European Journal of Human Resource Management Studies
ISSN: 2601 - 1972
ISSN-L: 2601 - 1972
Available on-line at: http://www.oapub.org/soc

doi: 10.5281/zenodo.3933062 Volume 3 │ Issue 1 │ 2019

GRANT ELEMENT AND OFFICIAL DEVELOPMENT ASSISTANCE NEXUS IN SUB-SAHARAN AFRICA: A REVIEW AND STATISTICS

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Abstract:
The main thrust of this paper is to examine the concept of grant element as applies in the development finance landscape. Statistical review showed that between 1985 and 2015, the average grant element from official creditors (multilateral and bilateral donors) to the Sub-Saharan Africa within this period is 58.54% and was highest at 73.48% in 2000. The lowest to the region over the same period was 38.00% in 2005. Typically, the underlying purpose of grant element and the concessionality associated with Official Development Assistance (ODA) is to facilitate economic development and improve social outcome of the recipient countries. This is for the reason that concessional funds mitigating the burden of debt services and enable help countries avoid excessive sovereign indebtedness.

JEL: H81; N17; N27

Keywords: grant element; ODA; Sub-Saharan Africa

1. Introduction

The grant element of a loan is the grant equivalent expressed as a percentage of the amount committed. The grant equivalent of a loan is its commitment (present) value, less the discounted present value of its contractual debt service; future service payments are conventionally discounted at 10 percent based on the uniform reference, or 5 percent based on the IMF base rate for determining grant equivalent. The outcome of the DAC-HLM of December 2014 lead to the introduction of higher concessionality thresholds

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aimed at fixing softer terms and conditions to countries most in need. This is captured essentially in the modernised ODA which modified the threshold for ODA eligibility which was hitherto set at a grant element of 25%.

Under the modernised system, loans to Low Income Countries (LIC) and the Least Developed Countries (LDC) must reach a grant element of at least 45% to be scored as ODA, while Lower Middle Income Countries (LMIC) will require a grant element of at least 15%, and 10% minimum grant element for Upper Middle Income Countries (UMIC). Furthermore, the new system also lowered the discount rate from 10% (used for assessing the concessionality of loans) to 5% base. 5% being the current IMF discount rate, plus adjustment factors of 4% for LDCs and LICs, 2% for LMICs, and 1% for UMICs (DAC, 2016). In addition to being used for assessing the concessionality of loans (i.e. whether the loan meet the threshold), the new 5% base is also used for calculating ODA grant Equivalent. The new system will be the standard of reporting effective from 2018. However, to ensure full transparency over the impact of the change on the volume of ODA, the new and old system will be used in reporting ODA for 2015 and 2017 (see Puppetto, 2016; OECD, 2014; IMF, 2015; IDA, 2017; OECD, 2015a and 2015b).

Table 1: Parameters adopted in the December 2014
DAC-HLM agreement on concessionality of instruments

	LDCs and Other LICs	**LMICS**	**UMICs**
IMF Discount Rate (Base factor) *(i)*	5%	5%	5%
Adjustment factor (risk premium) *(ii)*	4%	2%	1%
Discount rate *(i)* + *(ii)*	9%	7%	6%
Minimum concessionality element - threshold	45%	15%	10%

Source: Own preparation based on DAC (2016) and DG Trésor (2016).

The discount rate will now be higher when the recipient country has a low-income level. It will range from 6% for an emerging country such as China or South Africa to 7% for a country such as, and 9% for the poorest countries. The wider the spread between the loan interest rate and the reference (i.e. the discount rate), the greater the loan's concessionality. Hence, for the same loan, the proportion recorded as assistance will thus be larger for a country with limited or no access to market financing. This approach takes into consideration the creditor's risk exposure and hence its financial effort, while the DAC ensure strict compliance with IMF and World Bank rules for debt sustainability (DG-Trésor,2016*)*.

2. Measuring the Concessionality of Loans

In order to elucidate the technicalities of measuring the concessionality of loans, we present Figure 1 below, which explains the process.

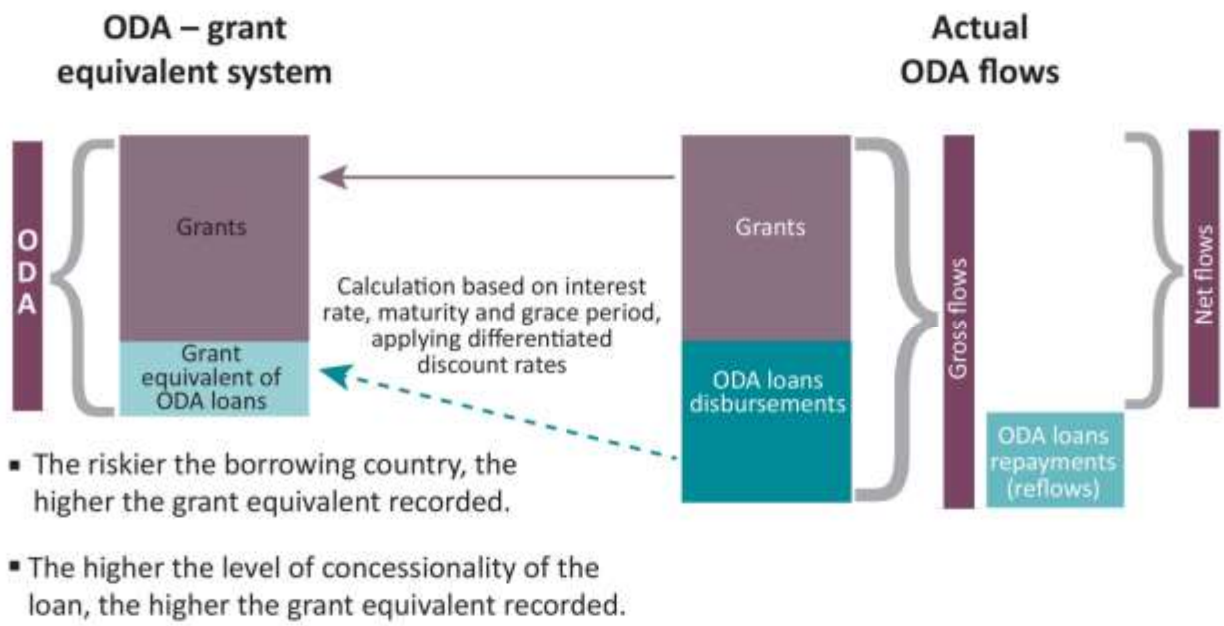

Figure 1: ODA Flows and Grant Equivalent Procedures.
(Source: Adapted from OECD (2014))

The shift from actual ODA cash flow to grant equivalents is illustrated in Figure 1. The present value of the loan calculated using the discount rate. IMF (2017) asserts that the discount rate is a base factor used for all concessionality assessments, regardless of the currency in which the loan is disbursed. IMF (2013) adds that discount rates for the grant element calculator use currency-specific Commercial Interest Reference Rates (CIRRs) and are updated on regular basis. The concessional level, as reflected by the grant equivalent, measure the "softness" of a credit with special emphasis on the benefit to the borrower compared to a loan provided at market rate (DAC, 2017).

3. Calculating the Grant Element

Arvanitis (2013) presents the formula for calculating the grant element for a loan with equal principal repayments as follows:

$$GrantElement = \frac{FaceValue - PresentValue}{FaceValue} \times 100$$

The formular for calculating grant element can therefore be expressed thus:

$$GrantElement = \frac{GrantEquivalent}{LoanValue} \times 100$$

If the interest rate charged for a loan is lower than the discount rate, the present value of the debt is less than its face value, with the difference reflecting the loan’s (positive) grant element (IDA, 2017).

Table 2 presents a scenario where there is a positive grant element when loan is disbursed at an interest rate below the market rate. The interest rate is 3%, and the present value of discounted repayments at 7% p.a is 28.09% less than the loan value, therefore the grant element is 28.09%.

Table 2: The grant element of a loan at 3% interest,
assuming market term is 7% - annual interest payment

A	B	C	D	E	F	G
Date	**Amount extended**	**Amount repaid – principal**	**Amount paid – interest**	**Total repaid**	**Discount factor (1.07 per annum, compounded)**	**Discounted repayments (E/F)**
1.1.2020	2,500,000				1.0000	
1.1.2021			75,000	75,000	1.0700	70,093.46
1.1.2022			75,000	75,000	1.1449	65,507.90
1.1.2023			75,000	75,000	1.2250	61,222.34
1.1.2024			75,000	75,000	1.3108	57,217.14
1.1.2025			75,000	75,000	1.4026	53,473.96
1.1.2026			75,000	75,000	1.5007	49,975.67
1.1.2027			75,000	75,000	1.6058	46,706.23
1.1.2028			75,000	75,000	1.7182	43,650.68
1.1.2029			75,000	75,000	1.8385	40,795.03
1.1.2030		2,500,000	75,000	2,575,000	1.9672	1,308,999.43
Total						**1,797,641.85**
*GrantEquivalent						**702,358**
**GrantElement						**28.09%**

Note: *Grant equivalent = Amount extended (B) less Total Discounted repayments (G) = 2,500,000-1,797,641.85= 702,358. **Grant element = Grant equivalent ÷ loan value = 702,358/2,500,000 × 100 = 28.09%.
Source: Own Computation

So far, it is worthy to emphasise that the *grant equivalent* estimates, at today's value of money, of how much is being given away over the tenor of a transaction, compared with a financial transaction at market terms. It is *grant equivalent* as a percentage of the commitment (present) value, and its calculations is applicable to all future debt services obligations on a transaction (Scott, 2017).

Figures 2 and 3 below explain grant elements in numbers. Figure 2 indicates that the low-income countries enjoyed most grant elements. From a regional perspective, the Sub-Saharan Africa has had substantial amount of grant elements in 2015 (58.08%) and over the 16 year average (59.55%) computed compared to the other regions.

Figure 2 presents trends of average grant element from new loan commitments, and the private creditors between 1985 and 2015.

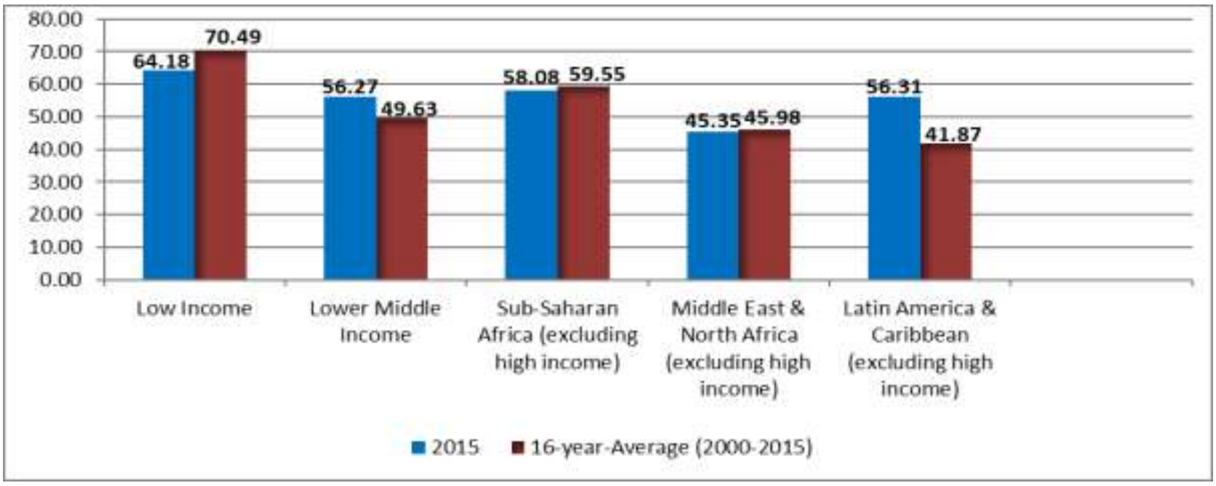

Figure 2: Average grant element on new external debt commitments, official (%) by Region and Income Group
(**Source:** Own Computation from World Bank, World Development Indicators)

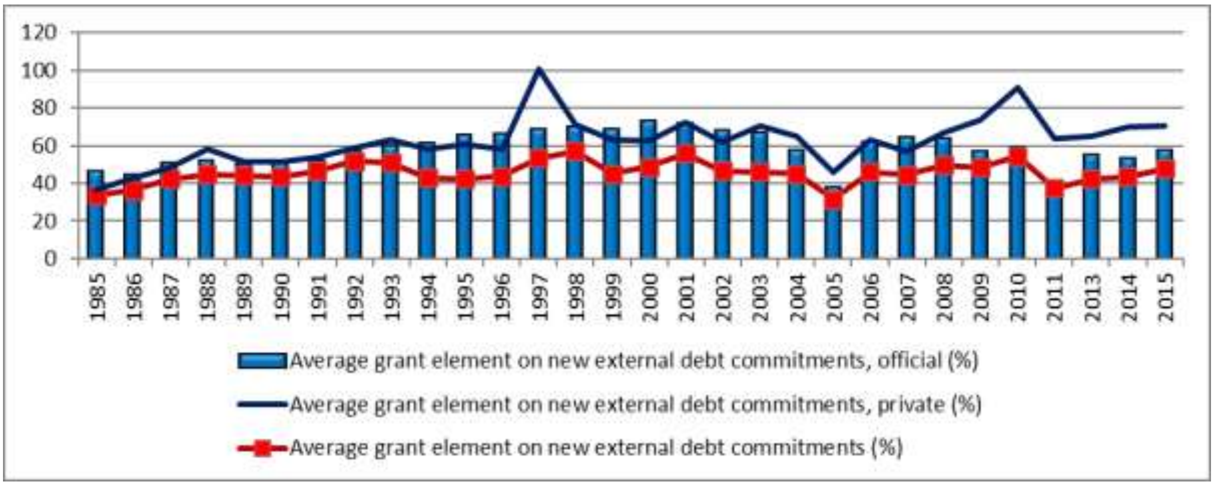

Figure 3: Average grant element on new external debt commitments, official, and Private (%)
(**Source:** Own Computation from World Bank, World Development Indicators)

4. Conclusion

According to the World Development Indicators, to obtain the average grant element, the grant elements for all public and publicly guaranteed loans are weighted by the amounts of the loans. The average grant element from official creditors (multilateral and bilateral donors) to the region within this period was 58.54% and was highest at 73.48% in 2000. The lowest to the region over the same period was 38.00% in 2005. Typically, the underlying purpose of grant element and the concessionality associated with ODA is to facilitate economic development and improve social outcome of the recipient countries. This is for the reason that concessional funds mitigating the burden of debt services and enable help countries avoid excessive sovereign indebtedness (GFC, 2014), there by availing the government of finances to investment in infrastructural and human capital development (Picarelli, 2016). Nevertheless, some studies have shown that excessive concessionality might impede growth, especially when recipient countries default on their concessional loans (Cordella & Ulku, 2007).

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