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Aid and public sector fiscal behaviour in failing states

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ABSTRACT

This paper looks at interactions between foreign aid and the public sector in developing countries, especially those considered to be fragile or failing states. A model is proposed which employs actual budgetary appropriations and revenue estimates (rather than estimated target variables) and allows for asymmetric preferences. Variants of the model are estimated using time-series data for Papua New Guinea (PNG). PNG is classified as a fragile state by the international community owing to perceived policy and institutional inadequacies. Results obtained suggest that foreign aid increases consumption and investment expenditures and decreases tax revenues and the level of borrowing.

1. Introduction

The international community has acquired lofty expectations of foreign development aid in recent years, especially since the adoption of the Millennium Development Goals (MDGs) at the United Nations (UN) Millennium Summit in September 2000. The MDGs aim *inter alia* to halve world-wide the number of people living in extreme income poverty by 2015. Part of the strategy to achieve or at least work towards the MDGs is a substantial scaling up of aid flows by donor nations (UN Millennium Project, 2005). This is clearly evident in aid statistics, with global Official Development Assistance (ODA) rising from $US69 billion in 2003 to around $US106 billion in 2005. ODA is expected to rise to $US130 billion in 2010 (OECD, 2006). While there is much optimism in the donor community about the impact of these flows, it has grave concerns about the effectiveness of aid to countries it classifies as 'fragile states'.[1] The impact of aid on growth and poverty reduction and the ability to efficiently use additional inflows is thought to be substantially lower in these countries compared to other recipients. Donors rightly insist that unless aid can be made to work better in fragile or failing states (the term preferred by and subsequently used in this paper), the intended developmental dividend from these increased flows will not be observed, and the world-wide achievement of the MDGs will not be possible in the foreseeable future, let alone by the agreed target of 2015.[2] Collier (2007) argues that finding initiatives to help the bottom billion (about three quartes of which live in fragile or failing states) is one of the key challenges facing the world in the twenty-first century.

While the countries belonging to the donor community failing state group are diverse in many respects, they all share two common characteristics. The first is that they are desperately poor. According to one of the two classification criteria currently used by the donor community, 46 countries were classified as fragile (failing) states in 2004.[3] Roughly one-third of the world's population living in extreme income poverty resides in these states. This equates to 340 million

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[1] See, for example, DFID (2005), McGillivray (2005) and ODI (2004).

[2] As will be evident from the discussion that follows in this paper, the term 'fragile state', as used in the donor community, is rather misleading, to the extent that it is not used to delineate states only in terms of their likelihood of breaking-up or vulnerability to downside shocks. It is for this reason that the term 'failing' state is subsequently used in this paper. It is these states that are the focus of Collier's (2007) comprehensive and engaging recent book. Note that Collier also primarily relies on the term failing as opposed to fragile.

[3] These countries were classified as fragile based on them being in the World Bank Low-income Country Under Stress (LICUS) group.

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people. Of the estimated 10.8 million children that died before their fifth birthday in 2002, just over 40% lived in these 46 states (Branchflower et al., 2004). The second characteristic is that they all have critically substandard public policies, poorly performing public institutions, or both. Donors actually use a measure of policy quality and institutional performance – the World Bank's Country Policy and Institutional Assessment (CPIA) – to deem a country fragile. It is indeed on the basis of this specific characteristic that donors primarily believe that these countries use aid poorly.[4]

Concerns over the likely impact of aid to failing states are broadly consistent with points long recognised in the research literature: recipient country public sectors are key players in determining the effectiveness of aid and that the broader impacts of these inflows are mediated by the manner in which public sectors use aid inflows.[5] The second of these points has been addressed in a research literature dating back to the 1970s that looks at the impact of aid on various categories of public sector revenue and expenditure. This research has its origins in the seminal work of Heller (1975), which went largely unnoticed in the literature on aid for a number of years. Gang and Khan (1991), in an important study, changed this state of affairs by applying Heller's model to time-series data for India.[6] Chishti and Hasan (1992), Khan and Hoshino (1992), Binh and McGillivray (1993), Gang and Khan (1993, 1999), Khan (1994), McGillivray (1994), White (1994), Otim (1996), Franco-Rodriguez et al. (1998), McGillivray and Ahmed (1999), Franco-Rodriguez (2000), McGillivray (2000), Mavrotas (2002, 2005), McGillivray and Ouattara (2005), Mavrotas and Ouattara (2006,) Ouattara (2006a, b) and Feeny (2006, 2007) have all followed Gang and Khan's lead with their own contributions to the 'fiscal response' literature, a term attributed to White (1992).[7]

The fiscal response literature has advanced both conceptually and econometrically as a result of the preceding studies. Advances include more theoretically sound and institutionally realistic utility function and constraint equation specifications, basing conclusions and policy recommendations on both reduced-form and structural equation parameter estimates, endogenising aid, analysing alternative aid disaggregations, using time-series data and the reporting of constraint and structural equation parameters consistent with the underlying theory. While these advances are important, it is widely acknowledged that there is still plenty of room for further improvement in both the design and application of fiscal response models (McGillivray and Morrissey, 2001a). In particular, no study has been able to address satisfactorily the two deficiencies widely thought to be the most serious in the fiscal response literature: the reliance on crudely estimated revenue and expenditure targets and the use of a utility function premised on perfectly symmetric policymaker preferences.[8]

Failing states have also been very much under-represented in the fiscal response literature, although this is understandable given that conditions in these countries are such that their failings include the reporting of requisite data. Only two of the above-cited studies, McGillivray and Ouattara (2005) and Mavrotas and Ouattara (2006), have looked specifically at a country classified as a failing state. Both, however, looked at the case of Côte d'Iviore.[9] More knowledge of the fiscal response to aid inflows in these countries is crucial, arguably more so than in other aid recipients.

This paper addresses both of the just-mentioned deficiencies. It builds on the work of Gang and Khan (1999) through its consideration of asymmetric preferences. It develops a generic fiscal response model that allows for asymmetric preferences and estimates this model using actual expenditure appropriations and revenue estimates instead of target estimates. It reveals that the problem with using estimated target values is far more serious than previously understood in the literature, and has in all likelihood led to seriously misleading policy recommendations. A specific form of this model is applied to Papua New Guinean time-series data for the period 1969 to 2000. This model has been largely based on fieldwork conducted in Papua New Guinea (PNG). Estimates of structural and reduced-form parameters are provided, based on alternative disaggregations of aid inflows.

While the modelling approach of this paper has a general appeal to the analysis of aid impact, a focus on PNG is interesting in its own right, for three reasons. First, PNG is unlike most other failing states in that the country has published annual data since the early 1960s on various categories of planned and actual revenues and expenditures. These data permit the estimation of a suitably specified fiscal response model. This in turn provides the potential for insights into the relationship between aid and various fiscal aggregates that are simply not possible for most failing states, and many other developing nations as well. Second, the level of official aid to PNG is particularly large. It has averaged 35% of government revenue since 1960, reaching as much as 60% in some years, and is much greater in magnitude than private foreign inflows (GPNG, 1962–2002; OECD, 2005). No other South Pacific country has received as much aid since 1960 as PNG (OECD, 2005). In per capita terms, aid to PNG has averaged US$90 since 1975 — nine times the average per capita receipts of all developing countries over the last ten years (OECD, 2005; UNDP, 1993–2003). Not only does this level of aid suggest that it is likely to have had observable impacts, but that the outlay of donor taxpayer funds warrants an evaluation of these impacts.

Third, PNG has experienced increasingly difficult times in recent decades (Windybank and Manning, 2003). PNG in many respects resembles the stereotypical failing, although still functioning, developing country. Achieving independence in the mid-1970s, PNG has experienced or exhibited frequent changes of government, a civil war, a military that has threatened revolt on a number of occasions, seemingly endemic corruption, a rapidly growing HIV/AIDS problem, low levels of personal security and a very poorly performing economy according to most if not all criteria. Some studies assert that foreign aid has actually contributed to aspects of PNG's decline (Hughes, 2003; Windybank and Manning, 2003). While there is little scientific evidence to support this claim, it is widely recognised that the PNG public sector has limited capacities to perform a number of functions, including the efficient application of aid inflows. This is reflected in it being classified by the international donor community as a fragile state, based on it being rated in the bottom two quintiles of CPIA scores (World Bank, 2003; Jones et al., 2004; McGillivray, 2005). In a further, somewhat radical and controversial response to the

[4] The two alternative criteria for assigning a country to the fragile state group are: (i) if it falls into the World Bank low-income country group and has a World Bank Country Performance and Institutional Assessment (CPIA) score of 3.0 or less and; and (ii) it belongs to the bottom two CPIA quintiles or was not assessed in the current CPIA round. Note that the first criterion is also used by the World Bank to assign a country to the Low-income Country Under Stress (LICUS) group (McGillivray, 2005). The statistics just quoted are for the LICUS group.

[5] This is also fully consistent with the findings of the very seminal and influential Burnside and Dollar (2000) study, which found that the impact of aid on per capita GDP growth is contingent on the quality of recipient country policies. It also assists in providing an explanation as to why Rajan and Subramanian (2008) fail to find any systematic impact of aid on growth.

[6] The important contribution of Mosley et al. (1987) should not be overlooked. This innovative study used the Heller model as a basis for analysing links between aid and growth using cross-country data.

[7] There is also a related literature, primarily concerned with the fungibility of aid. Fungibility occurs when a recipient is able to use aid funds for a purpose different to that intended by the donor. As such these studies look at the determinants of expenditure, treating revenues as exogenous and not looking at the interaction between revenues and expenditures. Better known studies of this kind include Cashel-Cordo and Craig (1990), Pack and Pack (1990, 1993), Khilji and Zampelli (1991, 1994), Feyzioglu et al. (1998) and Swaroop et al. (2000).

[8] Feeny (2007) provides the exception, although with limited elaboration of the advantages of such an approach.

[9] Feeny (2007) predominantly looked at failing states, to the extent that the study examined aid and fiscal aggregates using panel data for four countries, of which three are classified as failing. Those countries were Papua New Guinea, the Solomon Islands, and Vanuatu. The remaining country was Fiji.