	.2850944	-13.23	0.000	-4.331057	-3.213507
36	-4.783773	.2850944	-16.78	0.000	-5.342548	-4.224998
37	-3.545256	.2850944	-12.44	0.000	-4.104031	-2.986481
38	-5.073713	.2850944	-17.80	0.000	-5.632488	-4.514939
39	-1.757758	.2850944	-6.17	0.000	-2.316533	-1.198984
40	-.5193686	.2850944	-1.82	0.068	-1.078143	.0394061
41	-1.392644	.2850944	-4.88	0.000	-1.951419	-.833869
42	-2.877323	.2850944	-10.09	0.000	-3.436098	-2.318548
43	-.8285025	.2850944	-2.91	0.004	-1.387277	-.2697278
44	-.9019054	.2850944	-3.16	0.002	-1.46068	-.3431307
45	-1.224721	.2850944	-4.30	0.000	-1.783496	-.6659462
46	-8.90521	.2919024	-30.51	0.000	-9.477328	-8.333092
47	-1.907891	.2850944	-6.69	0.000	-2.466666	-1.349117
48	-2.682858	.2850944	-9.41	0.000	-3.241632	-2.124083
49	-4.701508	.2850944	-16.49	0.000	-5.260282	-4.142733
50	-2.006913	.2850944	-7.04	0.000	-2.565688	-1.448139
51	-.9208588	.2850944	-3.23	0.001	-1.479634	-.362084
52	-6.031998	.2919039	-20.66	0.000	-6.604119	-5.459876
53	-6.014722	.5264315	-11.43	0.000	-7.046508	-4.982935
54	-3.942849	.2850944	-13.83	0.000	-4.501624	-3.384074
55	-13.47295	.4450894	-30.27	0.000	-14.34531	-12.6006
56	2.080188	.2850944	7.30	0.000	1.521414	2.638963
57	0	(omitted)				
58	-.8078431	.2850944	-2.83	0.005	-1.366618	-.2490683
59	2.992135	.2850944	10.50	0.000	2.433361	3.55091
60	1.244116	.2850944	4.36	0.000	.6853413	1.802891
61	-2.59006	.2850944	-9.08	0.000	-3.148834	-2.031285
62	-1.498782	.2850944	-5.26	0.000	-2.057556	-.9400068
63	-1.331618	.2850944	-4.67	0.000	-1.890392	-.7728428
64	-1.091533	.2850944	-3.83	0.000	-1.650308	-.5327581
65	.0696869	.2850944	0.24	0.807	-.4890879	.6284617
66	-1.415982	.2850944	-4.97	0.000	-1.974757	-.857207
67	-1.834041	.2850944	-6.43	0.000	-2.392816	-1.275267
68	-1.739716	.2850944	-6.10	0.000	-2.298491	-1.180941
69	-2.945269	.2850944	-10.33	0.000	-3.504044	-2.386494
70	-1.369676	.2850944	-4.80	0.000	-1.928451	-.8109013
71	-2.75064	.3450848	-7.97	0.000	-3.426994	-2.074287
72	-.9627333	.2850944	-3.38	0.001	-1.521508	-.4039585

Nigeria :

. xi: regress LEXPORT LDM LTCR_FR_PPA i.YEAR i.PRODUCTS , noconstant

i.YEAR _IYEAR_1967-2019 (naturally coded; _IYEAR_1967 omitted)

i.PRODUCTS _IPRODUCTS_1-72 (naturally coded; _IPRODUCTS_1 omitted)

note: _IYEAR_2018 omitted because of collinearity

Source SS df MS Number of obs = 3,665

F(124, 3541) = 491.63

Model 149455.415 124 1205.2856 Prob > F = 0.0000

Residual 8681.12668 3,541 2.45160313 R-squared = 0.9451

Adj R-squared = 0.9432

Total 158136.542 3,665 43.1477603 Root MSE = 1.5658

LEXPORT Coef. Std. Err. t P>t [95% Conf. Interval]

LDM -.3793587 .0151925 -24.97 0.000 -.4091456 -.3495718

LTCR_FR_PPA -.2341833 .0402228 -5.82 0.000 -.3130454 -.1553212

_IYEAR_1968 -.2546627 .2722751 -0.94 0.350 -.7884945 .2791692

_IYEAR_1969 -.6610935 .2716708 -2.43 0.015 -1.19374 -.1284465

_IYEAR_1970 -1.835902 .2656689 -6.91 0.000 -2.356781 -1.315022

_IYEAR_1971 -.7592201 .268581 -2.83 0.005 -1.285809 -.2326311

_IYEAR_1972 -.8161669 .26661 -3.06 0.002 -1.338892 -.2934421

_IYEAR_1973 -1.023228 .2657217 -3.85 0.000 -1.544211 -.5022453

_IYEAR_1974 -1.459629 .2648669 -5.51 0.000 -1.978936 -.9403216

_IYEAR_1975 -1.971942 .2651 -7.44 0.000 -2.491706 -1.452178

_IYEAR_1976 -1.937579 .2664122 -7.27 0.000 -2.459916 -1.415242

_IYEAR_1977 -1.74939 .2629504 -6.65 0.000 -2.264939 -1.23384

_IYEAR_1978 -1.748733 .2627734 -6.65 0.000 -2.263935 -1.23353

_IYEAR_1979 -1.973172 .2642304 -7.47 0.000 -2.491231 -1.455113

_IYEAR_1980 -2.410679 .2647185 -9.11 0.000 -2.929695 -1.891662

_IYEAR_1981 -4.675455 .2747884 -17.01 0.000 -5.214215 -4.136696

_IYEAR_1982 -4.5021 .2750492 -16.37 0.000 -5.041371 -3.962829

_IYEAR_1983 -3.913012 .2817373 -13.89 0.000 -4.465396 -3.360629

_IYEAR_1984 -3.702256 .2834776 -13.06 0.000 -4.258052 -3.14646

_IYEAR_1985 -3.534311 .2788359 -12.68 0.000 -4.081006 -2.987616

_IYEAR_1986 -2.54765 .2589659 -9.84 0.000 -3.055388 -2.039913

_IYEAR_1987 -1.767893 .2421267 -7.30 0.000 -2.242615 -1.293171

_IYEAR_1988 -1.297592 .2413422 -5.38 0.000 -1.770776 -.8244087

_IYEAR_1989 -.7707571 .2380752 -3.24 0.001 -1.237535 -.3039788

_IYEAR_1990 -.797479 .2351423 -3.39 0.001 -1.258507 -.3364508

_IYEAR_1991 -.521516 .2328294 -2.24 0.025 -.9780093 -.0650228

_IYEAR_1992 -.0633534 .2308165 -0.27 0.784 -.5159001 .3891934

_IYEAR_1993 .9443774 .2294403 4.12 0.000 .4945288 1.394226

_IYEAR_1994 .6080846 .2295928 2.65 0.008 .1579371 1.058232

_IYEAR_1995	.3580639	.2284966	1.57	0.117	-.0899343	.8060621
_IYEAR_1996	-.0055344	.2286543	-0.02	0.981	-.4538419	.4427731
_IYEAR_1997	-.3351032	.2312511	-1.45	0.147	-.7885021	.1182956
_IYEAR_1998	-.1590554	.231398	-0.69	0.492	-.6127422	.2946314
_IYEAR_1999	-.0484679	.2349667	-0.21	0.837	-.5091517	.4122159
_IYEAR_2000	-.4659359	.2327088	-2.00	0.045	-.9221927	-.009679
_IYEAR_2001	-.6625664	.2344975	-2.83	0.005	-1.12233	-.2028025
_IYEAR_2002	-.4154543	.2368323	-1.75	0.079	-.8797959	.0488873
_IYEAR_2003	-.1026686	.2401911	-0.43	0.669	-.5735955	.3682584
_IYEAR_2004	-.4117693	.2425018	-1.70	0.090	-.8872267	.0636881
_IYEAR_2005	-.6441008	.2430524	-2.65	0.008	-1.120638	-.167564
_IYEAR_2006	-1.140341	.2434975	-4.68	0.000	-1.61775	-.6629313
_IYEAR_2007	-.4970596	.2448776	-2.03	0.042	-.9771749	-.0169442
_IYEAR_2008	-.4115455	.2450253	-1.68	0.093	-.8919505	.0688594
_IYEAR_2009	-.0393437	.2490647	-0.16	0.874	-.5276685	.4489812
_IYEAR_2010	-.1362498	.249443	-0.55	0.585	-.6253162	.3528167
_IYEAR_2011	-.1061762	.2510637	-0.42	0.672	-.5984203	.3860678
_IYEAR_2012	-.3841574	.25092	-1.53	0.126	-.8761196	.1078048
_IYEAR_2013	-.1586741	.2513948	-0.63	0.528	-.6515674	.3342192
_IYEAR_2014	-.973802	.2534375	-3.84	0.000	-1.4707	-.4769037
_IYEAR_2015	-.594338	.2550664	-2.33	0.020	-1.09443	-.0942462
_IYEAR_2016	-.5557182	.2573263	-2.16	0.031	-1.060241	-.0511954
_IYEAR_2017	-.1093719	.2618971	-0.42	0.676	-.6228563	.4041126
_IYEAR_2018	0	(omitted)				
_IYEAR_2019	-.2445824	.2620852	-0.93	0.351	-.7584356	.2692709
_IPRODUCTS_2	-.6755508	.3103975	-2.18	0.030	-1.284127	-.0669749
_IPRODUCTS_3	.9748024	.3103975	3.14	0.002	.3662265	1.583378
_IPRODUCTS_4	1.755615	.3118528	5.63	0.000	1.144186	2.367044
_IPRODUCTS_5	.4695562	.3103975	1.51	0.130	-.1390197	1.078132
_IPRODUCTS_6	4.987672	.3103975	16.07	0.000	4.379096	5.596248
_IPRODUCTS_7	3.498226	.3103975	11.27	0.000	2.88965	4.106801
_IPRODUCTS_8	.252081	.3103975	0.81	0.417	-.3564948	.8606569
_IPRODUCTS_9	-.5106694	.3103975	-1.65	0.100	-1.119245	.0979065
_IPRODUCTS_10	1.321417	.3103975	4.26	0.000	.7128414	1.929993
_IPRODUCTS_11	6.168916	.3103975	19.87	0.000	5.560341	6.777492
_IPRODUCTS_12	1.87994	.3103975	6.06	0.000	1.271364	2.488516

_IPRODUCTS_13	.3187478	.3103975	1.03	0.305	-.2898281	.9273236
_IPRODUCTS_14	.8347462	.3103975	2.69	0.007	.2261703	1.443322
_IPRODUCTS_15	1.013217	.3103975	3.26	0.001	.4046412	1.621793
_IPRODUCTS_16	2.042279	.3103975	6.58	0.000	1.433703	2.650855
_IPRODUCTS_17	1.316743	.3103975	4.24	0.000	.7081671	1.925319
_IPRODUCTS_18	2.906946	.3103975	9.37	0.000	2.29837	3.515522
_IPRODUCTS_19	3.220738	.3103975	10.38	0.000	2.612162	3.829313
_IPRODUCTS_20	-1.536797	.3198797	-4.80	0.000	-2.163964	-.9096296
_IPRODUCTS_21	.586389	.3103975	1.89	0.059	-.0221869	1.194965
_IPRODUCTS_22	2.980121	.3103975	9.60	0.000	2.371545	3.588696
_IPRODUCTS_23	2.446721	.3103975	7.88	0.000	1.838145	3.055297
_IPRODUCTS_24	-2.630572	.3415459	-7.70	0.000	-3.300219	-1.960926
_IPRODUCTS_25	2.963666	.3103975	9.55	0.000	2.35509	3.572242
_IPRODUCTS_26	-1.171418	.3133081	-3.74	0.000	-1.785701	-.5571358
_IPRODUCTS_27	.0361677	.3103975	0.12	0.907	-.5724082	.6447435
_IPRODUCTS_28	-1.0506	.3164303	-3.32	0.001	-1.671004	-.4301956
_IPRODUCTS_29	.1752281	.3118532	0.56	0.574	-.4362019	.7866581
_IPRODUCTS_30	3.008852	.3103975	9.69	0.000	2.400277	3.617428
_IPRODUCTS_31	1.878083	.3103975	6.05	0.000	1.269507	2.486659
_IPRODUCTS_32	-.8335467	.3149157	-2.65	0.008	-1.450981	-.2161123
_IPRODUCTS_33	1.832834	.3103975	5.90	0.000	1.224258	2.44141
_IPRODUCTS_34	2.028558	.3103975	6.54	0.000	1.419982	2.637134
_IPRODUCTS_35	.6962591	.3103975	2.24	0.025	.0876833	1.304835
_IPRODUCTS_36	1.424677	.3103975	4.59	0.000	.8161016	2.033253
_IPRODUCTS_37	1.045848	.3103975	3.37	0.001	.4372726	1.654424
_IPRODUCTS_38	2.845057	.3133579	9.08	0.000	2.230676	3.459437
_IPRODUCTS_39	3.739865	.3103975	12.05	0.000	3.131289	4.348441
_IPRODUCTS_40	1.792628	.3103975	5.78	0.000	1.184052	2.401203
_IPRODUCTS_41	2.053274	.3103975	6.61	0.000	1.444698	2.66185
_IPRODUCTS_42	2.871645	.3103975	9.25	0.000	2.263069	3.480221
_IPRODUCTS_43	.4273202	.3103975	1.38	0.169	-.1812557	1.035896
_IPRODUCTS_44	3.246847	.3103975	10.46	0.000	2.638271	3.855422
_IPRODUCTS_45	1.195366	.3103975	3.85	0.000	.58679	1.803942
_IPRODUCTS_46	1.540125	.3181987	4.84	0.000	.9162537	2.163996
_IPRODUCTS_47	2.47344	.3103975	7.97	0.000	1.864864	3.082016
_IPRODUCTS_48	1.272409	.3103975	4.10	0.000	.6638335	1.880985

_IPRODUCTS_49	1.620035	.3133573	5.17	0.000	1.005656	2.234414
_IPRODUCTS_50	5.445729	.3103975	17.54	0.000	4.837153	6.054305
_IPRODUCTS_51	1.440514	.3103975	4.64	0.000	.8319383	2.04909
_IPRODUCTS_52	2.76613	.3235956	8.55	0.000	2.131677	3.400583
_IPRODUCTS_53	11.50449	.3103975	37.06	0.000	10.89592	12.11307
_IPRODUCTS_54	5.141281	.3118055	16.49	0.000	4.529944	5.752617
_IPRODUCTS_55	-1.478519	.3637492	-4.06	0.000	-2.191698	-.7653396
_IPRODUCTS_56	7.622719	.3103975	24.56	0.000	7.014143	8.231295
_IPRODUCTS_57	-.9820961	.6001257	-1.64	0.102	-2.158723	.1945307
_IPRODUCTS_58	-.5340243	.3103975	-1.72	0.085	-1.1426	.0745515
_IPRODUCTS_59	7.981291	.3103975	25.71	0.000	7.372716	8.589867
_IPRODUCTS_60	6.910106	.3103975	22.26	0.000	6.30153	7.518682
_IPRODUCTS_61	1.257468	.3103975	4.05	0.000	.6488926	1.866044
_IPRODUCTS_62	4.202262	.3103975	13.54	0.000	3.593686	4.810838
_IPRODUCTS_63	4.969446	.3103975	16.01	0.000	4.36087	5.578022
_IPRODUCTS_64	.4223795	.3103975	1.36	0.174	-.1861963	1.030955
_IPRODUCTS_65	1.997137	.3103975	6.43	0.000	1.388561	2.605713
_IPRODUCTS_66	5.646913	.3103975	18.19	0.000	5.038338	6.255489
_IPRODUCTS_67	4.914943	.3103975	15.83	0.000	4.306368	5.523519
_IPRODUCTS_68	1.385896	.3103975	4.46	0.000	.7773198	1.994471
_IPRODUCTS_69	-.944001	.3362787	-2.81	0.005	-1.603321	-.2846814
_IPRODUCTS_70	3.478889	.3103975	11.21	0.000	2.870313	4.087465
_IPRODUCTS_71	.6358429	.3362805	1.89	0.059	-.0234802	1.295166
_IPRODUCTS_72	7.162757	.3103975	23.08	0.000	6.554181	7.771333

. xtgls LEXPORT LDM LTCR_FR_PPA i.YEAR i.PRODUCTS, noconstant

note: 2019.YEAR omitted because of collinearity

Cross-sectional time-series FGLS regression

Coefficients: generalized least squares

Panels: homoskedastic

Correlation: no autocorrelation

Estimated covariances = 1 Number of obs = 3,665

Estimated autocorrelations = 0 Number of groups = 72

Estimated coefficients = 124 Obs per group:

min = 8

avg = 50.90278

max = 53

Wald chi2(124) = 63097.12

Log likelihood = -6780.617 Prob > chi2 = 0.0000

LEXPORT	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
LDM	-.3834799	.0149173	-25.71	0.000	-.4127173	-.3542425
LTCR_FR_PPA	-.2695337	.0398062	-6.77	0.000	-.3475524	-.191515
YEAR						
1968	-.2564148	.2676366	-0.96	0.338	-.7809729	.2681433
1969	-.6591735	.2670278	-2.47	0.014	-1.182538	-.1358088
1970	-1.830344	.2611125	-7.01	0.000	-2.342115	-1.318572
1971	-.7505835	.263965	-2.84	0.004	-1.267945	-.2332216
1972	-.8072192	.2620242	-3.08	0.002	-1.320777	-.2936612
1973	-1.009908	.2611348	-3.87	0.000	-1.521723	-.4980937
1974	-1.448169	.2603034	-5.56	0.000	-1.958354	-.9379834
1975	-1.958758	.2605203	-7.52	0.000	-2.469368	-1.448147
1976	-1.925992	.2618163	-7.36	0.000	-2.439142	-1.412841
1977	-1.736502	.2584108	-6.72	0.000	-2.242978	-1.230027
1978	-1.736741	.2582399	-6.73	0.000	-2.242882	-1.2306
1979	-1.959639	.2596629	-7.55	0.000	-2.468569	-1.450709
1980	-2.399441	.2601519	-9.22	0.000	-2.909329	-1.889553
1981	-4.67407	.2700937	-17.31	0.000	-5.203444	-4.144696
1982	-4.507712	.2703818	-16.67	0.000	-5.037651	-3.977774
1983	-3.925708	.2769872	-14.17	0.000	-4.468593	-3.382823
1984	-3.718561	.2787196	-13.34	0.000	-4.264841	-3.172281
1985	-3.544581	.2741289	-12.93	0.000	-4.081864	-3.007298
1986	-2.525528	.2544538	-9.93	0.000	-3.024248	-2.026808
1987	-1.711127	.2378244	-7.19	0.000	-2.177255	-1.245
1988	-1.235166	.2370474	-5.21	0.000	-1.69977	-.7705617
1989	-.694328	.2338317	-2.97	0.003	-1.15263	-.2360264

1990	-.7093443	.2309762	-3.07	0.002	-1.162049	-.2566392
1991	-.4274396	.2286623	-1.87	0.062	-.8756095	.0207303
1992	.0537624	.2267625	0.24	0.813	-.3906839	.4982087
1993	1.067268	.2254009	4.73	0.000	.6254903	1.509046
1994	.730197	.2255468	3.24	0.001	.2881333	1.172261
1995	.483137	.2245145	2.15	0.031	.0430966	.9231774
1996	.1197576	.2246687	0.53	0.594	-.3205849	.5601002
1997	-.2141064	.2271966	-0.94	0.346	-.6594036	.2311908
1998	-.0386836	.2273728	-0.17	0.865	-.4843262	.4069589
1999	.1204555	.2311043	0.52	0.602	-.3325007	.5734117
2000	-.2981006	.2288849	-1.30	0.193	-.7467068	.1505056
2001	-.4912668	.2307054	-2.13	0.033	-.943441	-.0390926
2002	-.2346339	.2330711	-1.01	0.314	-.6914449	.2221771
2003	.0892991	.2363646	0.38	0.706	-.373967	.5525653
2004	-.2131077	.2386865	-0.89	0.372	-.6809247	.2547093
2005	-.4440586	.2392356	-1.86	0.063	-.9129517	.0248346
2006	-.9392539	.2396778	-3.92	0.000	-1.409014	-.469494
2007	-.2920524	.2411629	-1.21	0.226	-.7647231	.1806183
2008	-.2038044	.2412877	-0.84	0.398	-.6767196	.2691108
2009	.1783072	.2453477	0.73	0.467	-.3025654	.6591797
2010	.0821823	.2457225	0.33	0.738	-.3994248	.5637895
2011	.1160247	.2472876	0.47	0.639	-.3686501	.6006996
2012	-.162481	.2471982	-0.66	0.511	-.6469805	.3220185
2013	.0663458	.247694	0.27	0.789	-.4191256	.5518172
2014	-.74653	.249659	-2.99	0.003	-1.235853	-.2572073
2015	-.3659171	.2512662	-1.46	0.145	-.8583898	.1265556
2016	-.318471	.2536314	-1.26	0.209	-.8155795	.1786374
2017	.1348615	.2581246	0.52	0.601	-.3710534	.6407763
2018	.2460205	.2591283	0.95	0.342	-.2618615	.7539026
2019	0	(omitted)				

PRODUCTS

2	-.6755508	.3051014	-2.21	0.027	-1.273538	-.0775631
3	.9748024	.3051014	3.20	0.001	.3768147	1.57279
4	1.755615	.3065319	5.73	0.000	1.154824	2.356406
5	.4695562	.3051014	1.54	0.124	-.1284315	1.067544

6	4.987672	.3051014	16.35	0.000	4.389684	5.585659
7	3.498226	.3051014	11.47	0.000	2.900238	4.096213
8	.252081	.3051014	0.83	0.409	-.3459067	.8500687
9	-.5106694	.3051014	-1.67	0.094	-1.108657	.0873183
10	1.321417	.3051014	4.33	0.000	.7234296	1.919405
11	6.168916	.3051014	20.22	0.000	5.570929	6.766904
12	1.87994	.3051014	6.16	0.000	1.281953	2.477928
13	.3187478	.3051014	1.04	0.296	-.2792399	.9167354
14	.8347462	.3051014	2.74	0.006	.2367585	1.432734
15	1.013217	.3051014	3.32	0.001	.4152294	1.611205
16	2.042279	.3051014	6.69	0.000	1.444292	2.640267
17	1.316743	.3051014	4.32	0.000	.7187553	1.914731
18	2.906946	.3051014	9.53	0.000	2.308958	3.504933
19	3.220738	.3051014	10.56	0.000	2.62275	3.818725
20	-1.536797	.3144218	-4.89	0.000	-2.153052	-.9205413
21	.586389	.3051014	1.92	0.055	-.0115987	1.184377
22	2.980121	.3051014	9.77	0.000	2.382133	3.578108
23	2.446721	.3051014	8.02	0.000	1.848734	3.044709
24	-2.630572	.3357183	-7.84	0.000	-3.288568	-1.972577
25	2.963666	.3051014	9.71	0.000	2.365678	3.561654
26	-1.171418	.3079624	-3.80	0.000	-1.775014	-.5678233
27	.0361677	.3051014	0.12	0.906	-.56182	.6341553
28	-1.0506	.3110313	-3.38	0.001	-1.66021	-.4409896
29	.1752281	.3065322	0.57	0.568	-.425564	.7760202
30	3.008852	.3051014	9.86	0.000	2.410865	3.60684
31	1.878083	.3051014	6.16	0.000	1.280095	2.476071
32	-.8335467	.3095425	-2.69	0.007	-1.440239	-.2268546
33	1.832834	.3051014	6.01	0.000	1.234846	2.430821
34	2.028558	.3051014	6.65	0.000	1.43057	2.626545
35	.6962591	.3051014	2.28	0.022	.0982715	1.294247
36	1.424677	.3051014	4.67	0.000	.8266898	2.022665
37	1.045848	.3051014	3.43	0.001	.4478608	1.643836
38	2.845057	.3080113	9.24	0.000	2.241365	3.448748
39	3.739865	.3051014	12.26	0.000	3.141877	4.337852
40	1.792628	.3051014	5.88	0.000	1.19464	2.390615
41	2.053274	.3051014	6.73	0.000	1.455286	2.651262

42	2.871645	.3051014	9.41	0.000	2.273657	3.469633
43	.4273202	.3051014	1.40	0.161	-.1706675	1.025308
44	3.246847	.3051014	10.64	0.000	2.648859	3.844834
45	1.195366	.3051014	3.92	0.000	.5973782	1.793354
46	1.540125	.3127695	4.92	0.000	.927108	2.153142
47	2.47344	.3051014	8.11	0.000	1.875452	3.071427
48	1.272409	.3051014	4.17	0.000	.6744217	1.870397
49	1.620035	.3080107	5.26	0.000	1.016345	2.223725
50	5.445729	.3051014	17.85	0.000	4.847741	6.043716
51	1.440514	.3051014	4.72	0.000	.8425265	2.038502
52	2.76613	.3180743	8.70	0.000	2.142716	3.389544
53	11.50449	.3051014	37.71	0.000	10.9065	12.10248
54	5.141281	.3064854	16.77	0.000	4.540581	5.741981
55	-1.478519	.3575428	-4.14	0.000	-2.17929	-.7777477
56	7.622719	.3051014	24.98	0.000	7.024731	8.220707
57	-.9820961	.5898861	-1.66	0.096	-2.138252	.1740594
58	-.5340243	.3051014	-1.75	0.080	-1.132012	.0639633
59	7.981291	.3051014	26.16	0.000	7.383304	8.579279
60	6.910106	.3051014	22.65	0.000	6.312119	7.508094
61	1.257468	.3051014	4.12	0.000	.6594808	1.855456
62	4.202262	.3051014	13.77	0.000	3.604274	4.800249
63	4.969446	.3051014	16.29	0.000	4.371458	5.567434
64	.4223795	.3051014	1.38	0.166	-.1756081	1.020367
65	1.997137	.3051014	6.55	0.000	1.39915	2.595125
66	5.646913	.3051014	18.51	0.000	5.048926	6.244901
67	4.914943	.3051014	16.11	0.000	4.316956	5.512931
68	1.385896	.3051014	4.54	0.000	.787908	1.983883
69	-.944001	.330541	-2.86	0.004	-1.59185	-.2961525
70	3.478889	.3051014	11.40	0.000	2.880901	4.076876
71	.6358429	.3305428	1.92	0.054	-.0120091	1.283695
72	7.162757	.3051014	23.48	0.000	6.564769	7.760745

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. xi: regress LIMPORT LPIB LTCR_USA_PPA i.YEAR i.PRODUCTS , noconstant

i.YEAR _IYEAR_1967-2019 (naturally coded; _IYEAR_1967 omitted)

i.PRODUCTS _IPRODUCTS_1-72 (naturally coded; _IPRODUCTS_1 omitted)

note: _IYEAR_2019 omitted because of collinearity

Source SS df MS Number of obs = 3,742

F(124, 3618) = 410.90

Model 35485.4287 124 286.172812 Prob > F = 0.0000

Residual 2519.78389 3,618 .696457681 R-squared = 0.9337

Adj R-squared = 0.9314

Total 38005.2126 3,742 10.1563903 Root MSE = .83454

LIMPORT Coef. Std. Err. t P>t [95% Conf. Interval]

LPIB -.1215125 .0103383 -11.75 0.000 -.141782 -.101243

LTCR_USA_PPA -.2979356 .0211618 -14.08 0.000 -.3394259 -.2564453

_IYEAR_1968 -.1619586 .1427966 -1.13 0.257 -.4419285 .1180113

_IYEAR_1969 -.19683 .1421929 -1.38 0.166 -.4756162 .0819563

_IYEAR_1970 -.6107129 .1397589 -4.37 0.000 -.884727 -.3366989

_IYEAR_1971 .4095402 .1380933 2.97 0.003 .1387918 .6802885

_IYEAR_1972 -.0574355 .1401968 -0.41 0.682 -.3323081 .2174371

_IYEAR_1973 -.2697447 .1409046 -1.91 0.056 -.5460051 .0065156

_IYEAR_1974 -.586462 .1399447 -4.19 0.000 -.8608404 -.3120836

_IYEAR_1975 -.1931367 .140584 -1.37 0.170 -.4687686 .0824951

_IYEAR_1976 -.4304983 .139781 -3.08 0.002 -.7045557 -.1564409

_IYEAR_1977 -.1385741 .1395123 -0.99 0.321 -.4121047 .1349565

_IYEAR_1978 -.0678067 .140691 -0.48 0.630 -.3436483 .2080348

_IYEAR_1979 -.6367755 .1405799 -4.53 0.000 -.9123992 -.3611519

_IYEAR_1980 -.6736308 .1408335 -4.78 0.000 -.9497517 -.3975099

_IYEAR_1981 -2.614151 .1418473 -18.43 0.000 -2.892259 -2.336042

_IYEAR_1982 -2.555046 .1412773 -18.09 0.000 -2.832037 -2.278055

_IYEAR_1983 -2.429417 .1414446 -17.18 0.000 -2.706736 -2.152098

_IYEAR_1984 -2.324816 .1416892 -16.41 0.000 -2.602615 -2.047017

_IYEAR_1985 -2.107794 .1399716 -15.06 0.000 -2.382225 -1.833363

_IYEAR_1986 -1.554742 .1335575 -11.64 0.000 -1.816598 -1.292887

_IYEAR_1987 -1.201638 .1275972 -9.42 0.000 -1.451808 -.9514687

_IYEAR_1988	-.9560548	.126274	-7.57	0.000	-1.20363	-.7084794
_IYEAR_1989	-.5396203	.1243318	-4.34	0.000	-.7833877	-.2958529
_IYEAR_1990	-.6350067	.1238813	-5.13	0.000	-.8778908	-.3921226
_IYEAR_1991	-.2435613	.1225405	-1.99	0.047	-.4838167	-.0033059
_IYEAR_1992	.2684754	.1213832	2.21	0.027	.0304891	.5064617
_IYEAR_1993	1.356043	.1217253	11.14	0.000	1.117386	1.5947
_IYEAR_1994	.5186253	.1211311	4.28	0.000	.2811332	.7561173
_IYEAR_1995	.0243012	.1211546	0.20	0.841	-.2132368	.2618393
_IYEAR_1996	-.234841	.1218368	-1.93	0.054	-.4737167	.0040347
_IYEAR_1997	-.3029635	.1219533	-2.48	0.013	-.5420676	-.0638594
_IYEAR_1998	-.1135147	.1226224	-0.93	0.355	-.3539305	.1269011
_IYEAR_1999	.1722351	.1242538	1.39	0.166	-.0713794	.4158496
_IYEAR_2000	.1151234	.1242941	0.93	0.354	-.1285701	.3588169
_IYEAR_2001	.2950637	.1245406	2.37	0.018	.0508869	.5392405
_IYEAR_2002	.212195	.1266016	1.68	0.094	-.0360226	.4604126
_IYEAR_2003	.3229581	.1274555	2.53	0.011	.0730664	.5728498
_IYEAR_2004	.0906362	.1282	0.71	0.480	-.1607153	.3419877
_IYEAR_2005	-.2260137	.1284878	-1.76	0.079	-.4779295	.0259021
_IYEAR_2006	-.5655458	.1287357	-4.39	0.000	-.8179476	-.313144
_IYEAR_2007	-.6345235	.1296312	-4.89	0.000	-.8886811	-.380366
_IYEAR_2008	-.7369331	.128786	-5.72	0.000	-.9894334	-.4844328
_IYEAR_2009	-.3390797	.1318194	-2.57	0.010	-.5975274	-.0806321
_IYEAR_2010	-.448692	.1319746	-3.40	0.001	-.707444	-.18994
_IYEAR_2011	-.3213512	.1325919	-2.42	0.015	-.5813134	-.061389
_IYEAR_2012	-.7978324	.1330529	-6.00	0.000	-1.058699	-.5369663
_IYEAR_2013	-.7330925	.1336159	-5.49	0.000	-.9950625	-.4711224
_IYEAR_2014	-.6144261	.1341666	-4.58	0.000	-.8774758	-.3513765
_IYEAR_2015	-.502969	.1358076	-3.70	0.000	-.7692361	-.2367018
_IYEAR_2016	-.2726308	.1378848	-1.98	0.048	-.5429705	-.0022911
_IYEAR_2017	-.1758804	.1395227	-1.26	0.208	-.4494313	.0976706
_IYEAR_2018	-.1296881	.1394921	-0.93	0.353	-.4031792	.1438029
_IYEAR_2019	0	(omitted)				
_IPRODUCTS_2	-.3463954	.1621155	-2.14	0.033	-.6642422	-.0285486
_IPRODUCTS_3	-.5632759	.1621155	-3.47	0.001	-.8811227	-.2454291
_IPRODUCTS_4	1.450268	.1621155	8.95	0.000	1.132421	1.768115
_IPRODUCTS_5	.8370247	.1621155	5.16	0.000	.5191779	1.154871

_IPRODUCTS_6	.2723184	.1621155	1.68	0.093	-.0455284	.5901652
_IPRODUCTS_7	1.229372	.1621155	7.58	0.000	.9115249	1.547219
_IPRODUCTS_8	-.3003057	.1621155	-1.85	0.064	-.6181525	.0175411
_IPRODUCTS_9	-.7937446	.1621155	-4.90	0.000	-1.111591	-.4758978
_IPRODUCTS_10	.2157284	.1621155	1.33	0.183	-.1021184	.5335752
_IPRODUCTS_11	-.1341587	.1621155	-0.83	0.408	-.4520055	.1836881
_IPRODUCTS_12	-1.072157	.1621155	-6.61	0.000	-1.390004	-.7543102
_IPRODUCTS_13	-1.095479	.1621155	-6.76	0.000	-1.413326	-.7776321
_IPRODUCTS_14	.8636319	.1621155	5.33	0.000	.5457851	1.181479
_IPRODUCTS_15	-.1957872	.1621155	-1.21	0.227	-.513634	.1220596
_IPRODUCTS_16	.5734964	.1621155	3.54	0.000	.2556496	.8913432
_IPRODUCTS_17	.5450686	.1621155	3.36	0.001	.2272218	.8629154
_IPRODUCTS_18	1.557734	.1621155	9.61	0.000	1.239887	1.87558
_IPRODUCTS_19	1.797436	.1621155	11.09	0.000	1.479589	2.115283
_IPRODUCTS_20	-.3453066	.1621155	-2.13	0.033	-.6631533	-.0274598
_IPRODUCTS_21	-.163086	.1621155	-1.01	0.314	-.4809328	.1547608
_IPRODUCTS_22	1.358948	.1621155	8.38	0.000	1.041101	1.676794
_IPRODUCTS_23	1.711648	.1621155	10.56	0.000	1.393801	2.029495
_IPRODUCTS_24	-2.315492	.1621155	-14.28	0.000	-2.633339	-1.997645
_IPRODUCTS_25	.5206156	.1621155	3.21	0.001	.2027688	.8384624
_IPRODUCTS_26	-1.521862	.1621155	-9.39	0.000	-1.839709	-1.204016
_IPRODUCTS_27	-1.521938	.1621155	-9.39	0.000	-1.839785	-1.204091
_IPRODUCTS_28	-2.325402	.1621155	-14.34	0.000	-2.643249	-2.007556
_IPRODUCTS_29	.1360161	.1621155	0.84	0.402	-.1818307	.4538629
_IPRODUCTS_30	1.102972	.1621155	6.80	0.000	.7851257	1.420819
_IPRODUCTS_31	.1016098	.1621155	0.63	0.531	-.216237	.4194566
_IPRODUCTS_32	-.363353	.1621155	-2.24	0.025	-.6811998	-.0455062
_IPRODUCTS_33	.9727825	.1621155	6.00	0.000	.6549357	1.290629
_IPRODUCTS_34	1.368162	.1621155	8.44	0.000	1.050315	1.686008
_IPRODUCTS_35	.8630251	.1621155	5.32	0.000	.5451783	1.180872
_IPRODUCTS_36	1.807669	.1621155	11.15	0.000	1.489822	2.125516
_IPRODUCTS_37	1.466044	.1621155	9.04	0.000	1.148198	1.783891
_IPRODUCTS_38	.4376722	.1621155	2.70	0.007	.1198254	.755519
_IPRODUCTS_39	.1597404	.1621155	0.99	0.325	-.1581064	.4775872
_IPRODUCTS_40	-.0369128	.1621155	-0.23	0.820	-.3547596	.280934
_IPRODUCTS_41	.140975	.1621155	0.87	0.385	-.1768718	.4588218

_IPRODUCTS_42	.5851441	.1621155	3.61	0.000	.2672974	.9029909
_IPRODUCTS_43	.6658055	.1621155	4.11	0.000	.3479587	.9836523
_IPRODUCTS_44	.9199736	.1621155	5.67	0.000	.6021268	1.23782
_IPRODUCTS_45	1.165116	.1621155	7.19	0.000	.8472693	1.482963
_IPRODUCTS_46	-1.447262	.1621155	-8.93	0.000	-1.765108	-1.129415
_IPRODUCTS_47	1.434367	.1621155	8.85	0.000	1.11652	1.752214
_IPRODUCTS_48	.502985	.1621155	3.10	0.002	.1851382	.8208318
_IPRODUCTS_49	-4.468574	.1629044	-27.43	0.000	-4.787967	-4.14918
_IPRODUCTS_50	-4.071662	.1629044	-24.99	0.000	-4.391056	-3.752269
_IPRODUCTS_51	-.4410977	.1621155	-2.72	0.007	-.7589445	-.1232509
_IPRODUCTS_52	-5.068202	.1629044	-31.11	0.000	-5.387596	-4.748808
_IPRODUCTS_53	-4.179803	.1790128	-23.35	0.000	-4.530779	-3.828827
_IPRODUCTS_54	-3.519726	.1621155	-21.71	0.000	-3.837573	-3.201879
_IPRODUCTS_55	-6.534403	.1621155	-40.31	0.000	-6.85225	-6.216557
_IPRODUCTS_56	2.086072	.1621155	12.87	0.000	1.768225	2.403919
_IPRODUCTS_57	-9.765302	.2389571	-40.87	0.000	-10.23381	-9.296798
_IPRODUCTS_58	1.278018	.1621155	7.88	0.000	.9601717	1.595865
_IPRODUCTS_59	-.5738506	.1621155	-3.54	0.000	-.8916974	-.2560038
_IPRODUCTS_60	-.8612139	.1621155	-5.31	0.000	-1.179061	-.5433671
_IPRODUCTS_61	-.7863765	.1621155	-4.85	0.000	-1.104223	-.4685297
_IPRODUCTS_62	.9387528	.1621155	5.79	0.000	.620906	1.2566
_IPRODUCTS_63	.4645386	.1621155	2.87	0.004	.1466918	.7823854
_IPRODUCTS_64	-.2900772	.1621155	-1.79	0.074	-.607924	.0277696
_IPRODUCTS_65	.5888981	.1621155	3.63	0.000	.2710513	.9067449
_IPRODUCTS_66	.9807082	.1621155	6.05	0.000	.6628614	1.298555
_IPRODUCTS_67	-2.11784	.1621155	-13.06	0.000	-2.435687	-1.799993
_IPRODUCTS_68	-.5537793	.1621155	-3.42	0.001	-.8716261	-.2359325
_IPRODUCTS_69	-3.070726	.1621155	-18.94	0.000	-3.388573	-2.752879
_IPRODUCTS_70	-1.606202	.1621155	-9.91	0.000	-1.924048	-1.288355
_IPRODUCTS_71	-8.901359	.1820346	-48.90	0.000	-9.258259	-8.544458
_IPRODUCTS_72	1.209561	.1621155	7.46	0.000	.8917146	1.527408

. xtgls LIMPORT LPIB LTCR_USA_PPA i.YEAR i.PRODUCTS, noconstant

note: 2019.YEAR omitted because of collinearity

Cross-sectional time-series FGLS regression

Coefficients: generalized least squares

Panels: homoskedastic

Correlation: no autocorrelation

Estimated covariances = 1 Number of obs = 3,742

Estimated autocorrelations = 0 Number of groups = 72

Estimated coefficients = 124 Obs per group:

min = 16

avg = 51.97222

max = 53

Wald chi2(124) = 52697.56

Log likelihood = -4569.786 Prob > chi2 = 0.0000

LIMPORT	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
LPIB	-.1215125	.0101656	-11.95	0.000	-.1414367	-.1015884
LTCR_USA_PPA	-.2979356	.0208082	-14.32	0.000	-.338719	-.2571521
YEAR						
1968	-.1619586	.1404107	-1.15	0.249	-.4371586	.1132414
1969	-.19683	.1398171	-1.41	0.159	-.4708665	.0772065
1970	-.6107129	.1374238	-4.44	0.000	-.8800585	-.3413673
1971	.4095402	.135786	3.02	0.003	.1434046	.6756757
1972	-.0574355	.1378543	-0.42	0.677	-.327625	.212754
1973	-.2697447	.1385503	-1.95	0.052	-.5412984	.0018089
1974	-.586462	.1376065	-4.26	0.000	-.8561658	-.3167582
1975	-.1931367	.1382351	-1.40	0.162	-.4640726	.0777991
1976	-.4304983	.1374455	-3.13	0.002	-.6998865	-.16111
1977	-.1385741	.1371813	-1.01	0.312	-.4074445	.1302963
1978	-.0678067	.1383403	-0.49	0.624	-.3389487	.2033352

1979	-.6367755	.138231	-4.61	0.000	-.9077033	-.3658477
1980	-.6736308	.1384804	-4.86	0.000	-.9450473	-.4022142
1981	-2.614151	.1394772	-18.74	0.000	-2.887521	-2.34078
1982	-2.555046	.1389168	-18.39	0.000	-2.827318	-2.282774
1983	-2.429417	.1390813	-17.47	0.000	-2.702011	-2.156823
1984	-2.324816	.1393218	-16.69	0.000	-2.597882	-2.05175
1985	-2.107794	.1376329	-15.31	0.000	-2.37755	-1.838039
1986	-1.554742	.131326	-11.84	0.000	-1.812137	-1.297348
1987	-1.201638	.1254652	-9.58	0.000	-1.447546	-.9557309
1988	-.9560548	.1241642	-7.70	0.000	-1.199412	-.7126974
1989	-.5396203	.1222544	-4.41	0.000	-.7792346	-.3000061
1990	-.6350067	.1218114	-5.21	0.000	-.8737527	-.3962607
1991	-.2435613	.1204931	-2.02	0.043	-.4797235	-.0073992
1992	.2684754	.1193551	2.25	0.024	.0345438	.502407
1993	1.356043	.1196915	11.33	0.000	1.121452	1.590634
1994	.5186253	.1191072	4.35	0.000	.2851794	.7520711
1995	.0243012	.1191303	0.20	0.838	-.2091898	.2577923
1996	-.234841	.1198011	-1.96	0.050	-.4696469	-.0000351
1997	-.3029635	.1199157	-2.53	0.012	-.537994	-.0679331
1998	-.1135147	.1205736	-0.94	0.346	-.3498345	.1228051
1999	.1722351	.1221778	1.41	0.159	-.0672289	.4116991
2000	.1151234	.1222174	0.94	0.346	-.1244182	.3546651
2001	.2950637	.1224598	2.41	0.016	.055047	.5350804
2002	.212195	.1244863	1.70	0.088	-.0317937	.4561837
2003	.3229581	.1253259	2.58	0.010	.0773239	.5685923
2004	.0906362	.126058	0.72	0.472	-.1564329	.3377054
2005	-.2260137	.126341	-1.79	0.074	-.4736376	.0216101
2006	-.5655458	.1265848	-4.47	0.000	-.8136474	-.3174442
2007	-.6345235	.1274653	-4.98	0.000	-.8843509	-.3846962
2008	-.7369331	.1266342	-5.82	0.000	-.9851315	-.4887347
2009	-.3390797	.1296169	-2.62	0.009	-.5931242	-.0850353
2010	-.448692	.1297695	-3.46	0.001	-.7030356	-.1943484
2011	-.3213512	.1303765	-2.46	0.014	-.5768844	-.065818
2012	-.7978324	.1308298	-6.10	0.000	-1.054254	-.5414107
2013	-.7330925	.1313834	-5.58	0.000	-.9905993	-.4755857
2014	-.6144261	.1319249	-4.66	0.000	-.8729942	-.3558581

2015	-.502969	.1335385	-3.77	0.000	-.7646997	-.2412383
2016	-.2726308	.135581	-2.01	0.044	-.5383647	-.0068969
2017	-.1758804	.1371915	-1.28	0.200	-.4447708	.0930101
2018	-.1296881	.1371615	-0.95	0.344	-.3985197	.1391434
2019	0	(omitted)				

PRODUCTS

2	-.3463954	.1594068	-2.17	0.030	-.658827	-.0339639
3	-.5632759	.1594068	-3.53	0.000	-.8757074	-.2508443
4	1.450268	.1594068	9.10	0.000	1.137836	1.7627
5	.8370247	.1594068	5.25	0.000	.5245931	1.149456
6	.2723184	.1594068	1.71	0.088	-.0401132	.58475
7	1.229372	.1594068	7.71	0.000	.9169401	1.541803
8	-.3003057	.1594068	-1.88	0.060	-.6127373	.0121258
9	-.7937446	.1594068	-4.98	0.000	-1.106176	-.481313
10	.2157284	.1594068	1.35	0.176	-.0967032	.52816
11	-.1341587	.1594068	-0.84	0.400	-.4465902	.1782729
12	-1.072157	.1594068	-6.73	0.000	-1.384589	-.7597254
13	-1.095479	.1594068	-6.87	0.000	-1.40791	-.7830474
14	.8636319	.1594068	5.42	0.000	.5512003	1.176063
15	-.1957872	.1594068	-1.23	0.219	-.5082188	.1166443
16	.5734964	.1594068	3.60	0.000	.2610648	.8859279
17	.5450686	.1594068	3.42	0.001	.232637	.8575002
18	1.557734	.1594068	9.77	0.000	1.245302	1.870165
19	1.797436	.1594068	11.28	0.000	1.485005	2.109868
20	-.3453066	.1594068	-2.17	0.030	-.6577381	-.032875
21	-.163086	.1594068	-1.02	0.306	-.4755175	.1493456
22	1.358948	.1594068	8.53	0.000	1.046516	1.671379
23	1.711648	.1594068	10.74	0.000	1.399216	2.024079
24	-2.315492	.1594068	-14.53	0.000	-2.627924	-2.003061
25	.5206156	.1594068	3.27	0.001	.208184	.8330471
26	-1.521862	.1594068	-9.55	0.000	-1.834294	-1.209431
27	-1.521938	.1594068	-9.55	0.000	-1.834369	-1.209506
28	-2.325402	.1594068	-14.59	0.000	-2.637834	-2.012971
29	.1360161	.1594068	0.85	0.394	-.1764154	.4484477
30	1.102972	.1594068	6.92	0.000	.7905409	1.415404

31	.1016098	.1594068	0.64	0.524	-.2108218	.4140414
32	-.363353	.1594068	-2.28	0.023	-.6757846	-.0509214
33	.9727825	.1594068	6.10	0.000	.660351	1.285214
34	1.368162	.1594068	8.58	0.000	1.05573	1.680593
35	.8630251	.1594068	5.41	0.000	.5505936	1.175457
36	1.807669	.1594068	11.34	0.000	1.495237	2.1201
37	1.466044	.1594068	9.20	0.000	1.153613	1.778476
38	.4376722	.1594068	2.75	0.006	.1252406	.7501038
39	.1597404	.1594068	1.00	0.316	-.1526912	.4721719
40	-.0369128	.1594068	-0.23	0.817	-.3493444	.2755188
41	.140975	.1594068	0.88	0.376	-.1714565	.4534066
42	.5851441	.1594068	3.67	0.000	.2727126	.8975757
43	.6658055	.1594068	4.18	0.000	.3533739	.978237
44	.9199736	.1594068	5.77	0.000	.607542	1.232405
45	1.165116	.1594068	7.31	0.000	.8526845	1.477548
46	-1.447262	.1594068	-9.08	0.000	-1.759693	-1.13483
47	1.434367	.1594068	9.00	0.000	1.121935	1.746798
48	.502985	.1594068	3.16	0.002	.1905534	.8154166
49	-4.468574	.1601826	-27.90	0.000	-4.782526	-4.154622
50	-4.071662	.1601826	-25.42	0.000	-4.385615	-3.75771
51	-.4410977	.1594068	-2.77	0.006	-.7535293	-.1286661
52	-5.068202	.1601826	-31.64	0.000	-5.382154	-4.75425
53	-4.179803	.1760218	-23.75	0.000	-4.524799	-3.834806
54	-3.519726	.1594068	-22.08	0.000	-3.832157	-3.207294
55	-6.534403	.1594068	-40.99	0.000	-6.846835	-6.221972
56	2.086072	.1594068	13.09	0.000	1.77364	2.398503
57	-9.765302	.2349646	-41.56	0.000	-10.22582	-9.30478
58	1.278018	.1594068	8.02	0.000	.9655869	1.59045
59	-.5738506	.1594068	-3.60	0.000	-.8862822	-.2614191
60	-.8612139	.1594068	-5.40	0.000	-1.173645	-.5487823
61	-.7863765	.1594068	-4.93	0.000	-1.098808	-.4739449
62	.9387528	.1594068	5.89	0.000	.6263212	1.251184
63	.4645386	.1594068	2.91	0.004	.1521071	.7769702
64	-.2900772	.1594068	-1.82	0.069	-.6025088	.0223544
65	.5888981	.1594068	3.69	0.000	.2764665	.9013297
66	.9807082	.1594068	6.15	0.000	.6682766	1.29314

67	-2.11784	.1594068	-13.29	0.000	-2.430272	-1.805409
68	-.5537793	.1594068	-3.47	0.001	-.8662109	-.2413477
69	-3.070726	.1594068	-19.26	0.000	-3.383157	-2.758294
70	-1.606202	.1594068	-10.08	0.000	-1.918633	-1.29377
71	-8.901359	.1789931	-49.73	0.000	-9.252179	-8.550538
72	1.209561	.1594068	7.59	0.000	.8971298	1.521993
