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Political connections and post-disaster assistance in rural Vietnam☆

Trong-Anh Trinh [a,*], Simon Feeny [b], Alberto Posso [b]

[a] Melbourne Institute of Applied Economic and Social Research, University of Melbourne, Australia
[b] School of Economics, Finance, and Marketing, RMIT University, Australia

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ABSTRACT

Political connections have been shown to lead to corruption, favouritism and the pursuit of self-interests. They can therefore serve as an impediment to development and poverty reduction. This study examines whether having political connections is associated with post-disaster support from government authorities in the case of Vietnam. Using commune level data for the period 2012 to 2014 and a number of alternative econometric specifications, it finds that communes with higher levels of connections at the district level have a higher probability of receiving support in a post-shock period. The type of political connections is found to be important. We find a strong impact of political connections when household members are officials themselves or when households have relatives as officials. Having friends as officials does not appear to impact the likelihood of receiving assistance. The impacts are also greater when households have siblings, offspring or cousins working in government, but no evidence is found when officials are parents. Finally, having connections with district leaders is more important than connections with district officials.

1. Introduction

There is an emerging body of literature that examines political connections in the context of economic development (Caeyers and Dercon, 2012; Markussen and Tarp, 2014; Do et al., 2017; Lehne et al., 2018). Poor levels of governance and financial accountability in developing countries can lead to resources flowing to a privileged few. While having political connections is crucial in providing information to policymakers, government officials using their resources to serve their own self-interests will reduce the effectiveness of poverty alleviation programs. Decentralised local governments in developing countries may more efficiently elicit people's preferences than a centralised government, but they may also be subjected to the local political capture of public goods (Panda, 2015). While a substantial literature has examined the influence of political connections on the allocation of welfare programs, very few studies have been undertaken to understand the impact of such connections on post-disaster assistance (Takasaki, 2011; Caeyers and Dercon, 2012; Atkinson et al., 2015). Understanding how resources are distributed after a disaster is increasingly important. Populations in developing countries are becoming increasingly concentrated in vulnerable areas and extreme weather events are predicted to increase in frequency and severity (Solomon et al., 2007).

In this study, we examine whether lower level governments with greater political connections are more likely to receive support programs from the central government following natural disasters. We use Vietnam as a case study. The country is one of five to be

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* Corresponding author. Melbourne Institute of Applied Economic and Social Research, Faculty of Business and Economics, University of Melbourne, Australia.
E-mail address: tronganh.trinh@unimelb.edu.au (T.-A. Trinh).

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deemed most-affected by climate change and has been suffering from a high frequency of natural disasters. Even though, Vietnam remains solidly authoritarian, since its reforms in the mid-1980s it has adopted a process of political decentralisation (Malesky and London, 2014). Combining decentralisation and authoritarianism allows public officials to distribute funding and political rents without public scrutiny. In the context of post-disaster assistance programs, local leaders and government representatives select recipients without necessarily considering which communities have been worse affected. Local elites might therefore favour communes in which their friends or relatives reside, which results in a lack of legitimacy and reduced efficiency of assistance programs.

Most previous studies on political connections and resource allocations focus on democratic regimes, where political capital could be gained in exchange for disaster relief or other forms of support (Dasgupta and Beard, 2007; Besley et al., 2011; Panda, 2015). In the context of an authoritarian regime, however, political capital is an unlikely goal of public officials. We therefore investigate the role that relationships can have in determining support outcomes. We differentiate 'family ties' and 'social ties' to shed light on the mechanisms that drive resource allocation in authoritarian regimes. We use broad measures of political connectedness identified as: (i) households with members as public officials; (ii) households with relatives as public officials living outside the household; and (iii) households with friends or acquaintances as public officials. Our paper thus departs from most previous studies that use a simple definition of political connections, such as whether households are politically connected or that examine the share of households that have connections (Goldstein and Udry, 2008; Caeyers and Dercon, 2012; Panda, 2015; Alatas et al., 2019). We focus on connections at the district level given that post disaster funding decisions are made at the province level and the district leaders have direct authority to allocate resources.[1] We hypothesise that communes with more political connections will receive greater support since district officials are likely to favour the communes in which they have connections.

We use data from the Vietnam Access to Resources Household Survey (VARHS). The existing literature has been constrained by the paucity of data on the ranking of officials in authoritarian countries which are often too sensitive to obtain. The VARHS provides unique information on public officials at the household level. They are matched with the data on receiving support in the post-disaster period at the commune level which are available for the years 2012 and 2014. We estimate the probability that a commune receives support from the government following a disaster, subject to its political connections at the district level. We use different model specifications including conditional fixed-effects logit models and linear models with fixed effects. This approach has been widely used in studies examining the probability of participating in poverty alleviation programs (Panda, 2015) and receiving government credit (Markussen and Tarp, 2014).

Our findings stress a significant role of political connections on the allocation of disaster assistance in the context of climatic shocks. We show that communes with higher levels of connections at the district level are more likely to receive disaster support in a post-shock period. Specifically, we find that an increase in the number of connections for the average household by 1 unit in a commune increases the probability of receiving support after a natural disaster by approximately 30.7 percent. There is strong and robust evidence of 'family ties' acting as a mechanism. We find no evidence of a 'social ties' channel. We also uncover evidence suggesting that support is more likely to flow when household political connections are with younger family members. Finally, we show that having connections that are district leaders is more important than having connections as district officials. Overall, our findings suggest that political connections influence disaster assistance which might therefore reduce the effectiveness of such programs. Findings from this study, although focused on Vietnam, may also provide insights on resource allocation in other socialist economies.

The remainder of this paper is structured as follows. Section 2 provides a brief summary of previous studies and highlights the contributions of the paper. Section 3 presents a background of political connections in Vietnam and what they might mean for communes in the aftermath of a natural disaster. Section 4 discusses the empirical strategy and data used in this study. Section 5 presents and interprets the results while Section 6 provides the conclusion.

2. Existing literature and contributions

Our work fits broadly into the large literature on post-disaster recovery. Most studies show negative impacts of natural disasters on demographic changes in both developed and developing countries. Examples of such impacts include migration (Gröger and Zylberberg, 2016), poorer health outcomes (Lohmann and Lechtenfeld, 2015), and increased income inequality (Keerthiratne and Tol, 2018). Assistance in the post-disaster period therefore takes a crucial role given that affected populations in developing countries are often uninsured and priced out of safer areas (Klomp, 2019). The provision of disaster assistance is determined by a wide range of factors. A large body of literature has focused on international aid in the context of disasters and found that distribution of aid is affected by political interests of donors (e.g., Annen and Strickland, 2017; Weiler et al., 2018) in addition to the level of need and other characteristics of recipient countries, such as the quality of their institutions (Raschky and Schwindt, 2012) and their geopolitical position (Fink and Redaelli, 2011). Yet there are very few studies examining the allocation of resources provided by domestic governments in the aftermath of disasters, possibly because of the lack of data. Our study aims to fill this gap in the literature.

We study the allocation of relief following disasters against the backdrop of political connections. There are a handful of studies that examine how resource allocation is associated with political connections in developing countries. Besley et al. (2011) find that government officials in South India use their agenda-setting power to allocate more resources to their own village. Specifically, politician households are roughly 15 percent more likely to receive a Below-Poverty-Line (BPL) card. Similarly, Panda (2015) shows that

[1] Unfortunately, we are not able to examine the impacts of political connections at higher levels due to paucity of data.

households connected to a local political executive have a higher probability of receiving poverty-alleviating entitlements in India by 0.069 points compared to unconnected households. These results are consistent with those reported by Goldstein and Udry (2008) in Ghana, Alatas et al. (2012) in Indonesia, and Han and Gao (2019) in China. It should be noted that political connections may not be necessarily pernicious to community development. Mansuri and Rao (2004) suggest that in some cases elites may take actions that benefit non-elites, called 'benevolent capture'. Similarly, Dasgupta and Beard (2007) confirm pro-poor benefit allocations in Indonesian communities controlled by elites.[2]

We build on work that uses natural disasters as a quasi-experimental scenario to investigate the relationship between political connections and disaster relief. Caeyers and Dercon (2012) investigate the influence of political connections using a small dataset of 15 rural areas in Ethiopia. The authors find that households with local political connections have more than a 12-percentage point higher probability of obtaining cash or food receipts than households without such connections in the period following the 2002 drought. Aldrich (2010, 2016) find political connections play a role in the distribution of post tsunami aid to southern India and in the earthquake and tsunami recovery efforts in Japan in 2011. Atkinson et al. (2015) show that political connections are important influences of assistance provided to households in the Philippines following typhoons. Focusing on kin-based hierarchy, Takasaki (2011) finds that local elites capture the allocation of housing reconstruction funds among cyclone victims in rural Fiji. While these studies have provided evidence of the impact of political connections, the relative importance of different types of connections remains unexplored. This paper differentiates the role of 'family ties' from 'social ties' in the post disaster assistance allocation.

In Vietnam, few attempts have been made to understand the role of political connections in economic development. For example, Walder and Nguyen (2008) find that being a cadre in the country has a positive impact on income, although the return to being a cadre is lower than the return to private entrepreneurship, especially in comparison with China. Markussen and Tarp (2014) investigate the relationship between having relatives (outside of the household) in positions of political power and land investments in rural areas. They find that family ties to local government officials encourage household land-related investments. Using the Vietnam Access to Resources Household Survey (VARHS), the authors identify three explanations for this finding. They find that households with political connections: (i) have a lower probability of being expelled from the land by the state; (ii) have greater access to credit; and (iii) receive higher levels of transfers. Do et al. (2017) find that the home communes of officials receive greater government funded infrastructure within three years of them being promoted. The authors argue that an official's favouring of their hometown is captured in the old saying 'when one person becomes a mandarin, his whole clan benefits'. While interesting, this depiction might under-represent the true value (or cost) of political connections by limiting them to only one channel – being from the same hometown. More recently, Markussen and Ngo (2019) use VARHS and show that Communist Party membership is associated with a higher propensity to use credit and to boost income from farm- and non-farm enterprises.

Our analysis departs from most existing studies by exploring different types of connections including (i) household members that are officials; (ii) relatives that are officials; and (iii) households that have friends as officials. This allows us to carefully examine whether 'family ties' or 'social ties' are more important in influencing the receipt of disaster support. We also examine other dimensions of political connections including relationship-type (e.g., parents, siblings) as well as different positions held at the local government level (e.g., district leaders, district officials). Understanding these intricacies helps paint a clearer picture of the channels that influence political outcomes in developing countries governed by authoritarian regimes.

Finally, Vietnam provides a unique setting to investigate the relationship between political connections and post-disaster assistance. The country remains an authoritarian state with political power concentrated in one political party, and at the same time has been successful in making a transition to a market economy and recording high rates of economic growth. A key feature of its success has been the decentralisation of economic power which allows for autonomy of local governments in institutional and economic development (Malesky, 2008; Malesky and London, 2014). Decentralisation, however, is potentially problematic in the context of disaster relief. In the aftermath of climatic shocks, decentralisation provides opportunities for officials to distribute resources ineffectively and unequally. Officials can potentially make decisions based on self-interests including the allocation of funds to communes where they have connections. This problem is exacerbated by lack of transparency, corruption and bureaucratic patrimonial localism evident in authoritarian regimes (Van Arkadie et al., 2010). For example, Malesky et al. (2014) show that recentralization improves public services delivery, which is explained by reducing elite capture of the policy-making process. Our study thus attempts to provide further evidence of the inefficiency of decentralisation when local officials use their power to serve their self-interests in a post-disaster period.

3. Background

In Vietnam, political power is managed by a single political party, the Communist Party of Vietnam (CPV), which has ruled the country since the Vietnam War (London, 2009). The ruling CPV holds congress every five years. During congress, the party selects, appoints, and influences the filling of all executive and legislative positions at both local and national levels (Gillespie, 2008). The administrative system of Vietnam is divided into three levels: provinces, districts and communes.[3] At all three levels there is a representative body (the People's Council - *Hội đồng Nhân dân*) and an executive body (the People's Committee – *Uỷ ban Nhân dân*),

[2] Political connections have been widely examined across different contexts. For example, a large body of literature examines political connectedness and firms' performance and the value of firms (e.g., Fisman, 2001; Khwaja and Mian, 2005; Li et al., 2008). In these studies, political connections are formed through bribes/corruptions or other forms of transfers between politicians and firm representatives. Our study, in contrast, uses the term political connections to refer to any (non-monetary) connection between household members and officials.

[3] By 2009, Vietnam has total 63 provinces, 684 districts and 11,112 communes (Vietnam 2009 Population Census).

although they often have overlapping memberships. The two most powerful positions are local party secretary (of the People's Council) and chairman (of the People's Committee). The authority of the party secretary precedes that of the chairperson.[4]

Even though Vietnam is governed by a single party, elections are contested for seats in the People's Council, albeit the candidates are usually nominated and approved by the higher-level administrative unit. The number of councillors comprising the People's Council depends on the population of that province. The People's Council is elected for a five-year term. The party secretary is elected from the councillors at the beginning of each congress. In some cases, this position is nominated by the Central Committee of the CPV.

Since *Doi Moi*, Vietnam's period of reform which began in 1986, the central government has promoted decentralisation, granting substantial administrative and fiscal autonomy to local governments. Local officials have substantial influence over the local economy by managing key resources, such as land and credit as well as controlling taxation and government spending (Wescott, 2003).

As argued above, in the context of public welfare, this could, however, be associated with a problem of hometown favouritism whereby officials direct (more) public resources toward their own communes (Do et al., 2017). This is particularly likely when the process of collecting information on eligibility for welfare programs is costly and the allocation of financial resources is based on criteria rather than objective need. As a result, the allocation of government resources across communes is likely to be inefficient, at least from a development perspective. When this issue is coupled with other inherent problems associated with corruption and poor coordination among government agencies, the role that political connections play in determining societal outcomes becomes consequential.

The allocation of post-disaster relief is particularly important in the Vietnamese context because it is highly vulnerable to climatic and weather shocks. Located in a tropical monsoon region with a diverse and complex topography, Vietnam suffers from different types of natural disasters and approximately 70 percent of the population is exposed to risks from such extreme events (ISPONRE, 2009). Edenhofer et al. (2011) report an annual economic loss equivalent to 1.3 percent of Gross Domestic Product (GDP) in the period 1990 to 2009 resulting from natural disasters. Given the vulnerability of rural areas to natural disasters, the government has provided more than US$450 million in support to more than 6000 communities since 2005 (ISPONRE, 2009). Support programs are designed to provide financial resources for affected communes to improve infrastructure as well as to provide food and other facilities to vulnerable households.

4. Model specification and data

4.1. Model specification

This section outlines the empirical model used to examine how political connections impact on the probability of communes receiving government assistance following a disaster. Our arguments are largely based on those of Markussen and Tarp (2014) in their analysis of the role of political connections on rural land investments in Vietnam and Caeyers and Dercon (2012) in the context of the distribution of food aid in Ethiopia. Markussen and Tarp (2014) focus on whether households have relatives working as public officials. They argue that if households with political connections are more likely to make investments on their land, this is likely due to nepotism or government capture by the extended families of public officials. Caeyers and Dercon (2012) view political connections as part of a household's social capital. They distinguish between horizontal social networks (connections with others that have a similar degree of power) and vertical networks (which relate to connections between households and the political elite). The horizontal networks play an important role in providing information flows. If households have a large network of horizontal connections, they are more likely to: (i) obtain information about disaster assistance programs; and (ii) be able to effectively lobby policymakers for assistance being directed towards them. While vertical connections with elites can also aid in information flows and in signalling a need for support, they can also be a source of favouritism and used to ensure that assistance programs are directed to them rather than to those in greater need.

Drawing on these arguments, our study tests the following two hypotheses. First, we examine whether communes in which households have more political connections at the district level are more likely to receive assistance following a disaster. Second, we dig deeper into the types of relationship between households and officials. Specifically, we test the hypothesis that the influence of family connections ('family ties') is stronger than the influence of having social connections ('social ties').

Our empirical model specifies government support for affected communes in a post-disaster period being determined by its political connections as well as disaster and commune characteristics:

$$S_{i,t} = \alpha + \beta Log(Pc_{i,t}) + \gamma Log(Sh_{i,t-1}) + \delta Log(C_{i,t}) + \mu_i + \eta_t + \varepsilon_{i,t} \quad (1)$$

The variable $S_{i,t}$ is a dummy equal to one if commune i receives support from the government's official support program in period t. The key independent variable in our analysis is political connections ($Pc_{i,t}$), measured by the total connections at the district level that commune i has in period t. Since communes with larger populations are likely to have more connections, we take the number of connections divided by the number of households sampled per commune.[5] While examining connections at an aggregate level, we also investigate three different types of connections: (i) household members as public officials; (ii) relatives that are public officials that live

[4] The chairman often takes the position of deputy secretary in the People's Council.

[5] Table A1 (Appendix) shows that there is a significant variation in the number of households sampled per commune in five out of twelve provinces in our sample (i.e., Lao Cao, Lai Chau, Dien Bien, Dak Lak, and Dak Nong).

outside the household; and (iii) households that have friends or acquaintances as public officials. Furthermore, we decompose the relationships of public officials with households to parents, siblings or offspring. The key parameter β measures the impact of having political connections on the probability of receiving support from the disaster resilience program.

The variable $Sh_{i,t-1}$ measures the number of disasters that commune i has been subjected to in the past. We assume that communes that have a higher frequency of disasters are more likely to receive support from the government. $C_{i,t}$ is the vector of control variables which includes (average) annual income per capita in commune i in period t and headcount poverty in commune i in the same period. We also include other communes' characteristics to capture socioeconomic circumstances of communes such as the percentage of households using electricity and hygienic water as well as the percentage of the population that has completed high school. Finally, we include μ_i and η_t denoting commune and year fixed effects, respectively. The commune fixed effects account for time-invariant and unobservable factors such as geographical conditions and trade exposure. The year fixed effects deal with macroeconomic shifts that could impact both political connections and access to support programs.

Our analysis starts by estimating Equation (1) using a conditional fixed-effects logit model to account for the dependent variable being a dummy variable. One potential problem with this logistic regression is the missing observations that arise when the dependent variable is constant over time. In other words, the estimated results only consider communes gaining assistance or losing assistance in the study period. Another challenge of using the logit model with fixed effects is that we are not able to estimate the marginal effects as they depend on the values of fixed effects. Therefore, we use estimates from a linear probability model with fixed effects as a good approximation for the average marginal effects from the nonlinear model (Wooldridge, 2005).

Finally, it should be noted that our analysis does not consider communes that did not suffer from a natural disaster as we focus on post-disaster assistance. This, however, may raise the problem of selection bias given the heterogeneity between communes affected by disasters and those that did not suffer from extreme events. It is plausible that areas vulnerable to disasters may need more officials, thus increasing the likelihood of both receiving support and needing it. We conduct a simple t-test to check whether any differences between these types of communes exist. Using a set of commune characteristics, we find no evidence of statistically significant differences between communes (see Table A2, Appendix). More importantly, there is no evidence of differences in political connections across communes. Fig. 1 shows that the number of political connections across provinces in our sample. Political connections are strongest in provinces such as Nghe An and Dak Lak, while the opposite is found in Quang Nam, Khanh Hoa, and Lam Dong provinces.

4.2. Data

In this study, we utilise a panel dataset from the Vietnam Access to Resources Household Survey (VARHS), provided by the United Nations University's World Institute for Development Economics Research (UNU-WIDER). The survey instrument consists of (i) a commune module including information on infrastructure, access to services and development programs, and (ii) a household module which solicits information on characteristics of household members such as agricultural activities and a household's welfare. The aim of VARHS is to complement the large and nationally representative Vietnam Household Living Standards Survey (VHLSS), with a specific focus on collecting data and gaining an understanding of rural households in Vietnam.

VARHS started with a pilot survey in 2002 which covered a sample of 932 households in rural areas in four provinces (Ha Tay, Long An, Phu Tho, and Quang Nam). These households were randomly selected from the VHLSS in 2002. The sample was increased by 2324 households in the first official VARHS survey in 2006 (also taken from the VHLSS). Given that the original VARHS sample was limited to those that were present in 2006 and thus slightly older than a representative sample, the subsequent survey rounds were expanded in number and included more than 3200 households. Finally, a balanced sample of 2162 households is constructed covering 12 provinces and 464 communes for the period 2006–2014.[6] The overall attrition rate in this period is seven percent, which is relatively low considering that there are five survey waves (Brandt and Tarp, 2017).

Data for most variables included in the model are collected from the commune module. We focus on the period 2012 to 2014 when information on receiving support after disasters is available. In each survey, respondents were asked whether there was any disaster that occurred in the past two years. There are four types of climatic shocks: flood, drought, typhoon and landslide. For each type of shock, there are questions asking whether the commune received any assistance in the post-disaster period. To examine the impact of political connections on post-disaster assistance, we only focus on communes which suffered natural disasters. Fig. 2 presents a summary of climatic shocks in Vietnam using the VARHS dataset. The number of climatic shocks has increased significantly in all provinces of our sample, which is consistent with findings from a special report by the Intergovernmental Panel on Climate Change showing that climate change is an increasingly important issue in Vietnam (IPCC, 2018). Fig. 3 then provides a summary of communes affected by natural disasters in the period 2012 to 2014. From the total sample of 464 communes, 328 communes were affected by shocks in 2012 and 371 communes in 2014. There are 173 affected communes (about 53 percent) which did not receive support from the government in 2012, while this number increased to 255 communes (about 69 percent) in 2014.

The information on political connections is derived from the household module of the survey. The household survey collected detailed information on connections to officials. Public officials, in the context of our study, are defined as those who hold public

[6] Communes in the VARHS sample were randomly selected from the nationally representative VHLSS. The VHLSS consisted of 3063 communes, which in turn were taken from the master sample of total 10,476 communes from the most recent population census. Households were randomly sampled from the master sample and weights on households were calculated to represent the population census for some basic characteristics. For more details of the construction of VARHS, see Brandt and Tarp (2017).

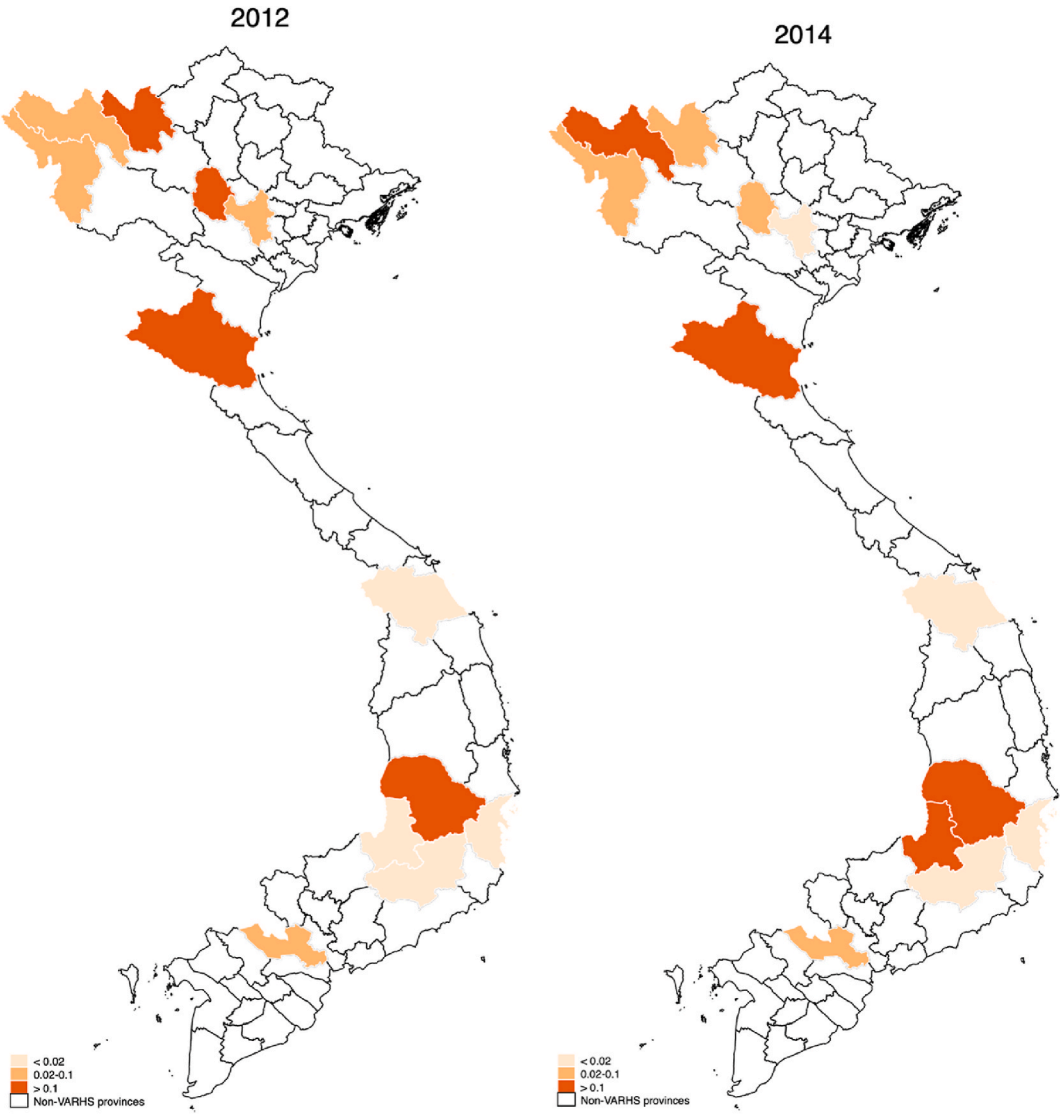

Fig. 1. Political connections in Vietnam in the period 2012–2014. *Notes:* Authors' calculation from 12 provinces of VARHS in the period 2012–2014. A darker value represents a higher share of households with political connections (in percent). One province in our dataset, Ha Tay, was merged with the capital Ha Noi after 2010. Unfortunately, we are not able to separate out Ha Tay in the figures.

responsibility at the district level.[7] The first category of connections includes households themselves having public officials. The second category includes households having relatives as officials. The third category includes households having friends or acquaintances as officials.

The dataset also contains information on the positions that connected people hold in public office. This includes district/commune leader, district/commune official and mass organization leader. Since mass organizations (such as farmer's unions, women' unions and youth unions) are not political organizations, they are not included in the study. In this study, we are interested in connections with district officials because they have direct authority to allocate assistance to communes. We also examine connections with commune officials and non-political groups to check the robustness of our results.

Finally, the survey contains information on the specific relationships of public officials with households – to parents, siblings or offspring. We expect that the power dynamic underlying these relationships can influence the allocation of disaster relief. For example, as in many other developing country regions, offspring in East Asia are socially understood to have a responsibility toward their parents, over and above other relatives. Therefore, we would expect that sons or daughters of household heads that are now officials are more likely to provide post-disaster relief to their families, *ceteris paribus*.

[7] Top officials and people working in state-owned enterprises are not included according to this definition.

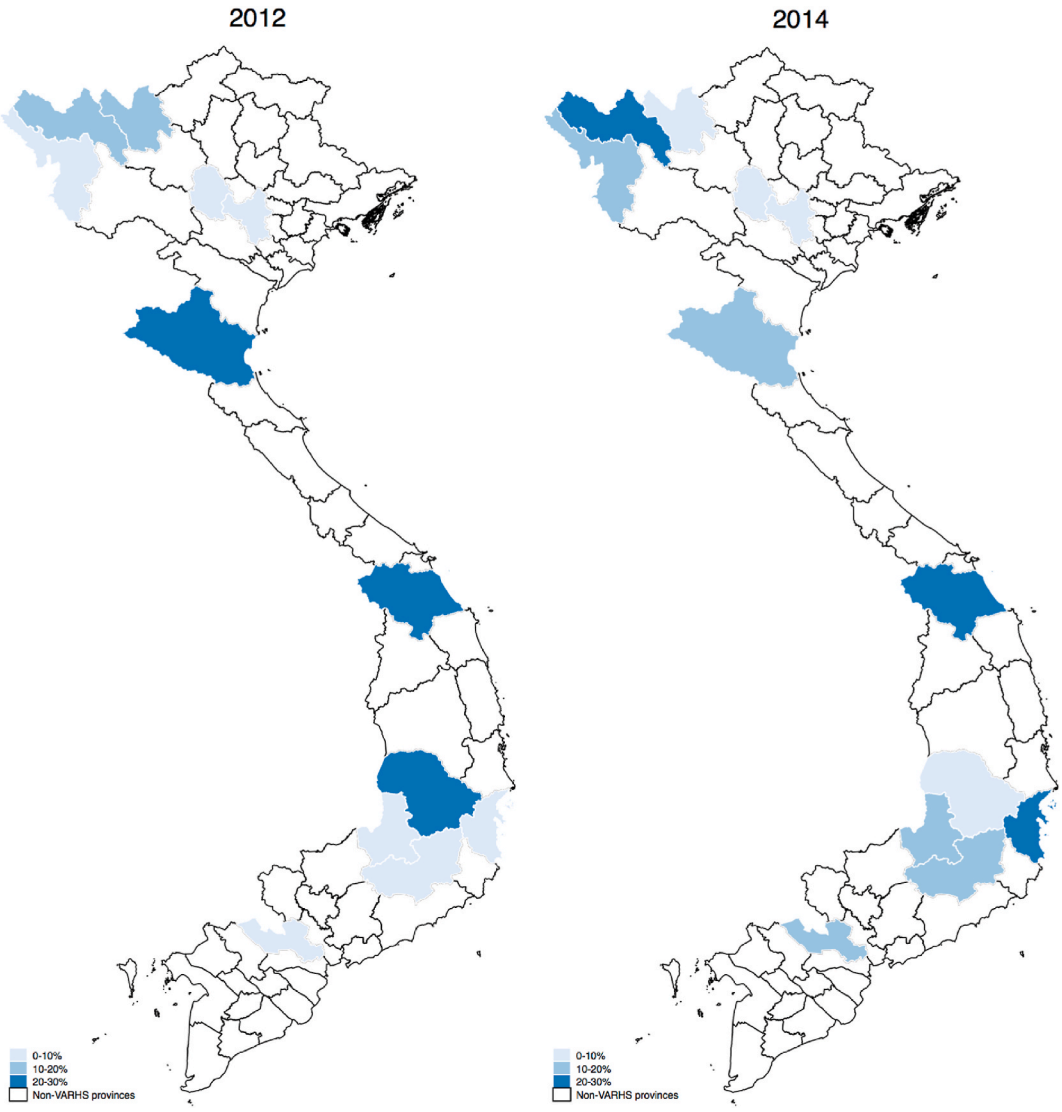

Fig. 2. Climatic shocks in Vietnam in the period 2012–2014. *Notes:* Authors' calculation from 12 provinces of VARHS in the period 2012–2014. A darker value represents a higher number of climatic shocks. Climatic shocks include flood, drought, typhoon and landslide. One province in our dataset, Ha Tay, was merged with the capital Ha Noi after 2010. Unfortunately, we are not able to separate out Ha Tay in the figures.

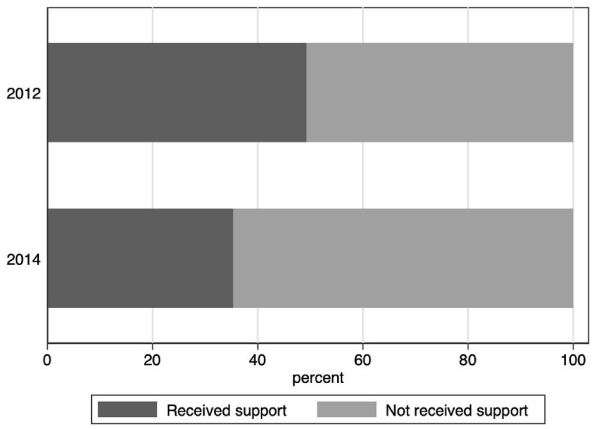

Fig. 3. Summary of communes suffered from climatic shocks in the period 2012–2014. *Notes:* Authors' calculation using VARHS 2012–2014.

Table 1
Descriptive analysis for political connections and post-disaster support.

	Year 2012		Year 2014	
	No support	Support	No support	Support
Types of connections				
Household members as officials	0.006	0.005	0.015	0.010
Relatives as officials	0.028	0.033	0.061	0.069
Friends as officials	0.023	0.036	0.233	0.250
Total political connections	0.057	0.074	0.309	0.328
Types of positions				
Leaders	0.015	0.025	0.020	0.028
Officials	0.043	0.046	0.059	0.073
Types of relatives				
Relatives as Parent (also in-laws)	0.001	0.002	0.002	0.002
Relatives as Sibling (also in-laws)	0.004	0.007	0.010	0.050
Relatives as Offspring (also in-laws)	0.004	0.005	0.007	0.008
Relatives as Cousin or other	0.016	0.018	0.027	0.040
Number of communes	146	130	193	83

Notes: The connections to officials are calculated by taking total number of political connections divided by number of households in the same commune. The variation in political connections between two years may be explained by retirement, promotion or moving to other positions. One may argue that households entering or exiting the sample may lead to a dramatic change in political connections from one period to the next. Still, this issue does not apply to our analysis as most households in our sample are interviewed in both surveys of VARHS. Communes with no record of disasters are excluded in the sample.

Table 1 summarizes the percentage of households having political connections and whether they received post-disaster support. The most common type of connection is households having friends as officials, while the least common type is households (themselves) having officials. Overall, it is clear from Table 1 that communes receiving assistance from the government have higher political connections than communes that did not receive support. We also note that there is an increase in the number political connections between 2012 and 2014. We propose several explanations for this change. First, the number of people employed by the public sector in Vietnam has increased significantly over the 2012–2014 period, as shown in Figure A1 (Appendix). This could be explained by the growing service sector, which remains predominantly owned and ran by the state (Chuc and Duong, 2019). Another explanation is that the Communist Party expanded its membership base in 2013, which led to a higher number of memberships and more people working in public sector (Markussen, 2015).[8]

Table A4 in the Appendix provides the summary statistics for other variables used in this study. We use a balanced panel of 276 communes covering the period 2012 to 2014 (a total of 552 commune-by-year observations), which includes household-level information for political connections and commune-level information for climatic shocks and receiving support. Urban communes are excluded from our study because climatic shocks are arguably more damaging in rural, agriculture-dependent, sectors.

5. Results and discussion

5.1. Main findings

The main results estimating the impact of political connections on the probability of receiving post-disaster support from government authorities are presented in Table 2. Column (1) provides the results using the conditional fixed-effects logit model. As discussed above, a potential issue with this specification is that communes with no variation in the dependent variable are excluded, leading to a lower number of observations. In addition, the marginal effects in this model are determined by the values of fixed effects which are not estimable. Therefore, we estimate the impact of political connections using a linear model with fixed effects as presented in columns (2) and (3).[9] Our preferred specification is the two-ways panel that controls for both commune and time fixed-effects. The standard errors are clustered at the commune level in all regressions.

The coefficients on the political connections' variables are consistently positive and statistically significant across the different specifications. For example, the results from the two-way panel model indicate that there is an increase in the probability of receiving support by 30.7 percent for a one unit increase in the number of political connections per household that a commune has (Column 3, Table 2). This confirms the expectation that communes with higher levels of connections are more likely to receive support in a post-shock period. Local government authorities are often assigned the responsibility of channelling funds to recipients. This mechanism

[8] We acknowledge that the increase in the number of households having friends as officials is large (from 3 percent in 2012 to 24 percent in 2014). While this number is plausible, we cannot rule out that it stems from measurement error. To address this issue, we calculate an average measure of the 2014 value by using data from 2012 to 2016 surveys. Our assumption is that the "true" 2014 value of political connections must be significantly related to those observed in 2016 if there is measurement error in the former. Our new estimates remain consistent with the main findings (Table A3, Appendix).

[9] We also run a Hausman test where the null hypothesis is that the preferred model is random effects model. The p-value of 0.0135 rejects the null hypothesis and confirms our selection of fixed effects model.

provides an opportunity for local officials to abuse their authority to direct resources to communes where they have self-interests. This finding is consistent with previous studies which show that political connections are a barrier that impedes the efficient allocation of resources for welfare programs (Markussen and Tarp, 2014; Do et al., 2017). In addition, the magnitude of impact in our study is comparable to those found in the literature (e.g., Panda, 2015).[10]

Next, we examine the link between specific types of political connections and the probability of receiving post-disaster support. The results are presented in Table 3, where we decompose political connections into households with members as public officials, relatives as public officials, and friends as public officials. First, we find that political connections, measured by the number of household members working as public officials, are significantly and positively correlated with receiving support. This result is consistent with Do et al. (2017), who find that hometown favouritism is a major determinant of government infrastructure spending. Second, we also find that communes characterised by households where people have a large number of relatives working as officials are associated with a higher probability of receiving support. This suggests that connections beyond being from the same hometown, such as kinship, are also important determinants of flows from government funded programs. Contrary to these findings, the coefficient on having friends as public officials variable is not statistically significant. It is possible that being friends with a government official is not a strong enough connection (on average) to increase the probability of receiving financial assistance. We therefore conclude that the impact of political connections is valid only in the context of 'family ties' rather than connections outside of the household termed 'social ties'.

Given the significant role of 'family ties' as the main mechanism, in Table 4 we investigate whether the relationship-type plays a role in determining whether communes receive post-shock government relief. The results show that favouritism occurs when households have siblings, offspring or cousins working in government, but no evidence is found when officials are parents. This may be due to cultural factors pressuring younger household members to look after older relatives – a social norm that does not seem to apply from older to younger family members.

Next, we explore whether having connections as leaders or officials at the district level is important. The district leaders have direct authority to manage resources from the province and central government and thus can use their power to allocate resources to specific communes. Still, we expect that an official working at the district level may also use his/her political capital to influence the decision of the leader, such as suggesting certain areas that could benefit from the support program. The results shown in Table 5 indicate that having public officials as leaders is positively correlated with the probability of receiving assistance. The finding does not apply to having non-leaders as political connections.

5.2. Potential endogeneity

It is plausible that the relationship between political connections and receiving support in the post-disaster period is not causal. In our context, endogeneity may arise from two sources. First, communes with more connections might be very different in many ways from those without (or with less) connections. Second, communes receiving assistance from the government may need more officials to manage funds, thereby leading to a higher number of political connections. In the absence of an appropriate instrument for political connections, it is thus challenging to establish a causal effect of political connections on post-disaster assistance.

To deal with this potential problem, we first include commune and time fixed effects which rule out the possibility that our results are driven by time invariant unobserved factors. Second, we control for potentially time-varying factors that may be correlated with both political connections and the probability of receiving support in the post-disaster period, such as income, poverty, and other development outcomes. We also perform the coefficient stability approach proposed by Oster (2019) to evaluate the possible degree of omitted variable bias under the assumption that bias arising from the observed controls is informative of bias arising from the unobserved factors. Table A7 (Appendix) shows that the bias-corrected estimate is still positive and increases to 0.610 (column 3).[11]

Finally, we attempt to minimise reverse causality by using information on political connections at time *(t-1)* to investigate its impact on receiving support at time *t,* subject to the occurrence of climatic shocks.[12] Specifically, we conduct this test by examining the impact of having political connections in 2010 and 2012 on the probability of receiving assistance in 2012 and 2014, respectively. The results shown Table A8 (Appendix) are consistent with our main findings.

5.3. Robustness checks

In this section, we conduct a battery of robustness tests. The fact that the dependent variable only measures whether the commune has received post-disaster funding or not poses a limitation to the substantive finding of our analysis. Since we do not know the level of assistance (amount of funding) that went to affected communes, we are not able to estimate the degree of (in-)efficiency in the allocation of post-disaster assistance. It might be the case that officials can direct funds to their preferred communes only when disasters occur at a small scale. In cases of more severe events, officials will have to divert funds to the affected communes independent of their level of connections to those commune members because there is a potential political cost for not doing so. For example, Malesky

[10] We also employ an unbalanced sample and find consistent impact of political connections (see Table A6, Appendix).

[11] Specifically, this coefficient bound is calculated as: $\beta^{*} = \widetilde{\beta} - [\dot{\beta} - \widetilde{\beta}]\left(\frac{R_{max} - R}{R - \dot{R}}\right)$, where $\widetilde{\beta}$ is the treatment effect of controlled regression (when all control variables are included), $\dot{\beta}$ is the treatment effect of uncontrolled regression, $\widetilde{R}$ and $\dot{R}$ are the R^2 of controlled and uncontrolled regressions, respectively. Oster (2019) suggests a conservative estimate of $R_{max} = 1.3\widetilde{R}$. The test is conducted by using "*psacalc*" package in Stata.

[12] We find a correlation of political connections between the two samples periods is 0.16. This correlation is statistically insignificant lending support to the validity of our test. Note that the survey in 2010 is not used in the main analysis as data for disasters are not available.

Table 2
Political connections and post-disaster support – Main results.

Dependent variable:	(1)	(2)	(3)
Receiving support	Panel logit	One-way panel	Two-ways panel
Political connections	0.935***	0.291***	0.307***
	(0.360)	(0.085)	(0.085)
Other controls	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes
Observations	220	552	552

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. Standard errors in parentheses. Standard errors are clustered at the commune level. Political connections are calculated by taking total number of political connections divide by number of households in the same commune. Column 1 shows results of conditional fixed-effects logit model, Column 2 shows results of panel analysis with commune fixed-effect model, Column 3 shows results of panel analysis with commune and time fixed-effects. Controls include commune level average income, poverty rate, population, shock intensity, share of households using electricity, share of households using hygienic water, and share of population with high school completion. Completed results are presented in Table A5 (Appendix).

Table 3
Political connections and post-disaster support – Types of connection.

Dependent variable:	(1)	(2)	(3)
Receiving support	Panel logit	One-way panel	Two-ways panel
Household members	1.380*	0.399***	0.444***
	(0.733)	(0.139)	(0.138)
Relatives	0.365*	0.037**	0.046**
	(0.210)	(0.017)	(0.018)
Friends	−0.279	−0.248	−0.262
	(1.301)	(0.182)	(0.178)
Other controls	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes
Observations	220	552	552

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. Standard errors in parentheses. Standard errors are clustered at the commune level. Column 1 shows results of conditional fixed-effects logit model, Column 2 shows results of panel analysis with commune fixed-effect model, Column 3 shows results of panel analysis with commune and time fixed-effects. Controls include commune level average income, poverty rate, population, shock intensity, share of households using electricity, share of households using hygienic water, and share of population with high school completion.

Table 4
Political connections and post-disaster support – Types of relative.

Dependent variable:	(1)	(2)	(3)
Receiving support	Panel logit	One-way panel	Two-ways panel
Parent (also in-laws)	–	0.433	0.428
	–	(0.303)	(0.300)
Sibling (also in-laws)	0.677*	0.608*	0.674**
	(0.351)	(0.328)	(0.313)
Offspring (also in-laws)	1.413*	0.243**	0.289***
	(0.812)	(0.106)	(0.108)
Cousin or other	0.927	0.473*	0.469*
	(0.796)	(0.286)	(0.280)
Other controls	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes
Observations	220	552	552

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. Standard errors in parentheses. Standard errors are clustered at the commune level. Column 1 shows results of conditional fixed-effects logit model, Column 2 shows results of panel analysis with commune fixed-effect model, Column 3 shows results of panel analysis with commune and time fixed-effects. Controls include commune level average income, poverty rate, population, shock intensity, share of households using electricity, share of households using hygienic water, and share of population with high school completion.

et al. (2012) show that even in authoritarian Vietnam, there is considerable policy responsiveness to citizens, especially at the sub-national level, and to pressure by international donors.

To address this issue, we control for the intensity of disasters by incorporating disaster data from the Emergency Events Database (EM-DAT). This database has been widely used in the literature, which contains a historical inventory of disasters and their impacts on lives and infrastructure. In Vietnam, 29 disasters were recorded by EM-DAT in the period 2010–2014 at the province level. It should be noted that EM-DAT focuses on large-scale disasters using the criteria of (i) 10 or more people dead; (ii) 100 or more people affected; (iii) the declaration of a state of emergency; and (iv) a call for international assistance. We then create a subsample in VARHS that can be matched with the disasters data from EM-DAT. Table A9 (Appendix) provides a summary of the matched provinces between VARHS and EM-DAT from 2010 to 2014. We then replicate our main findings in Table 2 by using this subsample. This allows us to test whether

Table 5
Political connections and post-disaster support – Types of position.

Dependent variable:	(1)	(2)	(3)
Receiving support	Panel logit	One-way panel	Two-ways panel
District leaders	1.194	0.429**	0.546***
	(0.823)	(0.181)	(0.179)
District officials	2.588	0.063	0.210
	(2.135)	(0.166)	(0.167)
Other controls	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes
Observations	220	552	552

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. Standard errors in parentheses. Standard errors are clustered at the commune level. Column 1 shows results of conditional fixed-effects logit model, Column 2 shows results of panel analysis with commune fixed-effect model, Column 3 shows results of panel analysis with commune and time fixed-effects. Controls include commune level average income, poverty rate, population, shock intensity, share of households using electricity, share of households using hygienic water, and share of population with high school completion.

the influence of political connections exists at the large-scale disasters. The results presented in Panel A of Table A10 (Appendix) are consistent with our main findings.

Another potential issue in the context of our analysis is measurement error, which is derived from the fact that the primary dependent variable (receiving assistance) and independent variable (disaster occurrence) are reported by the same respondent. To illustrate, a local official who is more closely related to his hometown may feel pressure to report that he or she was able to secure disaster assistance, or the official may feel more pressure to say the commune did not secure disaster assistance in the hope to get more support. In the VARHS survey, four interviewed respondents were selected to collect information at the commune level including disaster occurrence and receiving assistance. Figure A2 (Appendix) shows that about 45 percent of our sample are officials at any level. To address the potential reporting bias issue, we replicate our main analysis using a sub-sample from VARHS that uses the data from commune-level respondents in the community who are not public officials. Results in Panel B (Table A10, Appendix) suggest that our findings are not sensitive to this change.

In this study, we measure political connections by the number of connections divided by the number of households sampled per commune. However, the raw number of political connections might also be important. For instance, consider the simple case of two communes. The first commune has five public officials and 100 households per commune, resulting in a measure of 0.05. A second commune might have 50 officials but 1000 households per commune, resulting in the same measure of 0.05. However, the commune with a higher number of officials may be endowed with a stronger political network, resulting in a higher probability of receiving support. Therefore, we use the actual number of political connections without adjusting for household number in Panel C of Table A10 (Appendix). The results are consistent with previous findings.

5.4. Heterogeneity

Having shown that resource allocation in a post-disaster period is driven by political connections, it is useful to understand whether this relationship exists in different contexts. First, we expand our analysis by testing the connections to non-political groups. Although our core hypothesis relies on public officials who hold direct or indirect authority to allocate resources, it is interesting to investigate connections outside the political system. In our data set, we employ the information on officials working for mass organizations, such as unions or farmer associations. The results in Panel A, Table A11 (Appendix) find no evidence of the relationship between having connections to non-political groups and receiving support. This suggests that a direct connection to the Communist Party, rather than indirect connections, plays an important role in the context of disaster assistance.

Second, we investigate whether political connections also affect the probability of receiving support from non-government sources. We expect that this also matters in the context of non-government assistance as funds from NGOs often have to pass through government channels. The results shown in Panel B, Table A11 (Appendix) confirm our expectation. We conclude that political connections have an impact not only on government funding received, but also on funding from non-government sources. Our findings therefore indicate that political connections potentially reduce the efficiency of all support programs in the context of climatic shocks.

Third, we examine whether being connected to officials at the commune level is important. Communes are the lowest level of all administrative units, often including just a few thousand households. Thus, commune officials appear less able to influence those in higher levels of the political system. Still, it might be the case that a higher number of commune officials is associated with a broader network, which means that they can exercise their influence over district officials in order to obtain government assistance for their preferred/home communes. Results in Panel C, Table A11 (Appendix) provide evidence of such an effect, illustrated by the coefficient on political connections variables being positive and statistically significant at the 5 percent level.

Finally, although our main purpose is to examine the relationship between political connections and receiving support in the post-disaster period, we also examine whether communes with higher connections receive more assistance in the general context of public welfare. Assistance is measured using the number of government-led development programs over the last two years, available from the VARHS dataset. Unlike disaster programs, which are given in time of need, development programs are provided annually to improve the infrastructure of communes, such as upgrading roads, building hospitals and schools. Results in Panel D, Table A11 (Appendix)

show that communes with a higher number of political connections, measured by total connections with public officials, are associated with a higher number of development programs received.

6. Conclusion and policy recommendations

This study provides strong evidence that the elite in Vietnam capture support programs in the context of natural disasters. Using panel data at the commune level, we find that higher levels of political connections (at the district level) are associated with a higher probability of receiving support in the post-shock period. Our findings reveal evidence of favouritism in the political system, whereby officials have incentives to direct funds from the government toward their own commune members. We find that favouritism is prevalent when government officials are household members or relatives living outside the household. There is no evidence that being friends with officials increases the likelihood of receiving post-disaster relief. We also uncover evidence suggesting that support is more likely to flow from younger to older family members, while having connections to district leaders is more important than being connected to district officials. Even though the study uses Vietnamese data to reach these conclusions, the mechanisms explained here can potentially explain similar relationships in other authoritarian countries both within East Asia and beyond.

We argue that decentralisation coupled with authoritarianism provides an opportunity for officials to provide resources to their families without being subjected to any formal level of scrutiny. In authoritarian regimes, therefore, the central allocation of resources may lead to a more efficient distribution of resources. Ideally, of course, more transparency indicating how resources are allocated in the aftermath of disasters is warranted. Perhaps, apolitical non-government or foreign institutions need to work closely with the government of Vietnam to establish a better monitoring process.

There are two suggestions for future research to advance our understanding of political connections and public welfare. First, although this study reveals important impacts of political connections on receiving support after disasters, the type and intensity of disaster might play an important role. For example, communes that suffered from more severe shocks would have higher need of assistance. Second, a paucity of data prevented an examination of the impacts of political connections at higher levels of Vietnam's government. It might be the case that more power and influence at these higher levels might have an even greater impact on the allocation of resources. This remains an interesting and important area for future research.

Declaration of competing interest

The authors declare not to have conflict of interest, financially or otherwise, regarding the content of the paper.

Data availability

Data will be made available on request.

Appendix

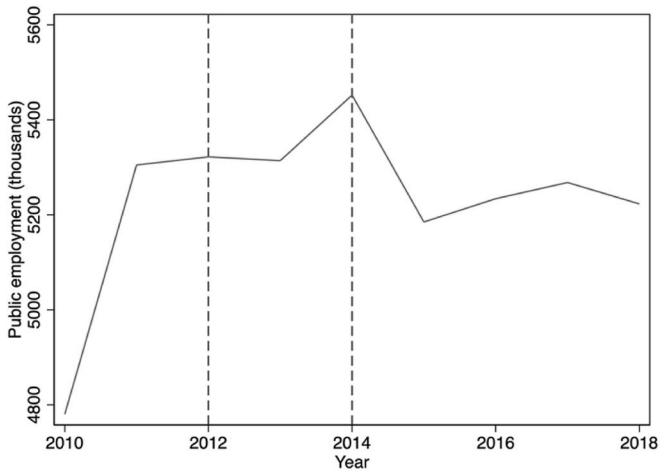

Fig. A1. Total employment in the public sector (thousands), 2010–2018. *Notes:* Authors' calculation using data from ILOStat (https://ilostat.ilo.org/data/). Public sector employment covers employment in the government sector plus employment in publicly-owned resident enterprises and companies, operating at central, state (or regional) and local levels of government. It covers all persons employed directly by those institutions, regardless of the particular type of employment contract..

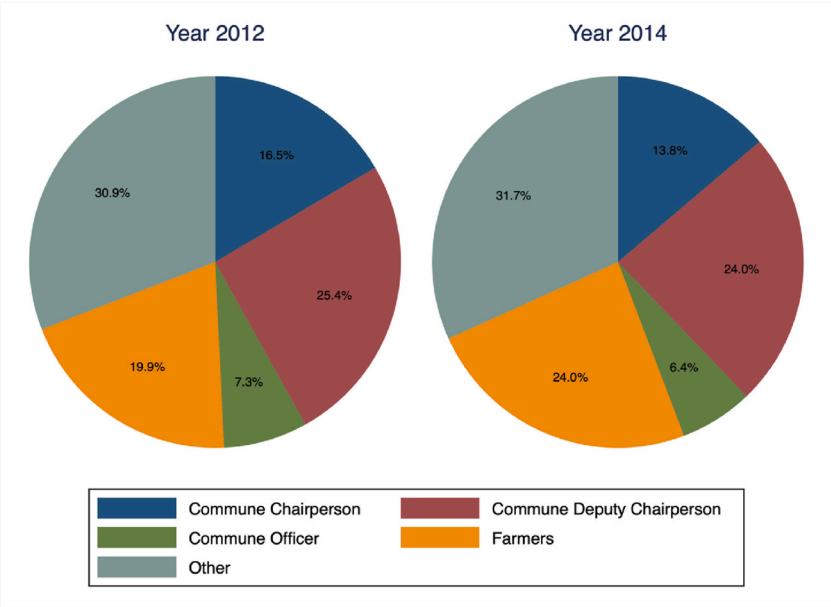

Fig. A2. Position of interviewed respondent in the commune moduleimage. *Notes:* Authors' calculation using VARHS 2012–2014..

Table A1
Number of households and communes by province

	VARHS 2012			VARHS 2014		
Province	No. of communes	No. of households	Average household per commune	No. of communes	No. of households	Average household per commune
Ha Tay	71	593	8.35	71	589	8.30
Lao Cai	25	108	4.32	28	295	10.54
Phu Tho	49	388	7.92	49	385	7.86
Lai Chau	30	135	4.50	34	320	9.41
Dien Bien	29	131	4.52	33	317	9.61
Nghe An	69	230	3.33	69	228	3.30
Quang Nam	44	341	7.75	44	338	7.68
Khanh Hoa	29	113	3.90	29	108	3.72
Dak Lak	39	164	4.21	41	350	8.54
Dak Nong	34	138	4.06	35	307	8.77
Lam Dong	24	80	3.33	24	78	3.25
Long An	43	339	7.88	43	333	7.74

Table A2
Differences between communes with disasters and communes without disasters

	Communes without disasters	Communes with disasters	Mean difference
Total connections	0.179	0.216	−0.038
Household members as public officials	0.009	0.010	−0.001
Relatives as public officials	0.049	0.049	0.000
Friends as public officials	0.120	0.157	−0.037
Income	136.430	265.089	−128.659
Population (in person)	8410.246	7425.538	984.709**
Percent of households using electricity	93.874	92.639	1.235
Percent of households using hygienic water	61.630	53.490	8.140**
Percent of population with high school completion	85.697	81.579	4.117**

Notes: ***p < 0.01, **p < 0.05, *p < 0.1; Mean difference (p-value) is calculated from a *t*-test, where H_0 is equality of means.

Table A3
Political connections and post-disaster support – Measurement issue of having friends as officials

Dependent variable:	(1)	(2)	(3)
Receiving support	Panel logit	One-way panel	Two-ways panel
Household members	1.436**	0.397***	0.439***
	(0.675)	(0.139)	(0.140)
Relatives	0.416*	0.038**	0.046**
	(0.214)	(0.018)	(0.018)
Friends	−0.637	−0.045	−0.082
	(0.480)	(0.107)	(0.120)
Other controls	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes
Observations	220	552	552

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. Standard errors in parentheses. Standard errors are clustered at the commune level. Column 1 shows results of conditional fixed-effects logit model, Column 2 shows results of panel analysis with commune fixed-effect model, Column 3 shows results of panel analysis with commune and time fixed-effects. Controls include commune level average income, poverty rate, population, shock intensity, share of households using electricity, share of households using hygienic water, and share of population with high school completion.

Table A4
Summary statistics

Variable	N	Mean	SD	Min	Max
Receiving support (dummy)	552	0.431	0.496	0.000	1.000
Political connections	552	0.212	0.303	0.000	1.500
Income (Average annual income per capita in commune, in log)	552	4.784	0.331	3.219	5.897
Poverty (number of poor households, in log)	552	5.281	0.834	2.639	7.044
Population (in log)	552	8.783	0.563	7.102	9.846
Shock intensity	552	8.453	1.869	3.000	12.000
Percent of households using electricity	552	93.079	14.613	0.000	100
Percent of households using hygienic water	552	54.814	38.291	0.000	100
Percent of population with high school completion	552	82.072	22.089	0.000	100

Notes: The political connections variable in this Table has not been controlled for number of populations. Shock intensity is measured by the number of disasters occurred in the past 10 years, as provided by VARHS.

Table A5
Political connections and post-disaster support – Main results

Dependent variable:	(1)	(2)	(3)
Receiving support	Panel logit	One-way panel	Two-ways panel
Political connections	0.935***	0.291***	0.307***
	(0.360)	(0.085)	(0.085)
Income	−1.898***	−0.354***	−0.242**
	(0.654)	(0.081)	(0.094)
Poverty	−0.179	0.052	−0.032
	(0.450)	(0.076)	(0.099)
Population	−0.326	−0.093	−0.051
	(0.413)	(0.135)	(0.143)
Shock intensity	0.087	0.033**	0.031*
	(0.063)	(0.016)	(0.016)
Share of households using electricity	0.011	0.003	0.003
	(0.009)	(0.003)	(0.003)
Share of households using hygienic water	0.001	0.000	0.001
	(0.003)	(0.001)	(0.001)
Share of population with high school completion	0.002	−0.000	0.000
	(0.006)	(0.001)	(0.001)
Fixed effects	Yes	Yes	Yes
Observations	220	552	552

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. Standard errors in parentheses. Standard errors are clustered at the commune level. Political connections are calculated by taking total number of political connections divide by number of households in the same commune. Column 1 shows results of conditional fixed-effects logit model, Column 2 shows results of panel analysis with commune fixed-effect model, Column 3 shows results of panel analysis with commune and time fixed-effects.

Table A6
Political connections and post-disaster support – Unbalanced sample

Dependent variable:	(1)	(2)	(3)
Receiving support	Panel logit	One-way panel	Two-ways panel
Political connections	0.935***	0.297***	0.311***
	(0.360)	(0.084)	(0.084)
Other controls	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes
Observations	220	697	697

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. Standard errors in parentheses. Standard errors are clustered at the commune level. Political connections are calculated by taking total number of political connections divide by number of households in the same commune. Column 1 shows results of conditional fixed-effects logit model, Column 2 shows results of panel analysis with commune fixed-effect model, Column 3 shows results of panel analysis with commune and time fixed-effects. Controls include commune level average income, poverty rate, population, shock intensity, share of households using electricity, share of households using hygienic water, and share of population with high school completion.

Table A7
Selection on unobservables

Dependent variable:	(1)	(2)	(3)
Receiving support	Uncontrolled regression	Controlled regression	Delta
Political connections	0.271***	0.307***	0.610
	(0.097)	(0.084)	
R-squared	0.026	0.156	

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. Standard errors in parentheses. Column (1) reports the results of the model without any controls, results of controlled regression are reported in Column (2). We use the Stata command '*psacalc*' to report the bias-corrected estimate for the effect of political connections on receiving support variable in Column (3).

Table A8
Political connections at time *(t-1)* and post-disaster support at time *t*

Dependent variable:	(1)	(2)	(3)
Receiving support	Panel logit	One-way panel	Two-ways panel
Political connection	1.578*	0.420*	0.462**
	(0.850)	(0.219)	(0.214)
Other controls	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes
Observations	220	552	552

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. Standard errors in parentheses. Standard errors are clustered at the commune level. Column 1 shows results of conditional fixed-effects logit model, Column 2 shows results of panel analysis with commune fixed-effect model, Column 3 shows results of panel analysis with commune and time fixed-effects. Controls include commune level average income, poverty rate, population, shock intensity, share of households using electricity, share of households using hygienic water, and share of population with high school completion.

Table A9
Provinces in VARHS matched with EM-DAT database

Province	2010	2011	2012	2013	2014
Lao Cai	x	x		x	x
Phu Tho		x		x	x
Lai Chau		x		x	x
Dien Bien		x		x	x
Nghe An	x	x	x	x	x
Quang Nam	x	x		x	
Khanh Hoa	x			x	
Dak Lak	x			x	
Dak Nong				x	
Lam Dong				x	
Long An		x		x	

Notes: There are 12 provinces in the VARHS. In this subsample, we exclude Ha Tay because it has been merged to Hanoi since 2008.

Table A10
Political connections and post-disaster support – Robustness tests

Dependent variable:	(1)	(2)	(3)
Receiving support	Panel logit	One-way panel	Two-ways panel
Panel A: EMDAT database			
Political connection	0.921***	0.359***	0.384***
	(0.344)	(0.099)	(0.100)
Observations	176	414	414
Panel B: Respondents are non-officials			
Political connection	1.190	0.303**	0.304**
	(1.233)	(0.127)	(0.126)
Observations	122	304	304
Panel C: Strength of connectedness			
Political connection	1.851**	0.444**	0.475**
	(0.849)	(0.212)	(0.208)
Observations	220	552	552
Other controls	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. Standard errors in parentheses. Standard errors are clustered at the commune level. Column 1 shows results of conditional fixed-effects logit model, Column 2 shows results of panel analysis with commune fixed-effect model, Column 3 shows results of panel analysis with commune and time fixed-effects. Controls include commune level average income, poverty rate, population, shock intensity, share of households using electricity, share of households using hygienic water, and share of population with high school completion.

Table A11
Political connections and post-disaster support – Heterogeneity

	(1)	(2)	(3)
	Panel logit	One-way panel	Two-ways panel
Panel A: Non-political groups and post-disaster support			
Political connection	−0.682	−0.197	−0.232
	(0.557)	(0.174)	(0.165)
Panel B: Political connections and assistance from NGO			
Political connection	0.612**	0.212***	0.236***
	(0.276)	(0.073)	(0.072)
Panel C: Political connections at commune level and post-disaster support			
Political connection	0.803*	0.289*	0.308**
	(0.485)	(0.149)	(0.147)
Panel D: Political connections and development program received			
Political connection	–	1.285**	1.283*
	–	(0.645)	(0.690)
Other controls	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes
Observations	220	695	695

Notes: ***p < 0.01, **p < 0.05, *p < 0.1. Standard errors in parentheses. Standard errors are clustered at the commune level. Column 1 shows results of conditional fixed-effects logit model, Column 2 shows results of panel analysis with commune fixed-effect model, Column 3 shows results of panel analysis with commune and time fixed-effects. Controls include commune level average income, poverty rate, population, shock intensity, share of households using electricity, share of households using hygienic water, and share of population with high school completion.

References

Alatas, V., Banerjee, A., Hanna, R., Olken, B.A., Tobias, J., 2012. Targeting the poor: evidence from a field experiment in Indonesia. Am. Econ. Rev. 102 (4), 1206–1240.
Alatas, V., Banerjee, A., Hanna, R., Olken, B.A., Purnamasari, R., Wai-Poi, M., 2019. Does elite capture matter? Local elites and targeted welfare programs in Indonesia. AEA Papers and Proceedings 109, 334–339.
Aldrich, D.P., 2010. Separate and unequal: PostTsunami aid distribution in southern India. Soc. Sci. Q. 91 (5), 1369–1389.
Aldrich, D.P., 2016. It's Who you know: factors driving recovery from Japan's 11 March 2011 disaster. Publ. Adm. 94 (2), 399–413.
Annen, K., Strickland, S., 2017. Global samaritans? Donor election cycles and the allocation of humanitarian aid. Eur. Econ. Rev. 96, 38–47.
Atkinson, J., Hicken, A., Ravanilla, N., 2015. Pork and typhoons: the influence of political connections on disaster response. Building Inclusive Democracies in ASEAN. Anvil Publishing, Manila.
Besley, T., Pande, R., Rao, V., 2011. Just rewards? Local politics and public resource allocation in South India. World Bank Econ. Rev. 26 (2), 191–216.
Brandt, K., Tarp, F., 2017. Characteristics of the VARHS data and other data sources. Growth, Structural Transformation, and Rural Change in Viet Nam. United Nations University World Institute for Development.
Caeyers, B., Dercon, S., 2012. Political connections and social networks in targeted transfer programs: evidence from rural Ethiopia. Econ. Dev. Cult. Change 60 (4), 639–675.

Chuc, N.D., Duong, T.P., 2019. Trade, structural adjustments and productivity growth in Vietnam. J. Southeast Asia. Econ. 36 (2), 256–273.
Dasgupta, A., Beard, V.A., 2007. Community driven development, collective action and elite capture in Indonesia. Dev. Change 38 (2), 229–249.
Do, Q.-A., Nguyen, K.-T., Tran, A., 2017. One Mandarin benefits the whole clan: hometown favoritism in an authoritarian regime. Am. Econ. J. Appl. Econ. 9 (4), 1–29.
Edenhofer, O., Pichs-Madruga, R., Sokona, Y., Seyboth, K., Matschoss, P., Kadner, S., Schlömer, S., 2011. IPCC Special Report on Renewable Energy Sources and Climate Change Mitigation. Prepared by Working Group III of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, UK.
Fink, G., Redaelli, S., 2011. Determinants of international emergency aid—humanitarian need only? World Dev. 5 (39), 741–757.
Fisman, R., 2001. Estimating the value of political connections. Am. Econ. Rev. 91 (4), 1095–1102.
Gillespie, J., 2008. Localizing global rules: public participation in lawmaking in Vietnam. Law Soc. Inq. 33 (3), 673–707.
Goldstein, M., Udry, C., 2008. The profits of power: land rights and agricultural investment in Ghana. J. Polit. Econ. 116 (6), 981–1022.
Gröger, A., Zylberberg, Y., 2016. Internal labor migration as a shock coping strategy: evidence from a typhoon. Am. Econ. J. Appl. Econ. 8 (2), 123–153.
Han, H., Gao, Q., 2019. Community-based welfare targeting and political elite capture: evidence from rural China. World Dev. 115, 145–159.
IPCC, 2018. Global Warming of 1.5°C. An IPCC Special Report on the Impacts of Global Warming of 1.5°C above Pre-industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty. Intergovernmental Panel on Climate Change (IPCC), Geneva, Switzerland.
ISPONRE, 2009. Viet Nam Assessment Report on Climate Change (VARCC). Institute of Strategy and Policy on Natural Resources and Environment, Vietnam.
Keerthiratne, S., Tol, R.S., 2018. Impact of natural disasters on income inequality in Sri Lanka. World Dev. 105, 217–230.
Khwaja, A.I., Mian, A., 2005. Do lenders favor politically connected firms? Rent provision in an emerging financial market. Q. J. Econ. 120 (4), 1371–1411.
Klomp, J., 2019. Does government ideology shake or shape the public finances? Empirical evidence of disaster assistance. World Dev. 118, 118–127.
Lehne, J., Shapiro, J.N., Eynde, O.V., 2018. Building connections: political corruption and road construction in India. J. Dev. Econ. 131, 62–78.
Li, H., Meng, L., Wang, Q., Zhou, L.A., 2008. Political connections, financing and firm performance: evidence from Chinese private firms. J. Dev. Econ. 87 (2), 283–299.
Lohmann, S., Lechtenfeld, T., 2015. The effect of drought on health outcomes and health expenditures in rural Vietnam. World Dev. 72, 432–448.
London, J., 2009. Viet Nam and the making of market-Leninism. Pac. Rev. 22 (3), 375–399.
Malesky, E.J., 2008. Straight ahead on red: how foreign direct investment empowers subnational leaders. J. Polit. 70 (1), 97–119.
Malesky, E., Schuler, P., Tran, A., 2012. The adverse effects of sunshine: a field experiment on legislative transparency in an authoritarian assembly. Am. Polit. Sci. Rev. 106 (4), 762–786.
Malesky, E., London, J., 2014. The political economy of development in China and Vietnam. Annu. Rev. Polit. Sci. 17, 395–419.
Malesky, E.J., Nguyen, C.V., Tran, A., 2014. The impact of recentralization on public services: a difference-in-differences analysis of the abolition of elected councils in Vietnam. Am. Polit. Sci. Rev. 108 (1), 144–168.
Mansuri, G., Rao, V., 2004. Community-based and-driven development: a critical review. World Bank Res. Obs. 19 (1), 1–39.
Markussen, T., Tarp, F., 2014. Political connections and land-related investment in rural Vietnam. J. Dev. Econ. 110, 291–302.
Markussen, T., 2015. *Social and Political Capital in Rural Viet Nam* (No. 2015/087). WIDER Working Paper.
Markussen, T., Ngo, Q.T., 2019. Economic and non-economic returns to communist party membership in Vietnam. World Dev. 122, 370–384.
Oster, E., 2019. Unobservable selection and coefficient stability: theory and evidence. J. Bus. Econ. Stat. 37 (2), 187–204.
Panda, S., 2015. Political connections and elite capture in a poverty alleviation programme in India. J. Dev. Stud. 51 (1), 50–65.
Raschky, P.A., Schwindt, M., 2012. On the channel and type of aid: the case of international disaster assistance. Eur. J. Polit. Econ. 28 (1), 119–131.
Solomon, S., Manning, M., Marquis, M., Qin, D., 2007. Climate Change 2007-the Physical Science Basis. In: Working Group I Contribution to the Fourth Assessment Report of the IPCC, vol. 4. Cambridge university press.
Takasaki, Y., 2011. Groups, networks and hierarchy in household private transfers: evidence from Fiji. Oxf. Dev. Stud. 39 (1), 97–130.
Van Arkadie, B., Huong, P.T.L., Hanh, T.T., Oanh, K.T.H., Thang, D.N., Khoi, D.K., London, J.D., 2010. Joint Country Analysis of Viet Nam. United Nations Development Programme (UNDP), Hanoi, March.
Walder, A.G., Nguyen, G.H., 2008. Ownership, organization, and income inequality: market transition in rural Vietnam. Am. Socio. Rev. 73 (2), 251–269.
Weiler, F., Klöck, C., Dornan, M., 2018. Vulnerability, good governance, or donor interests? The allocation of aid for climate change adaptation. World Dev. 104, 65–77.
Wescott, C.G., 2003. Hierarchies, networks and local government in Viet Nam. Int. Pub. Manag. Rev. 4 (2), 20–40.
Wooldridge, J.M., 2005. Fixed-effects and related estimators for correlated random-coefficient and treatment-effect panel data models. Rev. Econ. Stat. 87 (2), 385–390.