Aiding Fragility or Stability? The Impact of Foreign Assistance on Government Effectiveness and Violence in Afghanistan

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Abstract

This paper considers the response of two dimensions of stability—government effectiveness and level of violence—to the inflow of foreign assistance into Afghanistan. Novel econometric techniques—frequency domain causality and wavelet coherence analysis—are employed in analyzing time-series data covering the period 1995-2022. Firstly, it is confirmed that a virtuous cycle exists, in which the level of government effectiveness responds to the inflow of foreign assistance, and the inflow of foreign assistance in turn responds to the level of government effectiveness. Secondly, it is found that the nature of the relationship is positive, in which higher levels of foreign assistance inflows are correlated with higher levels of government effectiveness. Thirdly, it is discovered that foreign assistance inflows take the lead in this relationship, leading to the conclusion that foreign assistance inflows raise the quality of government effectiveness in Afghanistan. Finally, the results show that foreign assistance inflows significantly predict the absence of violence in Afghanistan. In summary, the findings suggest that foreign assistance can increase stability in Afghanistan by promoting government effectiveness.

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1. Introduction

Extensive discussions are held on the subject of how foreign aid might assist developing economies such as Afghanistan in their effectiveness and peace. Given its significance in Afghanistan's efforts to reduce poverty and consequently promote stability, foreign aid is a crucial topic. Afghanistan is one of the least developed nations of the world, with most of its citizens living in poverty (Islam et al., 2022). Over three decades of armed conflict, which has further wreaked havoc on the quality of human and physical capital, is the cause of the nation's instability.

Afghanistan has been in a state of conflict for decades, with various international actors providing aid and assistance to the country in an effort to stabilize the situation and promote government effectiveness (Maizland & Segal, 2023). Afghanistan's operations and development budgets make up its core budget, which now depends heavily on outside assistance in the form of international aid. The operations budget is largely financed by donor funds, while the development budget is nearly entirely reliant on donor grants (Akbarzadeh & Ibrahimi, 2020). Approximately 63% of Afghanistan's budget for the 2020-2021 fiscal year was supported by foreign donors, according to an Oxfam report. Only 33% of revenue was generated from domestic sources, despite the fact that it tripled over the previous 10 years (Rasa, 2020). These numbers demonstrate a consistently high degree of assistance.

The main objective of this assistance has been to promote stability and development in the country, with a particular focus on building government capacity and institutions. However, the impact of foreign assistance on government effectiveness and violence in Afghanistan has been a topic of much debate and controversy (Waldman, 2008). In the context of Afghanistan, foreign aid has been linked to both positive and negative outcomes. Some studies suggest that foreign aid can help to stabilize fragile states by supporting the development of democratic institutions and providing economic opportunities to improve infrastructure, education and health services, which can contribute to stability and development (International Crisis Group, 2021). However, other studies have found that foreign aid can also contribute to state fragility by undermining local governance, fueling corruption and reinforcing the power of warlords and other non-state actors (Kenny, 2017; Akbarzadeh & Ibrahimi, 2020; Khan & Moulanazada, 2018).

Overall, the impact of foreign assistance on government effectiveness and violence in Afghanistan depends on a variety of factors, including the type and amount of aid provided, the context in which it is delivered, and the capacity of local actors to use it effectively. The long history of foreign help in Afghanistan demonstrates that only $14.74 billion has been allocated for civic reconstruction and development since 2002, compared to the almost $25 billion in security-related aid that donors have supplied, mostly for the strengthening of Afghan security forces (Afridi & Ali, 2020). The US has invested over $127 billion in the war in Afghanistan since 2001. The US military currently spends close to $36 billion annually on the nation, or around $100 million per day, while since 2001, the average daily aid expenditure by all donors has been only $7 million. Only 20% of the total amount donated over the past eight years has been received by the government (Konarovsky, 2017).

The purpose of this research is to determine whether the inflows of foreign assistance into Afghanistan aid fragility or stability. Specifically, the study examines the relationship between foreign aid and government effectiveness, as well as the relationship between foreign aid and violence in the country. Investigating the impact of foreign assistance on these key issues can lead to a deeper understanding of the challenges facing Afghanistan, and more effective strategies can be developed for promoting stability and development in the country. This paper contributes to the body of literature in a number of ways. First, it provides additional empirical insight on the response of two key measures of state stability—government effectiveness and level of violence—to the inflows of foreign assistance in Afghanistan. By considering the response of government effectiveness to foreign assistance, it can be determined whether foreign aid strengthens factors such as public service quality, civil service quality and its degree of independence from political pressures, quality of policy formulation and implementation, amongst others. Also, by examining the response of the state of violence to foreign assistance, it can be established whether foreign assistance is a useful predictor of the absence of violent conflict in the country. This study also contributes to extant literature on the methodological front. Frequency domain causality and wavelet coherence analysis, both econometric techniques that are robust to issues such as nonlinearities, short data series, seasonal/economic episodes, nonstationarities, structural breaks and frequency variations, are employed.

The rest of the paper is divided into different sections. The second section gives a broad look at existing research on how foreign assistance affects the effectiveness of the government and violence. The third section explains the data used and methodology followed. The fourth section presents the empirical outcomes. The last section summarizes the main findings and provides recommendations for future research.

2. Literature Review

One of the fundamental reasons for foreign aid donations is that it is able to indirectly promote stability in regions plagued by conflict through improvement in their economic conditions (De Ree & Nillesen, 2009). Consequently, a lot of research attention has been directed towards the economic impacts of foreign assistance in recipient nations. Widely cited examples belonging to this group include Burnside and Dollar (2000), Collier and Dollar (2002), Easterly (2003) and Dalgaard et al. (2004). The summary of theoretical arguments put forward by these scholars is as follows. First, raising income levels through aid donation is able to increase the opportunity cost of engaging in violent conflict in a manner that drives stability. Second, foreign assistance is able to lower dependence on primary commodities and consequently minimize resource-related conflicts.

While the existing theoretical arguments seem logical, to date, empirical evidence on the direct effect of foreign assistance on different dimensions of stability are still limited, especially for the case of Afghanistan. Some studies have found that foreign aid can play a key role in promoting stability and improving government effectiveness in the country. For example, a study by Humayoon (2015) finds that foreign aid can help to build the capacity of Afghan government institutions and improve their ability to deliver services to citizens. This in turn can help to promote trust in government and reduce the likelihood of violence. Other studies have found that foreign assistance has had a positive impact on government effectiveness in Afghanistan. For example, a study by the World Bank (2020) reveals that foreign assistance has been critical in building institutions and capacity in Afghanistan, and that it has played a key role in promoting stability and development. Similarly, a study by the International Monetary Fund (IMF, 2017) shows that foreign assistance has helped to improve governance and reduce corruption in Afghanistan.

With regards to the effect of foreign assistance on violence in Afghanistan, some studies have found that it has played a positive role in reducing internal conflict and insurgency. For example, Collier and Hoeffler (2002) posit that foreign assistance decreases the likelihood of civil war by fostering economic growth and state capabilities. The United States Institute of Peace (USIP, 2017) finds that foreign assistance has helped to improve security and reduce violence in the country. Similarly, a study by the RAND Corporation (2019) indicates that foreign assistance has played a key role in countering insurgency and promoting stability in Afghanistan. Such findings align with the popular hypothesis which states that inflow of foreign assistance relaxes the recipient nation's budget constraint, and as a result, military expenditure needed to combat violent conflict is raised (Devarajan et al., 1999; De Ree & Nillesen, 2009).

However, other studies have found that foreign aid can also contribute to fragility and violence in Afghanistan. For example, Grossman (1991) argues that foreign assistance increases the value of state capture and therefore increases the likelihood of armed conflict. Esman and Herring (2003) suggest that inflow of foreign assistance aggravates existing ethnic cleavages, and consequently, instability. Collier (2011) argues that foreign aid can contribute to state fragility by creating a dependency on aid and undermining the incentives for governments to develop sustainable economic and political systems. Additionally, Grady (2017) find that foreign aid can also fuel violence by providing resources to warlords and other actors who use them to perpetuate conflict. Another study by Bryld et al. (2014) reveals that foreign assistance has often been poorly coordinated and has had limited impact on institution building and capacity development. Similarly, in a study by the Center for Global Development (CGD), it is found that foreign assistance has had limited impact on governance and has often been associated with corruption and inefficiency (Kenny, 2017). This group of findings aligns with the common claim in extant literature that aid has a destabilizing effect as it raises the likelihood of violent conflict (see Grossman, 1991; 1999).

Despite these differing perspectives, there is a growing consensus that the impact of foreign aid on government effectiveness and violence in Afghanistan is complex and multifaceted. A study by Wright and Winters (2010) suggests that the relationship between foreign aid and government

effectiveness is shaped by a number of factors, including the type of aid provided, the recipient government's capacity to absorb and use aid effectively, and the broader political and economic context in which aid is provided. In sum, the literature suggests that foreign aid can play a role in government effectiveness, as well as in fragility and violence in Afghanistan. Further research is needed to understand the complex dynamics at play and to develop more effective strategies for providing assistance to the country. This is the gap this study attempts to fill.

3. Data and Methodology

Data

To examine the causal linkage between the inflows of foreign assistance into Afghanistan and two different dimensions of stability in the country—government effectiveness and violence—annual time series data covering the period 1995-2022 is used. The period sampled is determined by data availability. The indices on government effectiveness and violence used for empirical analysis are two of the category-specific Worldwide Governance Indices of the World Bank.

Both indices are constructed by averaging data collected from underlying sources related to each concept through an unobserved component model approach. Both indices are used in their percentile rank form ranging between 0 and 100, with higher values associated with better outcomes. Detailed information on the construction of the indices can be found in Kaufmann et al. (2011). Data on net official development assistance and official aid to Afghanistan publicly provided under the World Development Indicators of the World Bank serves as the measure of foreign assistance into Afghanistan.

Frequency domain causality

To examine the frequency domain causal linkage between foreign assistance to Afghanistan, Afghanistan's government effectiveness and the level of violence in Afghanistan, the frequency domain causality test proposed by Breitung and Candelon (2006) is first conducted. This approach is an improvement on the ideas of Geweke (1982) and Hosoya (1991). These authors introduced a frequency-based decomposition of spectral density which allows the establishment of causality at various frequencies via Wald testing. As an improvement on these previous works, Breitung and

Candelon (2006) further established that the null of no causal effect at some specific frequency is equal to two linear restrictions that are testable through Wald tests within a vector autoregressive model. This approach is general enough to accommodate higher dimension systems as well as cointegrating relationship, and is able to detect causality at different frequencies.

The frequency domain causality technique is chosen for empirical analysis because of the identified strengths. Thus, it is examined through the technique whether some component of Afghanistan's foreign assistance inflow at frequency ω can be regarded as a significant predictor of some component of Afghanistan's government effectiveness or level of violence. Linear restrictions are placed on the coefficients of the first component of a vector autoregressive model as follows;

$$y_t = a_1 y_{t-1} + \cdots + a_p y_{t-p} + b_1 x_{t-1} + \cdots + b_p x_{t-p} + \varepsilon_{1t} \tag{1}$$

Where y is the dependent variable (FDI), x is either government effectiveness (GE) or violence (VIO), a and b indicate coefficients for the lag polynomials and ε_{1t} refers to error term.

$M_{x \to y}(v) = 0$ is equal to the linear restriction:

$$H_0: R(v)b = 0 \tag{2}$$

Where:b $= [b_1, \ldots, b_p]'$ refers to the vector of the coefficients of x.

and R(v) $= \begin{bmatrix} cos\ (v) \cos(2v) \ldots \cos(pv) \\ \sin(v) \sin(2v) \ldots \sin(pv) \end{bmatrix}$

Wavelet coherence analysis

To test the time-frequency dependence between foreign assistance to Afghanistan, Afghanistan's government effectiveness and the level of violence in Afghanistan, wavelet coherence analysis is further conducted. This approach is a combination of both time and frequency domains. Its strength over other techniques lies in its ability to decompose time series in several wavelet scales and frequencies (Ramsey, 1999). The technique generates orthogonal timescale data decomposition as well as nonparametric representations of individual series (Bouri et al., 2017). Moreover, it is robust to structural breaks and suitable for nonstationary data. Overall, the ability of wavelet analysis to decompose one-dimensional time data into a bi-dimensional time-frequency makes it

possible to investigate the short-run and long-run causal relations between foreign assistance to Afghanistan and government effectiveness or level of violence.

Following Ramsey (2002), given two time series, p_t and q_t, to picture the correlation between them in time-frequency domain, the cross wavelet transform of the time-series is given thus:

$$W_{pq}(k,f) = W_p(k,f)\overline{W_q(k,f)} \tag{3}$$

Where $W_p(k,f)$ and $W_q(k,f)$ represent the cross wavelet transforms of the time-series p_t and q_t respectively.

Following Torrence and Compo (1998), the squared wavelet coherence equation can be specified thus:

$$R^2(k,f) = \frac{\left|C\left(f^{-1}W_{pq}(k,f)\right)\right|^2}{C\left(f^{-1}|W_p(k,f)|^2\right)C\left(f^{-1}|W_q(k,f)|^2\right)} \tag{4}$$

Where C represents the time and the smoothing process over time, $0 \le R^2(k,f) \le 1$ such that the closer $R^2(k,f)$ is to 1, the greater the degree of correlation between the time series variables at a particular scale. At the other end, the closer $R^2(k,f)$ is to 0, the lower the level of correlation (Kirikkaleli, 2021).

Finally, the equation of the wavelet coherence difference phase is given thus:

$$\phi_{pq}(k,f) = tan^{-1}\left(\frac{L\left\{C\left(f^{-1}W_{pq}(k,f)\right)\right\}}{O\left\{C\left(f^{-1}W_{pq}(k,f)\right)\right\}}\right) \tag{5}$$

Where L is the imaginary operator and O is the real part operator.

4. Empirical Results

Unit root results

As a preliminary test, the stationarity properties of the data series are established through the Dickey-Fuller generalized least squares (DF-GLS) unit-root test of Elliot *et al.* (1996) and the Phillips–Perron (PP) unit-root test of Phillips and Perron (1988). Table 1 presents the unit root test results. Test outcomes show that the null of nonstationarity cannot be rejected at level for foreign

assistance and government effectiveness. Both variables however become stationary after first differencing. While the DF-GLS result suggests that the violence index is stationary at level, the PP result indicates that it only becomes stationary after differencing.

Table 1. Unit root results

| Variables	FDI	GE	VIO
DF-GLS	-1.003	-2.527	-3.337***
ΔDF-GLS	-5.289***	-3.158***	-4.334***
PP	-2.223	-1.436	-2.368
ΔPP	-6.702***	-2.997**	-4.462***

*Note: *** $P < 0.01$, ** $P < 0.05$, * $P < 0.1$.*

Frequency domain causality results

The outcomes of the frequency domain Granger causality testing are next reported. Since the presence of unit roots is established in the variables, following Breitung and Candelon (2006), the first differences of the data series are employed in the tests. Figures 1-4 are the spectral plots produced by the causality tests. The plots report the test statistics along with their 5% critical values (red line) and 10% critical values (green line) for all frequencies.
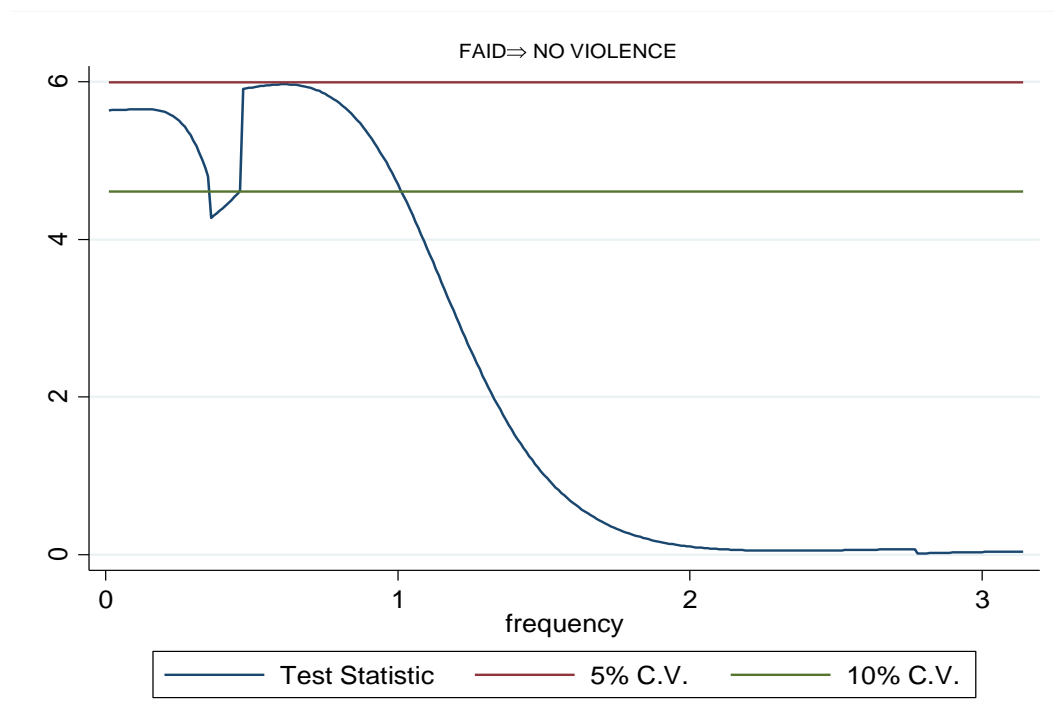
As shown in Figure 1, the null hypothesis of no predictability from foreign assistance to government effectiveness is rejected in the interval between 1 and 2.5 at 10% significance level. In Figure 2, the null of no predictability running from government effectiveness to foreign assistance is rejected at the interval between 0 and 1.4 at 10% significance level. The results therefore confirm the presence of a two-way causality running between foreign assistance and government effectiveness in Afghanistan. This is an indication that a virtuous cycle exists, in which the level of government effectiveness responds to the inflow of foreign assistance, and the inflow of foreign assistance in turn responds to the level of government effectiveness. It can therefore be concluded that foreign assistance is significantly useful for promoting government effectiveness in the country.
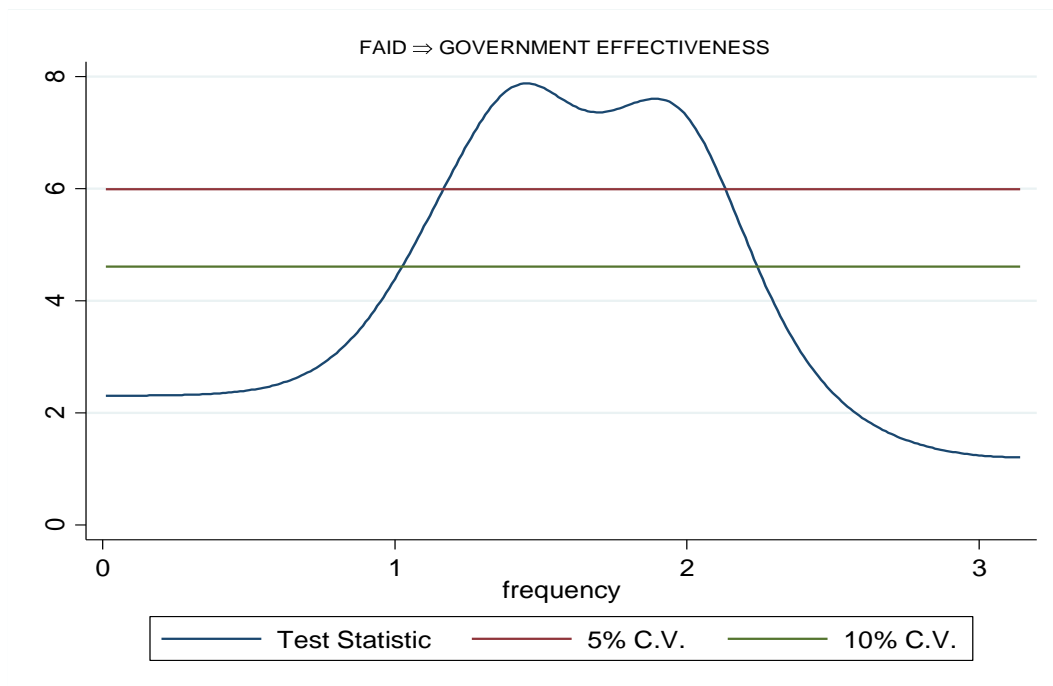
Figure 1. Breitung-Candelon Spectral Granger-causality Test: Foreign assistance to government effectiveness
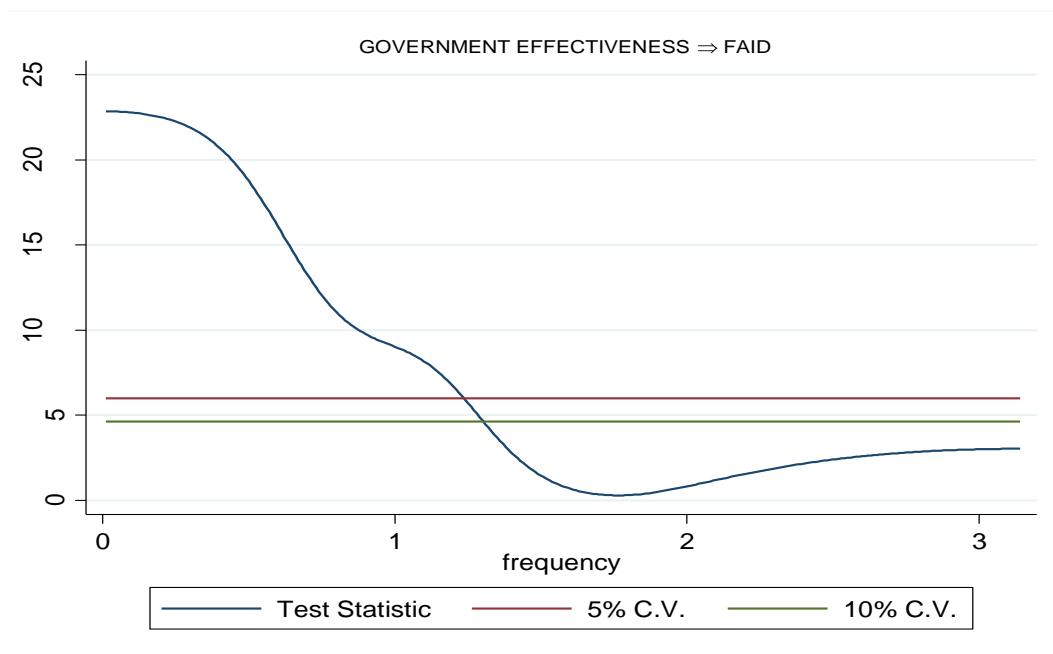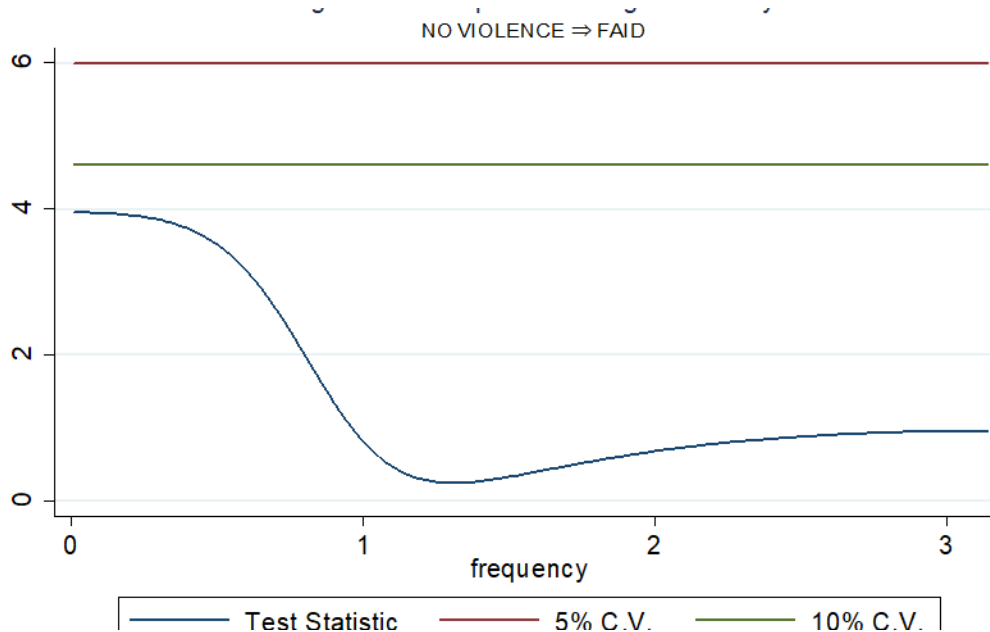

Figure 2. Breitung-Candelon Spectral Granger-causality Test: Government effectiveness to foreign assistance

Figure 3. Breitung-Candelon Spectral Granger-causality Test: Foreign assistance to no violence

Figures 3 and 4 show the causal relations between the inflow of foreign assistance into Afghanistan and the level of violence in the country. Figure 3 indicates that the null hypothesis of no predictability from foreign assistance to absence of violence is rejected in the interval between 0 and 1.1 at 10% significance level. Figure 4, on the other hand, shows that the null of no predictability running from absence of violence to foreign assistance cannot be rejected at any frequency even at 10% significance level. The results show that a one-way causal relation exists from foreign assistance to the level of violence in Afghanistan. This indicates that the level of violence experienced in Afghanistan responds to the inflow of foreign assistance.
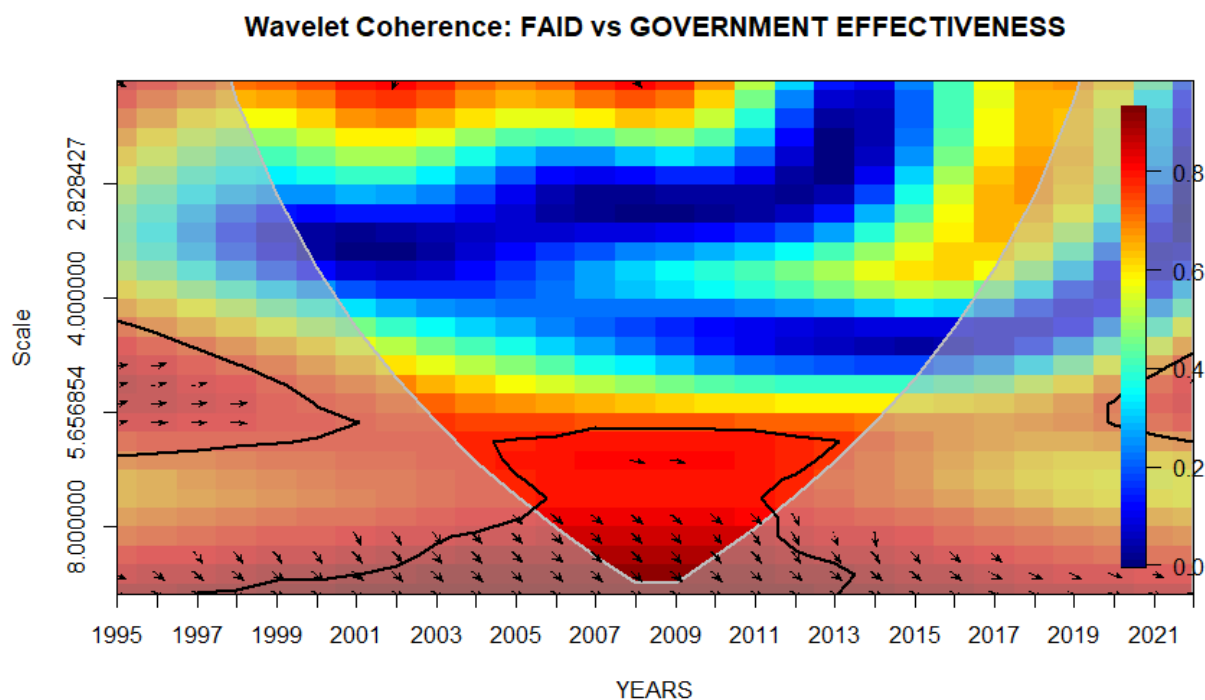
NO VIOLENCE ⇒ FAID

**Figure 4.** Breitung-Candelon Spectral Granger-causality Test: No violence to foreign assistance

Wavelet coherence analysis results

Figures 5 and 6 present the wavelet coherence analysis outcomes between the inflow of foreign assistance into Afghanistan and government effectiveness as well as level of violence. Frequencies are shown on the vertical axis of the images. Time horizon is reflected on the horizontal axis. The white line shaped like a cone is the cone of influence. On the right is a color scale which shows the degree of coherence or co-movement or correlation between the variables of interest. Color changes from blue to red represent changes from no coherence to high coherence. The thick dark lines enclosing the red areas indicate statistical significance at 5% significance level. The dark arrows are representative of wave spectra phase differences. Arrows pointing to the left reflect anti-phase, an indication that the series are completely out of phase or negatively correlated. Arrows pointing to the right show that the series are in phase or positively correlated. Downward pointing arrows are an indication that FAID is leading, whereas, upward pointing arrows indicate that FAID is lagging.

As depicted in Figure 5, similar to what was obtained via the frequency domain causality test, foreign assistance inflow into Afghanistan is highly correlated with the level of government effectiveness, especially in the periods between 2005 and 2013 and at low frequency, from 5.6 above. This period corresponds with the end of the international combat mission in Afghanistan and the handover of control to Afghan forces. The arrows pointing towards the right contained within the thick black line are indicative of a positive association between the inflow of foreign assistance and the level of government assistance in the country. Moreover, the downward pointing arrows reveal that foreign assistance is leading government effectiveness in the country. It is thus found that within the specified scale and time, the inflow of foreign assistance is an important indicator of government effectiveness in Afghanistan. However, as shown in Figure 6, the wavelet coherence analysis shows the absence of a significant correlation between foreign assistance inflow and the level of violence in the country.

Figure 5. Wavelet coherence between foreign assistance and government effectiveness

Wavelet Coherence: FAID vs NO VIOLENCE
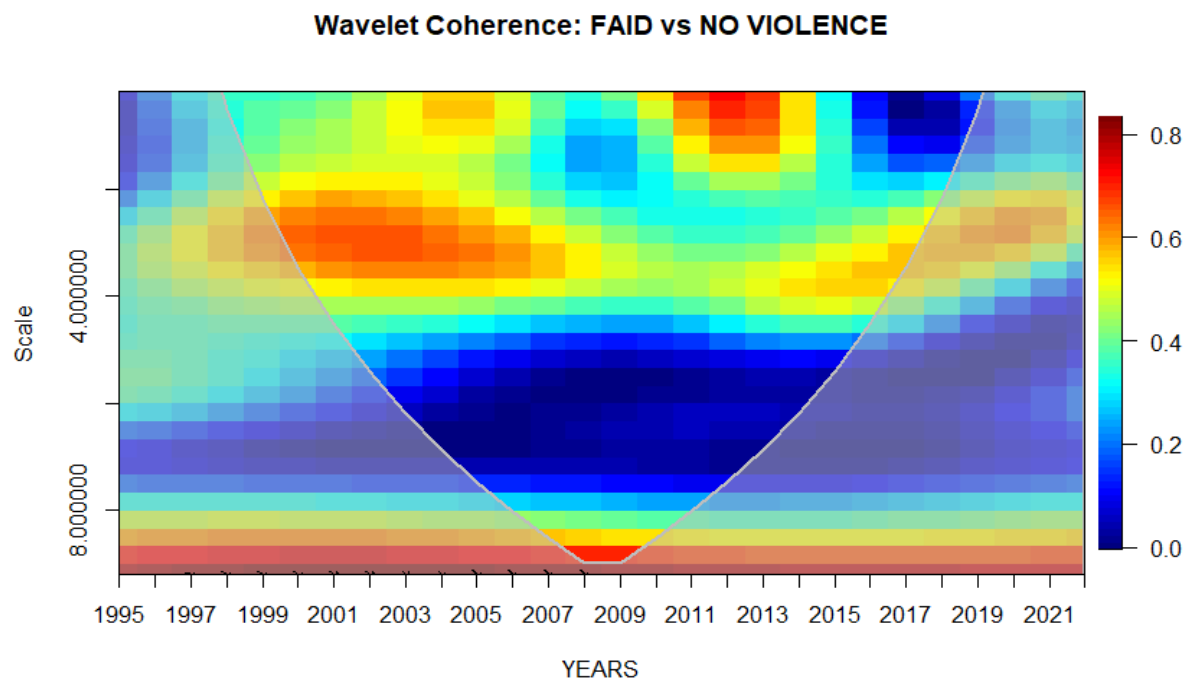
Figure 6. Wavelet coherence between foreign assistance and no violence

5. Conclusion

This paper considers the response of two dimensions of stability—government effectiveness and level of violence—to the inflow of foreign assistance into Afghanistan. By considering the response of government effectiveness to foreign assistance, it can be determined whether foreign aid strengthens factors such as public service quality, civil service quality and its degree of independence from political pressures, quality of policy formulation and implementation, amongst others. In addition, the examination of the response of the state of violence to foreign assistance provides an avenue by which it can be established whether foreign assistance is a useful predictor of the absence of violent conflict in Afghanistan. Novel econometric techniques—frequency domain causality and wavelet coherence analysis—that are robust to issues such as nonlinearities, short data series, seasonal/economic episodes, nonstationarities, structural breaks and frequency variations are employed in analyzing time-series data covering the period 1995-2022.

The study findings are quite revealing. Firstly, it is confirmed that government effectiveness does not only respond to foreign assistance inflows, a virtuous cycle also exists in which the level of government effectiveness responds to the inflow of foreign assistance, and the inflow of foreign assistance in turn responds to the level of government effectiveness. Secondly, it is found that the relationship is positive in nature, and higher levels of foreign assistance inflows are correlated with higher levels of government effectiveness. Thirdly, it is discovered that foreign assistance inflows take the lead in this relationship, leading to the conclusion that foreign assistance inflows raise the quality of government effectiveness in Afghanistan. Finally, the results show that foreign assistance inflow is a significant predictor of the absence of violence in Afghanistan.

Overall, the findings suggest that foreign assistance can increase stability in Afghanistan by promoting government effectiveness. This is perhaps due to its ability to prevent financial shortfalls that make it difficult for governments to pursue economic growth and strengthen state capabilities. As a policy recommendation, it is therefore suggested that foreign assistance should be specifically tied to programs that improve governance in the country, as the findings show that this is a significant channel for promoting stability in the country. This is in line with the suggestions put forward by the Meltzer Commission. In addition, this study outcome suggests that foreign assistance is potentially an important determinant of the level of conflict in Afghanistan, though the exact nature of this relationship is still up for debate.

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