Proc. of the Fourth Intl. Conf. Advances in Social Science, Economics and Management Study- SEM 2016

ISBN: 978-1-63248-094-1 doi: 10.15224/ 978-1-63248-094-1-50

ODA effectiveness and inclusiveness:

The long run dynamics

[Pacifique Mongongo Dosa]

***Abstract*—While ODA mostly funds the fundamental rather than the proximate determinants of growth; its economic effectiveness is often denied using short run empirical findings. Considering this inappropriate, long term reassessments are now conducted. However, they still consider ODA and growth as homogeneous. Subsequently, these reassessments fail to capture specific nexuses between their respective components. Drawing on co-integration features of SSA data, this paper fills that gap. Unlike in most short run studies, the estimation results show that both aid-grants and aid-loans positively affect the overall growth with a higher magnitude assigned to aid-loans. More importantly, when shifting focus from the overall to the inequality adjusted growth, both components perform much better. However, while the annual adjustment of deviations from this long run equilibrium is 10% for the inequality adjusted growth, it is only 0.02% for the impact on the overall growth. This spells out why most short run estimations end up with opposite results.**

***Keywords*—sub-Saharan Africa, growth, aid-grants, aid-loans, poverty reduction**

I. Introduction

Even though official development assistance (ODA) has been delivered since a couple of decades, major macroeconomic indicators still question its effectiveness in general and its impact on poverty reduction in particular. Drawing on such descriptive statistics, some researchers made strong claims against aid (Hansen and Tarp, 2000; Easterly, 2006; Moyo, 2009). They especially claim that a substitution of a relatively high share of tax income by aid distorts political and economic institutions required to achieve growth (see figure 1). In contrast, those involved in micro-level assessments argue that aid works when it is cleverly delivered. They suggest ex-ante RCT based impact evaluations before scaling up any development assistance (Kasusa 2014, Banerjee and Duflo, 2009; Narayan et al., 2009; Sachs, 2005; Collier, 1997).

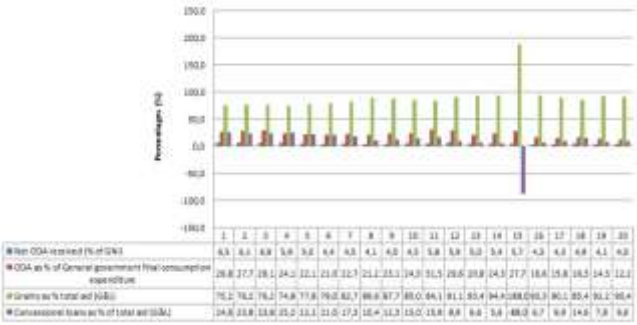

Figure 1. ODA as % share of Public spending, aid and aid components: 1992-2011 (WDI-OECD)

Pacifique Mongongo Dosa

Universidad de Cantabria
Spain

Drawing on such RCT based impact evaluations, the latter claim that without aid thousands of people could not survive to consequences of extreme poverty such as death from curable and preventable diseases or various humanitarian emergencies. Based on this, most aid practitioners have suggested and still recommend more and stable aid to make true the dream of living in a world without absolute poverty (ECDPM et al., 2013; HLPEP, 2013; Sachs et al., 2005; Collier, 2007; UN, 2006). From their perspective; if donor countries complied with the 0.7% GNI commitment (see figure 2), most miseries in developing countries would already have been part of history.

However, nobody within aid the sceptic literature fundamentally disagrees with that. Even though their stream is concerned with a possible substitution effect, it still concedes that such a humanitarian aid or any other emergency assistance is necessary. Nonetheless, this concession leaves intact their worries from the observed positive co-movement between the billions spent through governments to governments in the form of development assistance and the poor macroeconomic performances of recipient countries (Moyo, 2009; Rajan and Subramanian, 2011).

In an attempt to shed light on this issue, a number of empirical investigations have gone beyond such a correlation based counter aid argument. However most, of them came up with disappointing results. They either found a negative impact of ODA on economic growth or a statistically significant positive impact but too low to be considered as economically significant (Denkabe, 2004; Houdou, 2010; Rajan and Subramanian, 2011; Kraay and Raddatz, 2007).

Are such empirical findings enough to deny ODA as a development policy? The answer is "No". Because important shares of ODA often fund fundamental determinants of growth such as promotion of good and democratic governance, health, education, peace and security rather than the proximate determinants of growth such FDI or any type of directly productive activity (see figure 3). By empirically assessing the short run impact of an ODA targeting the fundamental, structural and long run determinants of growth; most of those studies could end up with nothing else than a denial of ODA as a development policy. To be valid, such a rejection should be based on long term empirical evidence considering the above-described nature of the sectors targeted by ODA.

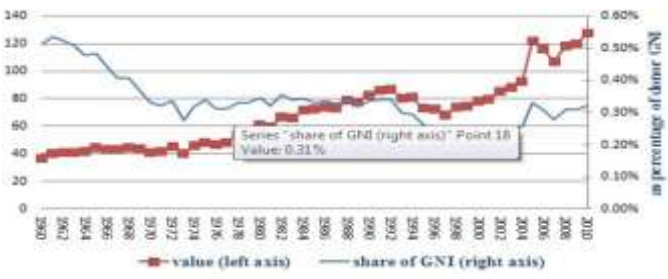

Figure 2. ODA values share of donors GNI (OECD-DAC)

Proc. of the Fourth Intl. Conf. Advances in Social Science, Economics and Management Study- SEM 2016

ISBN: 978-1-63248-094-1 doi: 10.15224/ 978-1-63248-094-1-50

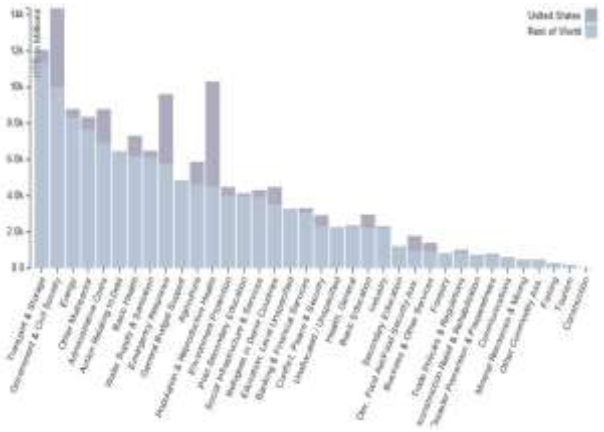

Figure 3. Sectoral distribution of ODA (OECD-DAC, MIT website's summary)

Indeed, a lot of such long term empirical investigations have already been carried out. Most of them came up with significantly positive long term nexus between aid and economic growth (Girijasankar, 2008; Subhash, 1996; Haile, 2010; Sanja and Camelia, 2006). Unlike most short run assessments, they subsequently give credit to aid as a development policy. However, they still consider either aid or growth or both as homogeneous. By doing so, they do not disentangle the poverty reduction impact from the overall assessment of aid effectiveness. They therefore fail to answer questions specific to aid and growth components.

In light of the aid sceptic literature, one would reasonably expect grants to be less efficient than concessional loans. Indeed, as the latter are refundable, they are more likely to be efficiently used than grants which can be diverted without running the risk of default of payment. In other words, it is much easier for a predatory government to keep diverting grants than concessional loans which has to be serviced.

Knowing such a relative effectiveness is crucial since it would lead to an efficiency gain from a reallocation between the ineffective and the effective aid components or at least by using more of each component where it proves to be more efficient. Furthermore, the magnitude of such a relative effectiveness would be different on the overall and the pro-poor growth since grants and concessional loans would have different potential to attain the poor.

Consequently, this work aims to investigate whether or not there is a significant difference between the long run effectiveness of aid-grants and aid-loans on both the economic growth and the pro-poor growth. It is in this perspective that the methodological framework is described in the second section. The third section presents the estimations. The fourth and last section concludes this work.

II. Methodological framework

I am quite aware of an endogeneity issue arising when one tries to capture the causal effect of aid or its components on economic growth. In general, this comes from various phenomena such as governance quality, resources endowment, peace or conflict which jointly determine both growth and aid inflow. In particular, that source of endogeneity is worsened by the reverse causality between aid and growth. The directions of such interdependencies are not obvious. Indeed, one would reasonably argue for their existence in both directions.

For instance, donor countries would give more aid to countries with very low growth considering that such countries have higher needs. They may also provide more aid to countries with relatively higher growth based on the assumption of better aid management in the latter. Furthermore, while the aid sceptic literature argues that aid has an intrinsic growth distorting effect (Moyo, 2009), aid tenants see in it the needed push towards the capital accumulation process and growth (Sachs et al., 2005). Therefore, aid can intuitively affect growth in both directions as well.

In such a situation, most empirical studies resort to instrumental variables (IV) using lag of endogenous variables as instruments (Tezanos et al., 2013). However, it has been shown that a long run framework cancelling out endogenous effects of received aid from observations of growth and its expectations is preferred instead of resorting to weak instruments such as lags of endogenous variables (Sanja and Camelia, 2006). Consequently, a co-integration setting is expected to yield adequate estimates of the long run relative effectiveness and inclusiveness investigated in this paper.

Nonetheless, I can resort to such a co-integration setting if and only if GDP (or inequality adjusted GDP), grants and concessional loans exhibit at least one common long run equilibrium. In this case, such equilibrium has the algebraic form of equation 1.

$$\boldsymbol{\beta_{11} logGDP_t + \beta_{12} logGrant_t + \beta_{13} logLoan_t + \alpha_1 = \delta_{1t}} \quad (1)$$

If the left hand-side of the co-integrating equation 1 yields a stationary vector $\boldsymbol{\delta_{1t}}$, then the logarithmic values of GDP, grant and concessional loans have common long run equilibrium with equation 2 as a co-integrating vector.

$$\boldsymbol{\beta_1} = \begin{pmatrix} \beta_{11} \\ \beta_{12} \\ \beta_{13} \end{pmatrix} \quad (2)$$

It is worth noting that there are "k-1" possible integrating equations and vectors describing long run relationships among "k" processes. Subsequently, it is likely to have another co-integrating equation and vector which respectively have the forms of equations 3 and 4.

$$\boldsymbol{\beta_{21} logGDP_t + \beta_{22} logGrant_t + \beta_{23} logLoan_t + \alpha_2 = \delta_{2t}} \quad (3)$$

$$\boldsymbol{\beta_2} = \begin{pmatrix} \beta_{21} \\ \beta_{22} \\ \beta_{23} \end{pmatrix} \quad (4)$$

$\boldsymbol{\beta_1}$ and $\boldsymbol{\beta_2}$ should be linearly independent and make the cointegrating matrix 5.

$$\boldsymbol{\beta} = \begin{pmatrix} \beta_{11} & \beta_{21} \\ \beta_{12} & \beta_{22} \\ \beta_{13} & \beta_{23} \end{pmatrix} \quad (5)$$

By making explicit equations 1 and 3 in terms of $\boldsymbol{logGDP_t}$ I respectively come up with equations 6 and 7 which give the long term elasticities of grants and concessional loans to GDP and hence enable a long run assessment of their relative effectiveness.

Proc. of the Fourth Intl. Conf. Advances in Social Science, Economics and Management Study- SEM 2016

ISBN: 978-1-63248-094-1 doi: 10.15224/ 978-1-63248-094-1-50

$$logGDP_t = \frac{\beta_{12}}{\beta_{11}} logGrant_t + \frac{\beta_{13}}{\beta_{11}} logLoan_t + \frac{\alpha_1}{\beta_{11}} + \frac{\delta_{1t}}{\beta_{11}} \quad (6)$$

$$logGDP_t = \frac{\beta_{22}}{\beta_{21}} logGrant_t + \frac{\beta_{23}}{\beta_{21}} logLoan_t + \frac{\alpha_2}{\beta_{21}} + \frac{\delta_{2t}}{\beta_{21}} \quad (7)$$

As short run data exhibit deviations from long run equilibriums, I evaluate the speed of adjustment by the vector error correction model formalized by equation system 8.

$$\begin{cases} \Delta logGDP_t = C_1 + \Upsilon_{11}\,\delta_{1,t-1} + \Upsilon_{21}\,\delta_{2,t-1} + a_{11}\,\Delta logGDP_{t-1} \\ \quad + a_{12}\,\Delta logGrant_{t-1} + a_{13}\,\Delta logLoan_{t-1} + \varepsilon logGDP_t \\ \Delta logGrant_t = C_2 + \Upsilon_{12}\,\delta_{1,t-1} + \Upsilon_{22}\,\delta_{2,t-1} + a_{21}\,\Delta logGDP_{t-1} \\ \quad + a_{22}\,\Delta logGrant_{t-1} + a_{23}\,\Delta logLoan_{t-1} + \varepsilon logGrant_t \\ \Delta logLoan_t = C_3 + \Upsilon_{13}\,\delta_{1,t-1} + \Upsilon_{23}\,\delta_{2,t-1} + a_{31}\,\Delta logGDP_{t-1} \\ \quad + a_{32}\,\Delta logGrant_{t-1} + a_{33}\,\Delta logLoan_{t-1} + \varepsilon logLoan_t \end{cases} \quad (8)$$

In the equation system 8, $\delta_{1,t-1}$ and $\delta_{2,t-1}$ are the residuals of the two co-integrating equations. Their respective coefficients determine the speed of adjustment. The higher their absolute values are, the faster the adjustments to the long run equilibriums are. In case of one valid co-integrating equation and vector, equation 8 is reduced in 9.

$$\begin{cases} \Delta logGDP_t = C_1 + \Upsilon_{11}\,\delta_{1,t-1} + a_{11}\,\Delta logGDP_{t-1} \\ \quad + a_{12}\,\Delta logGrant_{t-1} + a_{13}\,\Delta logLoan_{t-1} + \varepsilon logGDP_t \\ \Delta logGrant_t = C_2 + \Upsilon_{12}\,\delta_{1,t-1} + a_{21}\,\Delta logGDP_{t-1} \\ \quad + a_{22}\,\Delta logGrant_{t-1} + a_{23}\,\Delta logLoan_{t-1} + \varepsilon logGrant_t \\ \Delta logLoan_t = C_3 + \Upsilon_{13}\,\delta_{1,t-1} + a_{31}\,\Delta logGDP_{t-1} \\ \quad + a_{32}\,\Delta logGrant_{t-1} + a_{33}\,\Delta logLoan_{t-1} + \varepsilon logLoan_t \end{cases} \quad (9)$$

In what follows, I resort to Johansen (1991)'s procedure to determine the number of the co-integrating equations compatible with the data structure and then the estimation of the corresponding co-integrating vector (s). To get the speed of adjustment, I estimate the associate vector error correction model.

III. Estimation results and discussion

As a pre-estimation investigation, I carry out a stationarity analysis. This checks whether the considered processes are stationary or at least are equally integrated. As an outcome, all of them become stationary after being log-differenced once. In other words, their logarithmic series are integrated of order one. Consequently, the latter are appropriate for further investigation within a co-integration setting. In what follows, I first make the diagnosis without inequality adjustment. Then, I include the inequality adjustment in the analysis. [1]

A. *Without inequality adjustment*

The Johansen (1991)'s test of co-integration comes up with two valid long run equilibriums. Tables I and II respectively give the outcomes of the trace and the maximal eigenvalue tests.

TABLE I. TRACE TEST OF CO-INTENTEGRATION (AUTHOR'S)

r	Test	10%	5%	1%	Eigenvalue
0	77.80	32.00	34.91	41.07	4.283376e-01
1	32.65	17.85	19.96	24.60	6.861866e-01
2	10.62	07.52	09.24	12.97	9.071165e-01

TABLE II. M. EIGENVALUE TEST OF CO-INTEGRATION (AUTHOR'S)

r	Test	10%	5%	1%	Eigenvalue
0	45.15	19.77	22.00	26.81	4.283376e-01
1	22.02	13.75	15.67	20.20	6.861866e-01
2	10.62	07.52	09.24	12.97	9.071165e-01

As these two tests are sequential (Johansen, 1991), I start by checking the null hypothesis of lack of co-integration relationship against the alternative of the existence of at most one co-integrating equation. In tables I and II, this corresponds to the second rows "$r = 0$". The two tests give test statistics largely higher than the critical values respectively at 10, 5 and 1% significance level. Consequently, I reject the null hypothesis in favour of the alternative. Then the latter hypothesis becomes the null against the alternative assuming at most two co-integrating equations. Once again, the third lines "$r = 1$" in both tables provide higher test statistics than critical values. This rejects the second null in favour of the second alternative hypothesis.

Now, the previous second alternative hypothesis becomes the new null hypothesis against the alternative assuming at most two co-integrating equations. While the fourth rows "$r = 2$" of the two tables give higher test statistics than the corresponding critical values at 10% and 5% significance level, in contrast, the former becomes lower than the latter at 1% significance level. Subsequently, at 1% significance level, both the trace and the maximal eigenvalue tests retain the null hypothesis of existence of at most two co-integration equations. Table III gives the corresponding co-integrating vectors normalized with respect to $logGDP_t$.

TABLE III. CO-INTEGRATING VECTORS (AUTHOR'S)

Variables	Vector 1	Vector 2
$logGDP_t$	1.0000000	1.000000
$logGrant_t$	-0.1326844	4.030976
$logLoans_t$	-1.4175834	-8.929384
Constant	-18.2185927	10.173862
ect, r=2	-1.069e-02	5.914e-02
ect, r=1	-0.024558	

[1] To account for poverty dimension, I correct the mean income for inequality using the complement to one of GINI coefficient. I would like to thank prof. Branko Milanovic and Sergio Tezanos Vazquez for their respective reassuring comments on this procedure.

Proc. of the Fourth Intl. Conf. Advances in Social Science, Economics and Management Study- SEM 2016

ISBN: 978-1-63248-094-1 doi: 10.15224/ 978-1-63248-094-1-50

By equalizing the co-integrating vectors-based linear combinations of the three variables to the stationary residuals underpinning their co-integration, I end up with the co-integrating equations 10 and 11 corresponding respectively to the co-integrating vector 1 and 2 forming the co-integrating matrix of table III.

$$logGDP_t - 0.1326844 * logGrant_t - 1.4175834 * logLoan_t - 18.2185927 = \delta_{1t} \quad (10)$$

$$logGDP_t + 4.030976 * logGrant_t - 8.929384 * logLoan_t + 10.173862 = \delta_{2t} \quad (11)$$

By making explicit equations 10 and 11 with respect to $logGDP_t$, I get equations 12 and 13 highlighting the long run relative effectiveness of aid-grants and aid-loans.

$$logGDP_t = 18.2185927 + 0.1326844 * logGrant_t + 1.4175834 * logLoan_t + \delta_{1t} \quad (12)$$

$$logGDP_t = -10.173862 - 4.030976 * logGrant_t + 8.929384 * logLoan_t + \delta_{2t} \quad (13)$$

In both co-integrating equations, the long run effects suggest that concessional loans are more effective than grants. While in the first long term equilibrium the elasticities of both grants and concessional loans are positive and have relatively high magnitudes (see equation 12), in the second equilibrium the effect of grants becomes negative (see equation 13). From this, I expect one of these two co-integrating equations to be invalidated by the last validation criterion of generating a converging (negative) adjustment mechanism in the error correction model.

Indeed, the error correcting terms of table III invalidate the second vector in favour of the first. Unlike the first vector, the second has a positive coefficient associated to its error correcting term. Thus, I consider as valid only the first long run equilibrium corresponding to the co-integrating equation 12 and its associated error correction term for "$r = 1$" in table III. As the end result, both grants and concessional loans have positive long run elasticities which are statistically and economically significant. Furthermore, concessional loans exhibit higher relative effectiveness than grants. Slightly more than 2% of deviations from this long run equilibrium are adjusted each year.

B. *With inequality adjustment*

When shifting focus from the unadjusted GDP to the inequality adjusted GDP, the Johansen (1991)'s tests of co-integration gives only one valid long run equilibrium. Tables IV and V respectively give the outcomes of the trace and the maximal eigenvalue tests for this case.

TABLE IV. TRACE TEST OF COINTENTEGRATION ON INEQUALITY EDJUSTED DATA (AUTHOR'S)

r	Test	10%	5%	1%
0	33.26	32.00	34.91	41.07
1	11.77	17.85	19.96	24.60

TABLE V. MAXIMAL EIGENVALUE TEST OF CO-INTEGRATION ON INEQUALITY ADJUSTED DETA (AUTHOR'S)

r	Test	10%	5%	1%
0	21.49	19.77	22.00	26.81
1	08.50	13.75	15.67	20.20

Even though the only valid co-integration equation passes the first sequence of the test by rejecting the null hypothesis only at 10% significance level, the latter is confirmed at the second stage of the test and that even at 1% significance level.

Indeed, while both tables IV and V for "$r = 0$" provide a higher test statistic than the corresponding critical value only at 10% significance level, they give higher values of test statistics at 10, 5 and 1% significance level for "r=1". This strongly validates the existence of such a long run common equilibrium. Table VI gives the associated co-integrating vector normalized to the inequality adjusted GDP ($logIAGDP_t$).

TABLE VI. CO-INTEGRATING VECTOR CORRESPONDING TO THE INEQUALITY ADJUSTED DATA (AUTHOR'S)

Variables	Vector
$logIDGDP_t$	1.0000000
$logGrant_t$	-0.5330108
$logLoans_t$	-2.7363523
constant	-2.8402718
ect	-0.097123

As in the unadjusted case, by equalizing the co-integrating vectors-based linear combination of the three variables to the stationary residual underpinning their co-integration, I find the co-integrating equation 14 associated to the co-integrating vector of table VI.

$$logIAGDP_t - 0.5330108 * logGrant_t - 2.7363523 * logLoan_t - 2.8402718 = \delta_t \quad (14)$$

By making explicit equation 14 with respect to $logIAGDP_t$, I get equation 15 highlighting the long run relative effectiveness of aid-grants and aid-loans with a focus on inclusiveness.

$$logIAGDP_t = 2.8402718 + 0.5330108 * logGrant_t + 2.7363523 * logLoan_t + \delta_t \quad (15)$$

Like the case without adjustment, the estimated common long run equilibrium of equation 15 shows that concessional loans are relatively more effective than grants but, they both have positive impacts. Roughly 10% of short run deviations from this long run equilibrium are adjusted each year. From this, one should expect perceiving the first effects of ODA and ODA components on inequality adjusted GDP growth approximately 10 years after their delivery. This would explain why most short run investigations fail to capture such an effect.

Proc. of the Fourth Intl. Conf. Advances in Social Science, Economics and Management Study- SEM 2016

ISBN: 978-1-63248-094-1 doi: 10.15224/ 978-1-63248-094-1-50

IV. Conclusion

Drawing on co-integration properties of SSA data, I integrate inclusiveness to the long run assessment of aid effectiveness. While checking whether or not the long term investigations would meet results of existing short run analyzes was the first target, elaborating on inclusiveness and capturing the relative performances of both aid-grants and aid-loans was the second aim. Considering that grants and concessional loans not only affect economic growth but they are also impacted by the latter within a kind of loop of causality, I have resorted to a co-integration framework incorporating such interdependencies and controlling effects of other omitted processes which would otherwise bias the outcome.

The estimation results show that both aid-grants and aid-loans positively affect the overall economic growth, with the former being more effective than the latter. More importantly, when considering the inequality adjusted growth instead of the overall growth, they both perform much better. However, while the adjustment of deviations from the impact on poverty reduction is 10% a year, the annual adjustment speed towards an effect on the overall growth is only 0.02%. In other words, each delivered ODA is reducing inequality in an interval of 10 years while its effect on overall economic prosperity would be perceptible in much longer period of time.

Coming back to the aid effectiveness debate; that much longer adjustment period associated to overall growth would explain why most short run empirical studies end up with insignificant effects of ODA and/or its components on it. Furthermore, while such a low speed seems to question aid potential in boosting economic prosperity, the relatively faster speed of adjustment of the impact on inequality adjusted growth underpins its potentials as a poverty reduction instrument. This recommend aid specifically in tackling poverty and inequality, but recognizes ODA limits in boosting the overall growth.

References

[1] A. V. Banerjee and E. Duflo, Poor economics: A radical rethinking of the way to fight global poverty, public Affairs, 2009.

[2] P. Collier, "The failure of conditionality" in Perspectives on aid and development, C. Gwin, and J. Nelson, eds. Washington DC: Overseas development council, 1997.

[3] P. Collier, The bottom billion: Why the poorest countries are failing and what can be done about it, Oxford University Press, 2007.

[4] P. Denkabe, "Policy, aid and growth: A threshold hypothesis" Journal of African Development, vol. 1(1), 2004, pp. 39–45.

[5] W. Easterly, The white man's burden: Why the west's efforts to aid the rest have done so much ill and so little good, penguin Press, 2006.

[6] ECDPM, DIE, and ODI, European report on development (2013), post-2015: Global action for an inclusive and sustainable future, Technical report, European commission, 2013.

[7] M. Girijasankar, "Foreign aid and economic growth: A co-integration analysis of the six poorest african countries", Economic analysis and policy, vol. 38, 2008, pp. 251–260.

[8] F. Haile, "The long-run effects of aid and disaggregated aid flows in ethiopia", University of Copenhagen, working paper, 2010.

[9] H. Hansen and F. Tarp, "Aid effectiveness disputed", Development economics, 2000, pp. 1–27.

[10] HLPEP, A new global partnership: eradicate poverty and transform economies through sustainable development"/ the report of the high-level panel of eminent persons on the post-2015 development agenda, Technical report, UN secretariat, 2013.

[11] N. Houdou, "Foreign aid, foreign direct investment and economic growth in sub-saharan africa: Evidence from pooled mean group estimator (pmg)", International journal of economics and finance, vol. 2(3), 2010, pp. 39–45.

[12] S. Johansen, "Estimation and hypothesis testing of co-integration vectors in gaussian vector autoregressive models", Econometrica, vol. 59(6), 1991, pp. 1551–1580.

[13] M. M. Kasusa, "Towards more effective official devlopment assistance" in Inside the Black box: Contributions to the discussion on official development assistance, I. Freeman et al., eds. UNU-MERIT working paper series, 2015-014, pp. 9-13.

[14] A. Kraay and C. Raddatz, "Poverty traps, aid, and growth", Journal of development economics, vol. 82, 2007, pp. 315–347.

[15] D. Moyo, Dead aid: Why aid is not working and how there is another way for Africa, Penguin Books, 2009.

[16] D. Narayan, L. Pritchett, and S. Kapoor, "Moving Out of Poverty: Success from the bottom up", World Bank publications, Palgrave Macmillan, 2009.

[17] R. Rajan and A. Subramanian, "Aid, dutch disease, and manufacturing growth", Journal of development economics, vol. 9(1), 2011, pp. 106–118.

[18] J. Sachs, The end of poverty: economic possibilities for our time. Penguin, 2005.

[19] J. Sachs, et al., Investing in development: A practical plan to achieve the UN millennium development goals. Technical report, UN Millennium project, 2005.

[20] G. R. Sanja and M. Camelia, "Development aid and economic growth: A positive long-run relation", Colombia university, working paper nr. 2, 2006.

[21] S. Subhash, Applied Multivariate Techniques. John Wiley Sons, 1996.

[22] S. Tezanos, A. Quinones and M. Guijarro, " Inequality, aid and growth: macroeconomic impact of aid grants and loans in latin america and the caribbean, Journal of applied economics, vol. 16(1), 2013, pp. 153–177.

[23] UN, Doubling Aid: Making the "Big Push" work. United nations, 2006.

About Author:

If ODA positive impacts on economic growth were as rapidly and easily perceptible as its effects on poverty alleviation, none of us would need either macroeconomic models or econometric estimations to show that it remains a reliable development policy despite the well-known limitations behind this and other relevant concerns raised on it!

Pacifique Mongongo Dosa is currently affiliated to the doctoral school of the university of Cantabria-Spain where he is finalising his PhD in "Economics: Instruments of economic analysis". He has two masters' degrees namely the "Master of advanced studies in economics" (Kotholieke Universiteit Leuven-Belguim) and the "Master of science in governance and development" (Universiteit Antwerpen-Belguim). Besides that, he has been accepted as a member of the European association of development research and training institutions (EADI) since 2013. He values such a background and network in carrying out advanced investigations in macroeconomic modeling, macro-econometrics and time series-based macroeconomic forecasting and that for both developed and developing countries.