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The Promise and Peril of Peacekeeping Economies

RESEARCH NOTE

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Contemporary United Nations (UN) peacekeeping deployments commonly pursue both security and economic objectives, but the existing scholarly literature contains hardly any systematic assessments of peacekeeping missions' economic effects. We address this issue in two ways. First, we use cross-country data to show that UN peacekeeping missions are large-scale economic interventions. They stimulate demand in depressed economic environments; we find significantly higher economic growth in the presence of peacekeeping deployments than in comparable cases without them. However, we estimate that economic growth rapidly declines when missions end, which suggests that they do not necessarily promote stable economic development. Second, we provide evidence in this vein by turning to microlevel survey data that we collected in Monrovia, where the United Nations Mission in Liberia (UNMIL) had a large presence from 2003 onward. Our data suggests that UNMIL's spending created demand for low-skill employment in the service sector, largely without facilitating skill transfers or loosening credit constraints for business owners. This illustrates the problem of "peacekeeping economies" suggested by our cross-country analysis: peacekeeping missions help create an economic boom fueled by demand in nontraded products, particularly low-skill services, which may not be robust to the mission's withdrawal.

Introduction

Recent studies suggest that United Nations (UN) peacekeeping deployments tend to achieve core security objectives (Doyle and Sambanis 2006; Fortna 2008; Gilligan and Sergenti 2008; Beardsley 2011; Hultman, Kathman, and Shannon 2014a, 2014b). They appear to have prolonged postwar peace, prevented conflict contagion, and reduced battlefield and civilian fatalities. However, peacekeeping deployments are not merely security interventions. They often have profound economic consequences.

Practitioners see these economic consequences as an important way that deployments help generate long-term stability in postconflict environments. The UN Security Council has explicitly endorsed a multidimensional approach to peacekeeping with a resolution that was cosponsored and approved by all Council members (United Nations 2013b). In a typical contribution to the debate, the permanent representative of Turkey noted that "ensuring sustainable development should be at the heart of all peacekeeping efforts" and that "peacekeeping missions were 'economic forces' in their own right and that it was important to strengthen their link with local economics" (United Nations 2013a).

Some of the very first quantitative work on UN peacekeeping identified economic considerations as a crucial component of successful peacebuilding (Doyle and Sambanis 2000). In its conceptualization, "international capacities" marshaled as part of a peacekeeping mission provided benefits by contributing to both economic relief and the provision of security, but subsequent studies focused almost exclusively on the latter.

This note addresses this omission. First, we use macrolevel, cross-country data to show that UN peacekeeping missions are in fact large-scale economic interventions. The amounts of money that peacekeeping deployments inject into local economies may not seem large in absolute terms, but it is hard to overstate their significance in the context of the ravaged economies of postwar societies. Peacekeeping missions stimulate demand in depressed economic

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environments, and we find that economic growth is significantly higher in their presence compared to cases in which the UN does not deploy peacekeepers. However, there are potential downsides, such as economic disruption when peacekeepers withdraw, and indeed we estimate that economic growth rapidly declines at the time of mission closure. The fact that a collapse in economic growth often accompanies the withdrawal of peacekeepers suggests that the benign economic effects of missions may not be robust. Local spending associated with peacekeeping missions can amount to a short-term spike in the demand for certain goods and services, but does not necessarily promote stable economic development.[1]

Second, we provide evidence in this vein by turning to microlevel survey data that we collected in Monrovia, the capital of Liberia, where the United Nations Mission in Liberia (UNMIL) had a large peacekeeping presence from 2003 until 2018. We find that UNMIL's presence does appear to have shaped local markets, for example in the sense of a large number of employees catering predominantly or exclusively to foreigners. Our data suggests in particular that UNMIL's spending created demand for low-skill employment in the service sector.[2] UNMIL does not appear to have facilitated skill transfers, loosened credit constraints for existing and prospective business owners, or otherwise enabled sustainable businesses and long-term economic infrastructure. Instead the mission in Liberia seems to illustrate the problem of "peacekeeping economies" suggested by our cross-country analysis: the UN helps create an economic boom fueled by a high demand in nontraded products, particularly low-skill services, which may not be sustainable beyond the peacekeeping mission's withdrawal. These results comport with other findings showing how the influx of external revenue via foreign aid (Rajan and Subramanian 2011), oil windfalls (Caselli and Michaels 2013), or remittances (Lartey, Mandelman, and Acosta 2012) leads to demand for nontradable products and an expansion of the service sector.

This does not mean that the peacekeeping presence failed to improve the economic lives of ordinary individuals in Liberia. UNMIL played an important role in stabilizing the country and generated incomes that would otherwise not have materialized. Indeed, we show that selling goods and services to peacekeepers is associated with greater earnings and assets as well as a higher probability of having savings. We estimate very high approval rates for UNMIL, in particular among those who have received something of value from the mission. A large majority wanted UNMIL to stay in the country.

Yet, one reason why few people in Monrovia wanted UNMIL to leave is because Monrovia's fragile economy may have become dependent on the peacekeeping mission's spending.[3] A "peacekeeping economy" without peacekeepers is bound to undergo a painful adjustment period, when suddenly falling demand requires a costly reallocation of labor and capital across sectors. The UN can and should ease this process; it should consider deployment and procurement strategies that can help put host country's economic development on solid footing. We conclude the article with recommendations along these lines.

Previous Research on the Peacekeeping Economy

The term *peacekeeping economy* refers to the economic activities associated with a peacekeeping mission's presence in a certain location. This includes, first, services catering to foreigners, including those provided by hotels, restaurants, bars, and in the transportation and construction sectors; second, the high- and low-skilled jobs available to local staff associated with the mission; and finally, the downstream economic impacts of these activities on other sectors (Jennings and Bøås 2015). The implicit assumption is that such activities would not have taken place without the mission.[4]

We take the existing literature on the effects of revenue windfalls deriving from foreign aid, commodity price shocks, and oil and mineral discoveries as a useful starting point in considering the economic impacts of peacekeeping missions.[5] As a peacekeeping mission—with its thousands of staff members and foreign-funded consumption—increases the demand for nontraded goods, we might expect short-run effects similar to those of foreign aid receipts or other external windfalls. For example, we would ordinarily expect wage increases in the construction, health, or education sectors, if resources go into these sectors (Corden and Neary 1982).[6]

At the same time, a prominent part of the literature on countries experiencing revenue windfalls warns that a "resource curse" can come to haunt them. Unaccountable elites can capture rents while growth and development stagnate. Along these lines, a number of cross-country studies have suggested that foreign aid has little to no effect on growth (Boone 1996; Easterly 2003; Rajan and Subramanian 2008) or that it has a positive effect only in "good policy environments" (Burnside and Dollar 2000).[7] Still, the macrolevel association between the presence of peacekeepers and economic growth could well be positive, because funds are disbursed differently: Peacekeeping missions directly boost demand for goods and services at deployment sites. In contrast, foreign aid is usually collected by governments, who can use it to substitute for existing expenditures (Feyzioglu, Swaroop, and Zhu 1998; Chatterjee, Giuliano, and Kaya 2012) and allow corrupt officials to enrich themselves (Svensson 2000; Knack 2001).[8]

Aside from stimulating the demand for nontraded goods via spending, previous research has argued that peacekeeping operations can impact the economy through three key channels. First, peacekeeping missions can provide physical security and as a result facilitate economic transactions. Caruso, Khadka, Petrarca, et al. (2017) argue that South

[1] Jennings (2010) and Allred (2006), among other—mostly qualitative—studies, suggest that peacekeeping missions can have large, but not necessarily desirable economic impacts.

[2] The UN deployment is also associated with a burgeoning market for transactional sex, perhaps the most troubling outgrowth of a reorientation of the economy toward UN personnel. From our survey data, we estimate that roughly 3 percent of the UN's contribution to Liberia's GDP in 2012 came from UN personnel buying sex in Monrovia alone. Put differently, the money that UN personnel paid for transactional sex in Monrovia constituted nearly 1 out of every 1,000 US dollars moving through Liberia's economy on an annual basis. On the issue of peacekeeping and transactional sex, see Beber et al. (2017).

[3] We completed our fieldwork prior to the Ebola outbreak, which has left Liberia's economy in an even more vulnerable state.

[4] See Jennings and Bøås (2015) and Jennings (2015) for discussions of the term *peacekeeping economy* and current approaches to its study. Baker (2014) also makes an argument for the distinctiveness of peacekeeping-related economic activities, at least in the Yugoslavian case.

[5] Demekas et al. (2002) argue that the effects of postconflict aid differ from those of development aid. However, peacekeeping missions tend to spend more heavily on the consumption of local goods than reconstruction projects.

[6] This appears to have been the case in Afghanistan (Bove and Gavrilova 2014). For a meta-analysis of the literature on foreign aid and growth, see Doucouliagos and Paldam (2009).

[7] Burnside and Dollar (2000) determine the quality of policy environments based on fiscal policies, inflation, and trade openness.

[8] Relatedly, Mvukiyehe and Samii (2010) find high levels of market vitality in areas around peacekeeping bases in Liberia.

Sudan illustrates this. They find that the presence of peacekeeping operations is associated with increased agricultural production, arguably due to changes in the security environment.[9]

Second, peacekeeping missions can positively or negatively impact state capacity and government functioning. On the one hand, peacekeeping missions and accompanying economic aid could improve the delivery of government services and the provision of public goods by way of "rehabilitating infrastructure and public institutions" (Demekas, McHugh, and Kosma 2002, 20). On the other hand, peacekeeping missions could undermine state capacity by siphoning qualified individuals away from public sector work. International organizations tend to offer more lucrative positions.[10] This also raises the risk that only a small set of educated elite residents, including expatriate groups such as well-to-do Lebanese in Liberia (Edu-Afful and Aning 2015), reap the benefits of peacekeeping missions.

Third, and relatedly, peacekeeping deployments could help create human capital and transfer skills. The principal avenue for human capital development is the employment of local staff (Carnahan, Durch, and Gilmore 2006). As noted above, this can have the unintended consequence of effectively removing desperately needed skilled labor from the local economy.

We suggest that one way to differentiate these arguments from the claim that peacekeeping missions lead to a short-term expansion of the nontraded sector is to consider the extent to which economic gains endure when a mission withdraws. Improvements in the security environment, state capacity, and human capital are likely to persist, at least in the short- and medium-term. Conversely, if the peacekeeping mission simply created a market in nontraded products that it then ceases to support, we should see a challenging adjustment period. Cooks, drivers, maids, and other service workers have to find employment in other areas of the economy at this point. If other sectors do not immediately absorb excess labor and capital, an economic downturn can occur. In general, the high wages and low labor availability caused by a boom in the nontraded sector (Durch 2010) can crowd out manufacturing and other activities and shrink the traded sector,[11] which may not immediately recover after the demand for nontraded products falls (Matsuyama 1992). This can cause prolonged economic pain and stunt economic growth (Sachs and Warner 1995; Gylfason, Herbertsson, and Zoega 1999).[12]

We will return to this question in the empirical analysis below. We conclude this section by noting that researchers ought to study peacekeeping economies more broadly. Some aspects have received scholarly attention. For example, numerous studies examine the gendered economic consequences of a peacekeeping presence (Jennings 2010; Aning and Edu-Afful 2013, 2014; Beber, Gilligan, Guardado, et al. 2017). Yet, few systematic quantitative analyses of peacekeeping economies exist, a gap that this article helps to narrow.[13]

Cross-Country Evidence

Contemporary UN peacekeeping missions involve budgets that amount to a substantial share of the typical host country's gross domestic product (GDP). They are first and foremost military operations aimed at fulfilling mandated security objectives, but they also constitute economic interventions on an impressive scale.

Consider Figure 1, which displays data compiled by Durch (2010).[14] We show the share of the host country economy that consists of direct mission-related UN spending, for all available fiscal years (2004/2005–2007/2008) and peacekeeping missions.[15] These estimates include only funds that the mission in all likelihood disburses in-country: mission subsistence and volunteer living allowances, salaries of locally hired staff, and local mission procurement. They do not include salaries and living allowances of international staff, which the UN frequently deposits in staff members' countries of origin, procurement of imported goods and services, and spending on quick-impact projects. The numbers shown in Figure 1 therefore likely underestimate the true magnitude of peacekeeping-funded economic activity.[16]

We see that peacekeeping missions amounted to about 1.7 percent of the host country economy on average and a maximum of 6 percent in the case of Liberia. For comparison, the post–World War II Marshall Plan for Germany amounted to an annual stimulus of just 0.5 percent of the country's economy (for a period of four years, and counting only actual spending and ignoring debt relief).[17] The American Recovery and Reinvestment Act, marked on the graph as the 2009 US stimulus package, provided a one-time stimulus of 5.5 percent of the country's economy, and Franklin D. Roosevelt's Public Works Administration, created in 1933, received funding equivalent to 5.9 percent of GDP (Reuters Staff 2009). Remarkably, these massive economic interventions appear similar in scale to the multiyear economic contributions of contemporary peacekeeping missions. The budgets of peacekeeping deployments are small in nominal terms, but so are the wrecked economies of postconflict societies. Peacekeeping missions can play a central role in providing economic stimulus in these contexts (Carnahan et al. 2006; Durch 2010).

One key question is whether spending associated with peacekeeping missions merely displaces local economic activity or fuels economic growth in excess of what we would observe in their absence. In the following we perform a cross-country analysis that suggests it is the latter: countries that host peacekeeping missions experience greater

[9] Rolandsen (2015) find no effect of peacekeeping spending in South Sudan, potentially due to the small size of the market, a lack of skilled labor, and the country's excessive reliance on oil revenue. Mvukiyehe and Samii (2010) argue that the sense of security prevalent in Liberia need not be attributable to the peacekeeping mission. Amara (2012) finds that a surge in military personnel does not necessarily translate into economic or security gains in Iraq.

[10] Ammitzboell (2007) argues this is a challenge faced by the peacekeeping mission in Kosovo and the coalition forces in Afghanistan.

[11] Examples of this type of resource curse, also known as Dutch disease, abound. For instance, Rajan and Subramanian (2011) find that countries receiving more aid as a share of GDP exhibit lower growth in manufacturing exports.

[12] One example is Afghanistan, where the withdrawal of US and international troops brought about economic pain, despite its highly anticipated nature (O'Donnell 2014).

[13] A seminal article by Carnahan et al. (2006) and its follow-up (Durch 2010) systematically explore the economic advantages and disadvantages of peacekeeping operations. They conclude that peacekeeping missions have a net positive impact on certain economic outcomes such as labor productivity and taxation capacity. Current work includes Bove and Elia (2018).

[14] Durch (2010) updates material presented in Carnahan et al. (2006).

[15] Missions did not necessarily start in fiscal year 2004/2005 or end in fiscal year 2007/2008.

[16] We display the figures obtained by Durch (2010) under the assumption that the share of local content of mission procurement is steady over time. Under the alternative assumption of an increasing share of local content of mission procurement, estimates are higher and not available for the fiscal year 2004/2005.

[17] This figure depends on exchange-rate and base-year assumptions, and some argue that Marshall Plan aid constituted closer to 1 percent of Germany's economy. For details, see Berger and Ritschl (1995), Sinn (2012), and Ritschl (2012).

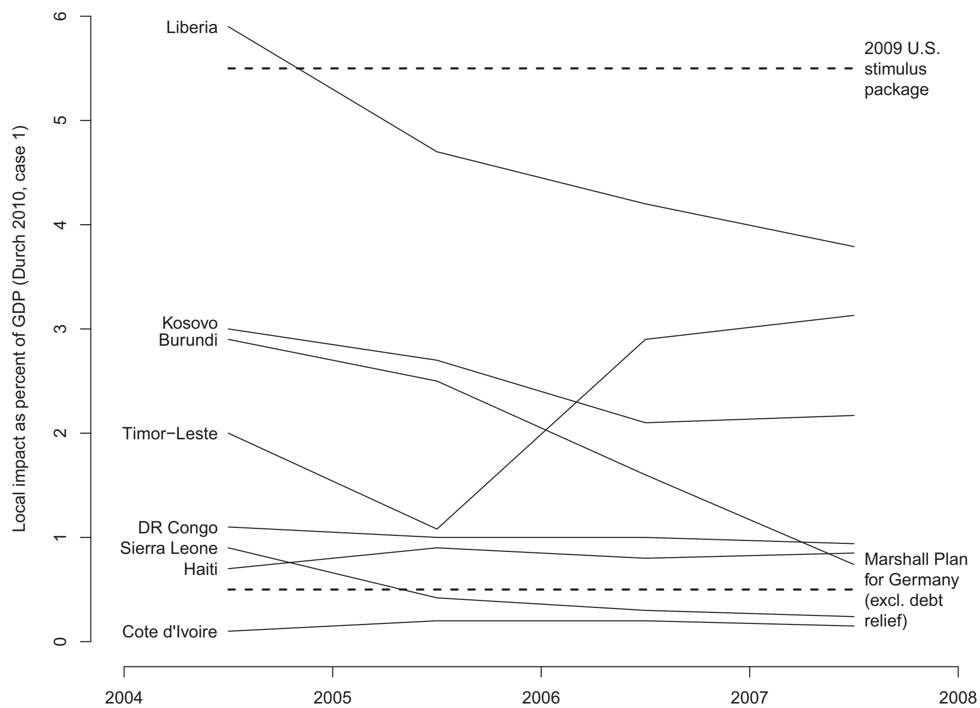

Figure 1. Peacekeeping's share of host country economies

Table 1. Peacekeeping and economic growth

GDP per capita growth	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
UN peacekeeping	1.50	2.54	5.21	4.03	2.80
	(0.73)*	(0.95)**	(2.11)*	(1.01)**	(1.17)*
Observations	5680	1775	676	3106	98
Sample	All	Major conflict	Postconflict	Post–Cold War	Matching

Notes: Units of observation are country-years, 1960–2008. Models include country and year fixed effects and ten-year histories for conflict incidence and log fatalities, unless specified otherwise. Matching estimates are results from bivariate regression using cross-sections matched on GDP, log population, ethnic fractionalization, mountainousness, French and British colonial histories, and the number of conflict years and log fatalities in the previous five years. **significant at the 99 percent level, *95 percent level.

economic growth than similarly situated countries without peacekeepers.

We combine several existing datasets for this analysis. We obtain a record of peacekeeping deployments from the dataset on Third Party Peacekeeping Missions, 1946–2014, Version 3.1, compiled by Mullenbach (2013). For information on armed conflicts, we turn to the Uppsala Conflict Data Program (UCDP)/ Peace Research Institute Oslo (PRIO) Armed Conflict Dataset, 1946–2014, Version 4–2015 (Gleditsch, Wallensteen, Eriksson, et al. 2002; Pettersson and Wallensteen 2015), and the PRIO Battle Deaths Dataset, 1946–2008, Version 3.0 (Lacina and Gleditsch 2005). We draw additional covariates from the World Bank's World Development Indicators, 1960–2014, Version 28-Jul-2015. The observations for our statistical analysis are country-years, and the available data covers the time period from 1960 to 2008.

Table 1 presents results from a set of regressions of GDP per-capita growth on an indicator for the presence of a UN peacekeeping force in a given country and year. Unless specified otherwise, all models include country and year fixed effects and ten-year histories for conflict incidence and log fatalities (separate lagged variables for each of the ten preceding years). Across estimations, we see a substantial positive and statistically significant association between peacekeeping missions and economic growth.[18] In column 1, we perform this estimation on all countries, including countries that have not experienced recent conflict, because not all peacekeeping missions operate in what one might consider a conventional postconflict environment. Some missions, such as the United Nations Peacekeeping Force in Cyprus (UNFICYP), have been in place for decades despite an absence of major violence. As one might expect, the inclusion of developed countries that both grow steadily and are unlikely to ever require peacekeepers depresses the estimated coefficient. Even so, the coefficient remains statistically significant and large; it links peacekeeping to a 1.5 percent increase in the growth rate.

In column 2, we include only countries that have experienced major armed conflict (a conflict that produced in excess of one thousand fatalities in at least one year) during the time period under study. The coefficient of interest rises to 2.5 percent, as we would expect from the exclusion of nonconflict countries in which stability begets both growth and the absence of peacekeeping. Per-capita GDP growth in

[18] We report additional estimations (with five-year conflict histories, with a lagged dependent variable, with infant mortality as an alternative outcome, and for the sample of countries that have experienced major conflict in the post–Cold War era) in Tables S.1 and S.2 in the supplementary information.

Table 2. Peacekeeping strength and economic growth

GDP per capita growth	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
UN personnel, log	0.25	0.43	0.76	0.51	0.25
	(0.10)*	(0.14)**	(0.32)*	(0.14)**	(0.65)
Observations	5680	1775	676	3106	146
Sample	All	Major conflict	Postconflict	Post–Cold War	Peacekeeping

Notes: Units of observation are country-years, 1960–2008. Models include country and year fixed effects and ten-year histories for conflict incidence and log fatalities, unless specified otherwise. Model 5 includes conflict histories but not fixed effects due to sample size. **significant at the 99 percent level, *95 percent level.

countries that have experienced conflict averages about 2 percent with a standard deviation of 7 percent, so a coefficient of 2.5 percent implies an increase in economic growth by more than one-third of a standard deviation. Given the scale of the spending reported above (recall we estimated that mission spending accounts for roughly 1.7 percent of the economy on average), these estimates imply a multiplier substantially larger than one. However, we make this claim tentatively in the absence of spending data for all missions.

Our estimate rises further still to 5.2 percent if we limit the analysis to postconflict countries, which have experienced armed conflict in the last ten years but are currently peaceful, as we do in column 3. The larger coefficient is consistent with the fact that we are focusing here on those country-years in which peacekeeping is most variable empirically and most salient economically. In column 4, we limit our sample to the post–Cold War era and estimate that peacekeeping is associated with an additional 4 percent growth. This is a significantly larger coefficient than we observe for all country-years in column 1, perhaps a reflection of the fact that large integrated, economically relevant missions have become much more common since 1990. Finally, in column 5 we report results from a matching estimation, namely the coefficient from a bivariate regression using cross-sections that we matched on GDP, logged population totals, ethnic fractionalization, mountainousness, French and British colonial histories, and the number of conflict-years and log fatalities in the previous five years.[19] Instead of choosing a sample in which peacekeeping should theoretically be relevant (such as postconflict country-years), matching allows us to construct a sample in which peacekeeping is actually relevant—a sample containing observed peacekeeping deployments together with look-alike cases that could well have seen peacekeepers but did not. This procedure yields an estimate of 2.8 percent.[20]

Across all of these models the presence of a peacekeeping mission and economic growth go hand-in-hand. In Table 2, we now relate economic growth to the size of any peacekeeping deployment, which we log due to the skewness of the personnel data. For consistency we use specifications comparable to those in Table 1, with similar results.[21] Across these estimations, a 1 percent increase in the number of deployed peacekeepers is associated with an increase in growth of 1 percent of the estimated coefficient. For all country-years, we link doubling a mission in size to an increase in

Table 3. Difference in differences

ΔGDP per capita growth (annual %)	*(1)*
ΔUN peacekeeping	3.87
	(1.45)**
Observations	5591

Notes: Units of observation are country-years, 1960–2008. (2) Models include country and year fixed effects and ten-year histories for conflict incidence and log fatalities. **significant at the 99 percent level.

Table 4. Deployments versus withdrawals

ΔGDP per capita growth (annual %)	*(1)*	*(2)*
ΔUN peacekeeping (deployments)	0.90	
	(1.73)	
ΔUN peacekeeping (withdrawals)		–10.73
		(2.70)**
Observations	5584	5574

Notes: Units of observation are country-years, 1960–2008. (2) Models include country and year fixed effects and ten-year histories for conflict incidence and log fatalities. **significant at the 99 percent level.

economic growth of $\ln(2) \cdot .25$ percent = 0.17 percent, a statistically significant but substantively small estimate. We obtain somewhat larger estimates for the restricted samples shown in columns 2 to 4, for the same reasons given above. However, when we restrict the sample to only those country-years in which peacekeepers were present, we return to an estimate of 0.25, which now lacks statistical significance given the small sample size.

This suggests that personnel numbers alone do not fully capture the logic of peacekeeping economies. One reason could be that total deployment strength matters less than the composition of the mission: perhaps missions with a larger civilian component are more closely linked to a host country's economic trajectory. It is also possible that some of the association between peacekeeping and growth passes through the provision of security as opposed to the raw consumption spending attached to a mission of particular size. As noted above, we figure that the implied multiplier on mission spending lies substantially in excess of one, and it appears reasonable to not attribute this excess to direct spending on nontraded product. In turn this should diminish any apparent association between mission size and growth. We leave a further exploration of the relevant cross-sectional comparisons to future research, but hope to illuminate this issue by now turning to episodes of within-country change regarding the presence of peacekeepers.

Table 3 shows the coefficient we obtain from a difference-in-differences estimation, which indicates an overall result in terms of both the size of the association and its

[19] We use coarsened exact matching (Iacus, King, and Porro 2009).

[20] While our estimates vary across models, differences between them are for the most part not statistically significant. The only significant difference at the 95 percent level separates the coefficients for post–Cold War and all country-years (difference of 2.53, with standard error 1.24). The difference between postconflict and all country-years (3.71, with standard error 2.23) is significant at the 90 percent level.

[21] We omit the matching estimator because we are now considering a continuous measure of peacekeeping.

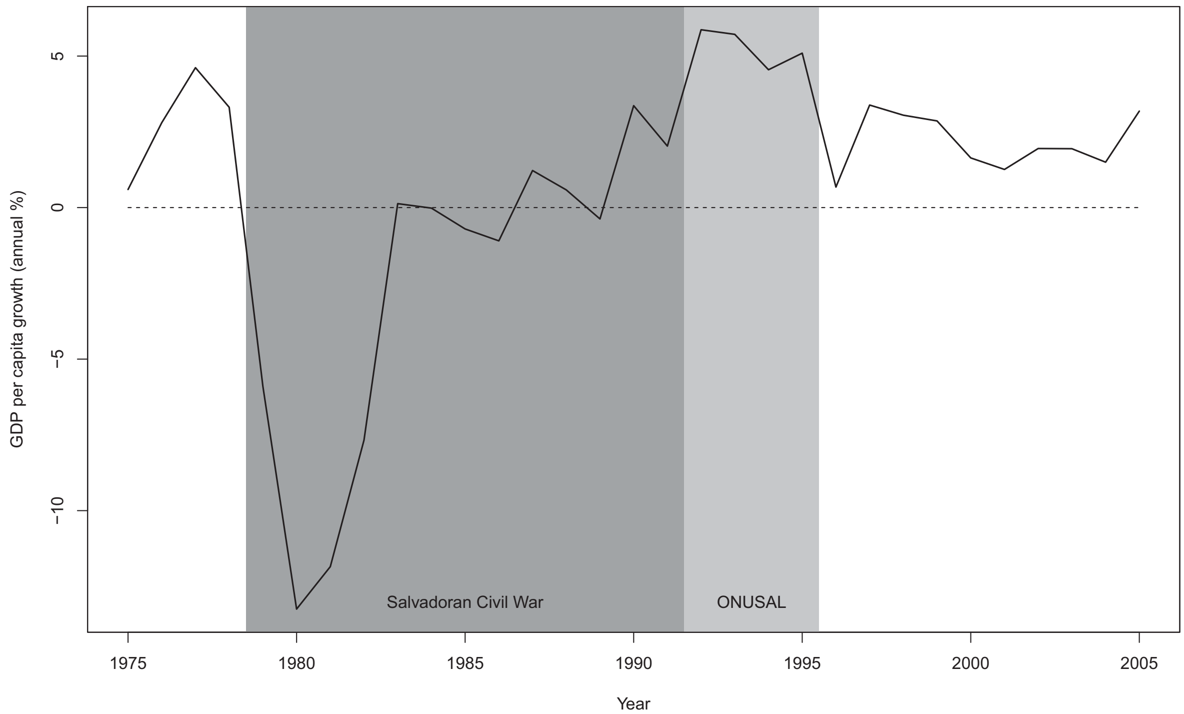

Figure 2. Conflict and recovery in El Salvador

statistical significance similar to what we saw in Table 1.[22] The difference-in-differences approach focuses our attention on within-country change, which can happen in two ways: peacekeeping forces can deploy and they can withdraw. This is a crucial distinction, given our interest in the sustainability of the growth effect of UN peacekeeping missions, and Table 4 reports separate results for deployments and withdrawals.[23]

We can see that deployments are not linked to immediate, large increases in growth rates. But when UN peacekeeping missions leave, economic disruption and negative growth shocks appear to strike. This comports with the observation that withdrawals tend to be more abrupt than troop buildups and that peacekeeping missions tend to insufficiently manage the potential economic downsides of rapid withdrawals. It also suggests that peacekeeping missions do not direct their economic stimulus in a way that would lead to persistent and robust growth.

Figure 2 provides an illustration using one of the cases included in our statistical analysis, El Salvador. We show the GDP per-capita growth rate across time. We can see that El Salvador's economy contracted severely at the beginning of the civil war (this decline is in fact more than a standard deviation worse than the average economic contraction we see at the beginning of an armed conflict), recovered as the war ended and the UN deployed its Observer Mission in El Salvador (ONUSAL), and experienced a pronounced drop in the growth rate when ONUSAL withdrew.

Our results show that peacekeeping economies represent good economic times. But they also suggest that they are vulnerable to painful disruption when missions withdraw. Next we turn to survey data that we collected in Liberia's capital Monrovia for on-the-ground evidence that peacekeeping-driven economic booms are not geared toward sustainability. We will suggest that peacekeeping forces help fuel demand for low-skill services, which risks collapsing when the mission eventually withdraws—and which is likely one reason why most Monrovians did not want UNMIL to leave, despite a stable security situation.

Survey Data from Monrovia, Liberia

Background

The UN initially established its Mission in Liberia (UNMIL) in September 2003 in order to facilitate the implementation of the Comprehensive Peace Agreement signed in Accra one month earlier.[24] UNMIL's mandate in 2003 entailed the deployment of fifteen thousand soldiers, police officers, and civilians to Liberia, until the mission's closure in 2018. The UN stationed its largest concentration of personnel in Monrovia, which is Liberia's capital, the site of UNMIL's headquarters, and where we conducted the survey discussed below.

The deployment of thousands of peacekeepers transformed not only Liberia's security, but also its economic environment. In no small part this is due to the vast destruction caused by the brutal civil wars that first began in 1989 and ultimately ended with the Comprehensive Peace Agreement in 2003. The wars resulted in about 250,000 deaths out of a population of around two to three million people at the time, and some of the most intense fighting occurred in Monrovia. Our survey therefore provides a snapshot of economic activity in the context of a war-ravaged region where the UN had deployed a large-scale peacekeeping mission,

[22] Difference-in-differences and two-way fixed-effects models are equivalent under certain conditions given a balanced panel, but that is not the case here.

[23] The data includes forty-three deployments and thirty withdrawals. Without regression adjustments, per-capita GDP growth changes from an average of 6.2 percent to 3 percent in the aftermath of a withdrawal.

[24] UNMIL followed in the footsteps of peacekeepers from the Economic Community of West African States (ECOWAS). In fact, a large share of the initial UN deployment consisted of "rehatted" ECOWAS forces from other West African countries, principally Ghana and Nigeria.

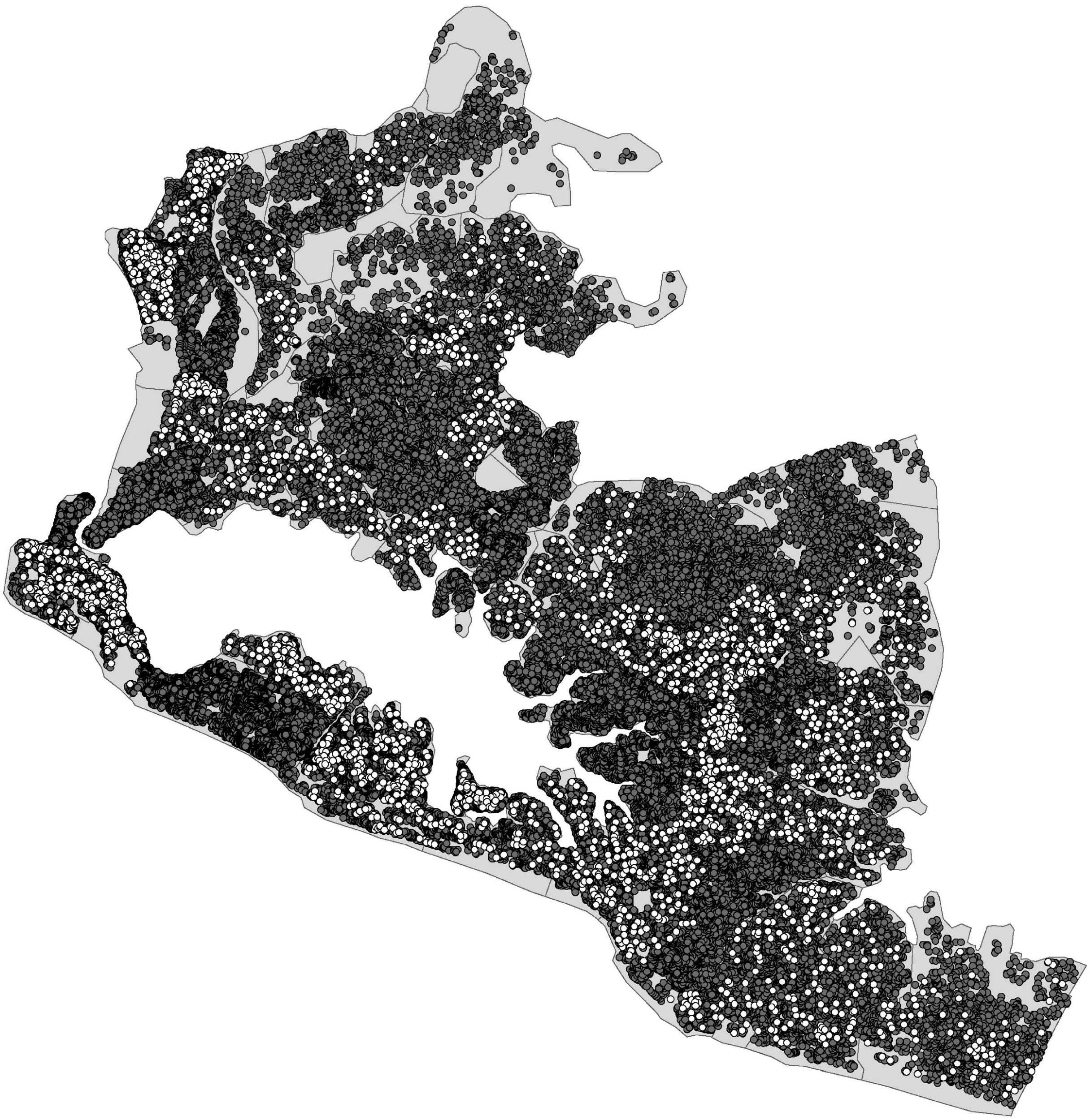

Figure 3. Geolocated structures and sample

largely achieved its mandated security objectives, and committed to the mission's withdrawal in the near future.

Data Collection

In order to examine microlevel economic interactions with peacekeepers in the Liberian context, we conducted a representative survey of a random sample of 1,381 greater Monrovia residents in the fall of 2012. Since we did not have access to census maps or any other reliable sampling frames, we geolocated all 110,750 dwellings using satellite images. We then randomly selected residences in thirty-nine sampled enumeration areas. Figure 3 shows all dwellings (in gray) as well as those selected (in white) within greater Monrovia. GPS-equipped enumerators located target buildings, randomly selected households and individual subjects, and completed a dwelling assessment, household roster, and individual questionnaires. Since enumerators carried GPS devices and surveys are time-stamped, we were able to ensure that research assistants followed assigned enumeration paths.[25]

Response rates for our survey are high, as is common in Liberia, with 88.7 percent of targeted households completing the survey. Four households (0.3 percent) refused to participate. In some cases enumerators could not locate the geocoded dwelling (8.1 percent), the building was not a residence (2 percent), or the sampled household could not be interviewed despite multiple contact attempts (0.9 percent).

Results

In the following we suggest that UNMIL reshaped Liberia's economy, but not in a way that would optimally promote

[25] Survey instruments and other materials are available in the supplementary information. See also Beber et al. (2017) for additional information.

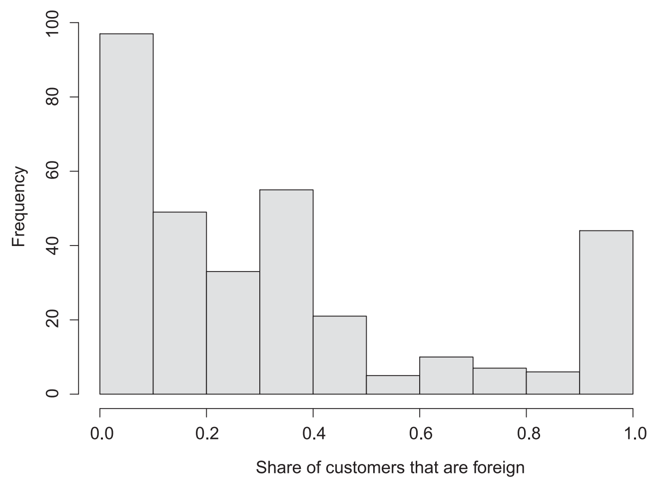

Figure 4. Share of foreign customers, for employed respondents

development or ensure that the economy can withstand UNMIL's withdrawal. At the same time, UNMIL's spending did improve economic outcomes for ordinary Liberians in the short term. Perhaps as a result, the overwhelming majority of respondents approved of UNMIL and supported a continuation of the mission.

First, Figure 4 shows that about 71 percent of employed respondents in our sample reported regularly selling to foreigners, a substantial number of whom were UNMIL personnel or otherwise associated with the UN's presence.[26] The customer base was entirely foreign for 12 percent of these employees. About 40 percent of respondents (56 percent among men) reported employment, so we estimate that twenty-five thousand individuals, plus their dependents, relied on a job that exclusively catered to foreigners, in a metropolitan area of about 540,000 adults at the time of our survey. For another estimated twenty-three thousand individuals, at least half (but not all) of his or her primary job's customer base consisted of foreigners.

A similar picture emerges with respect to the smaller group of individuals who owned a business or worked for themselves.[27] We estimate that about eighteen thousand individuals in greater Monrovia earned money from a primary business with a customer base at least half of which was composed of foreigners. In aggregate, this means that about sixty-two thousand persons earned their living in a context where at least half of the customers were foreigners.[28] Many businesses and employees depended substantially on foreign spending and UNMIL-generated demand and are hence vulnerable to economic disruptions caused by UNMIL's withdrawal.

One could think that UNMIL-related spending, specifically business generated by foreigners, might have helped build aspiring, robust companies that can create value even as UNMIL withdraws. But most of the UNMIL-related demand focused on low-skill services: drivers, security guards, cooks, maids, and so on.[29] Figure 5 makes this point by showing employee occupations according to their top-level International Labour Organization (ILO) classification for each type of customer base.[30] Employees catering to foreigners were more likely to work in elementary occupations or in service and sales and less likely to work as managers, craftsmen/craftswomen, or professionals. This also suggests businesses catering to foreigners did not benefit from skills transfers that might enable a business to persist in a postpeacekeeping Liberia.

There is also little reason to believe that UNMIL helped to solve the capital and credit constraints that are the most challenging problem Liberians face when they want to open and run a business. Figure 6 illustrates this point. It shows that the overwhelming majority of businesses continued to be funded with personal savings or a family gift. This widespread unavailability of credit surely stands in the way of robust post-UNMIL economic growth. The large amounts of funds that UNMIL has injected into the Liberian economy over the years appear to have done little to resolve this issue.

To be clear, UNMIL economic activity did not generally impose hardships on ordinary individuals. On the contrary, respondents benefited when they engaged in economic exchange with peacekeepers. The peacekeeping mission may not have laid all of the groundwork it could have laid in order to enable sustainable growth in Liberia, but neither was UNMIL an extractive operation.

Table 5 shows how selling goods or services to UNMIL personnel affected respondents' economic well-being. We consider four outcomes: log total earnings from any self-employment or business activity during the previous one-month period; log liquid assets, which is the total value of anything a subject could sell if he or she was in urgent need for money; an asset index based on whether the respondent owned specific items such as a bicycle, a generator, a television, livestock, and so on; and an indicator for whether the subject had any savings.[31] We report survey regression estimates and adjust for the subject's gender, age, marital status, cognitive score, household size, business ownership, and employment status. We also include education splines and fixed effects for a subject's primary sampling unit and the language he or she speaks at home (Bassa, English, Gbandi, Gio, Grebo, Kpelle, Krahn, Lorma, Mandingo, Mano, or Vai).

Across different outcome measures, the estimates indicate that subjects were better off when they provided goods or services to UNMIL personnel. We see a roughly one-third increase in earnings, an increase of one-quarter of a standard deviation in the asset index (which we measure approximately in standard deviations), and an increase of 17 percentage points in the probability that a subject had savings. The estimated association between ever having sold goods or services to peacekeepers and total liquid assets is particularly large and corresponds to a threefold increase, but note that the average subject holds liquid assets valued

[26] Regular sales to foreigners here means that at least 10 percent of the subject's reported weekly customer base in his or her primary job is foreign. In general, interactions with foreigners are ubiquitous in Monrovia: almost all employed respondents (99 percent) reported selling to at least one foreigner per week.

[27] There is only minor overlap between business ownership and employment, with about 4 percent of respondents reporting both.

[28] This aggregate figure is of particular interest because it is robust to the fact that subjects could have reasonably classified some economic activities, such as cleaning and other domestic services, as either employment or self-employment. Cleaners, for example, usually identified as employees in our sample, but a substantial minority identified as self-employed.

[29] Low-skill services also include sex work. Although the standard occupational categories discussed here do not include sex work as such, subjects could still have reported it as economic activity in this section of the survey, either with a related or without an occupational classification.

[30] We infer the top-level classification from respondents' actual occupations. A complete, standard list of low-level occupations is available in the supplementary information.

[31] In order to not lose observations, we add one dollar to reported earnings and assets before taking the log.

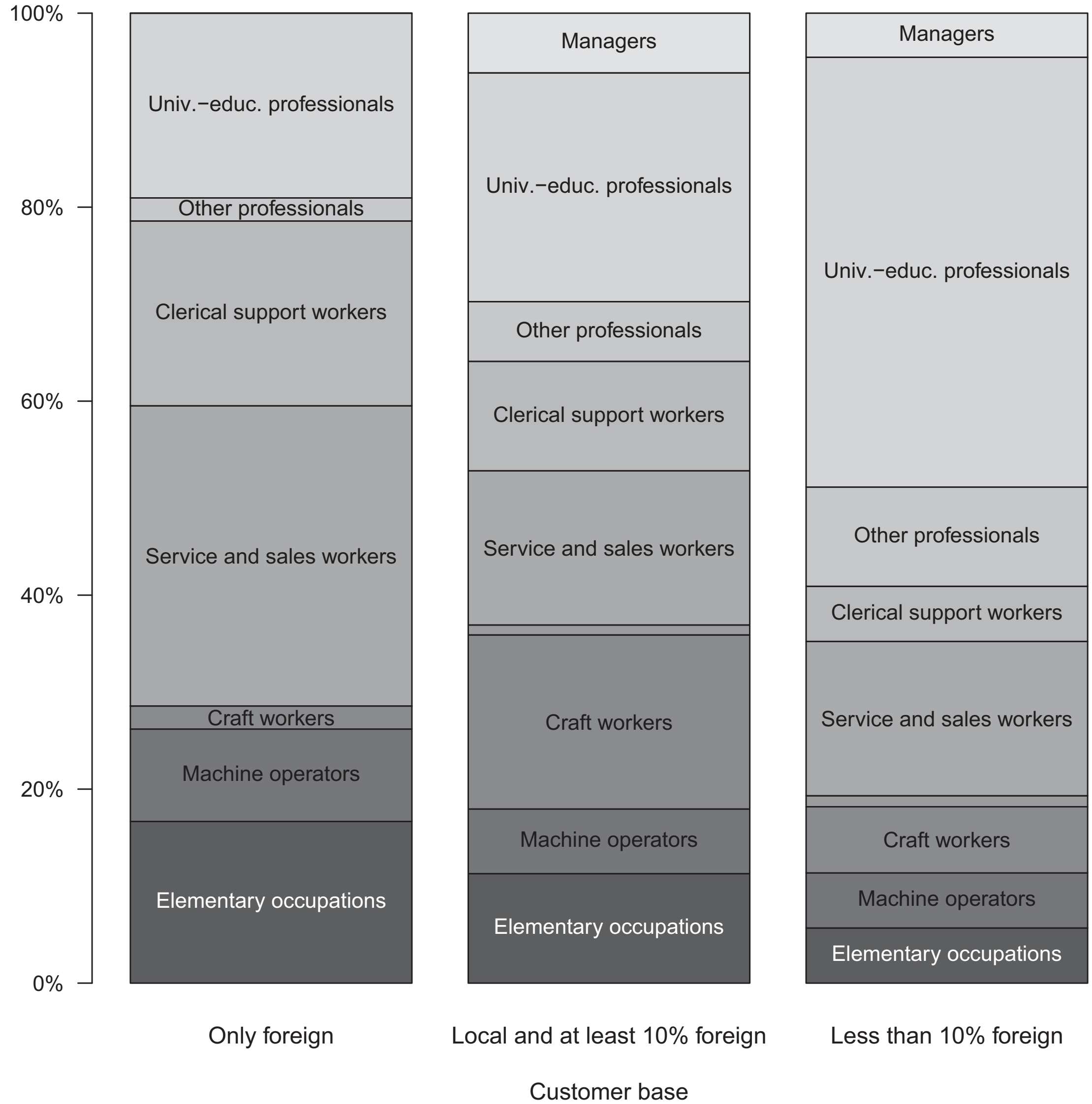

Figure 5. Occupations for employees, by ILO classification

at just sixty-five Liberian dollars, which is less than one US dollar.[32]

Table 6 shows that the estimated coefficients are generally larger if the sale to UNMIL personnel occurred relatively more recently. The economic benefits of transacting with UNMIL personnel dissipate over time, as we would expect.[33]

Our estimations include fixed effects for primary sampling units. However, we could still be concerned that proximity to a base improved subjects' safety and hence their earnings, but also increased their probability of selling goods or services to peacekeepers simply due to collocation. This could induce a spurious correlation between transactions with UNMIL personnel and measures of economic well-being. We therefore use the maps in Figures 7 and 8 to check for any clustering of well-off subjects around UN locations in Monrovia, but find none. Areas that are relatively poor, as measured by our asset index and an enumerator-reported indicator of wall quality, include Peace Island and the area east of the Monrovia-Kakata Highway. Wealthier parts of the city include areas in central Monrovia, along Duport Road in the east, along Somalia Drive, and portions of Paynesville. Yet, these areas do not obviously correspond to the locations of UN sites marked in white. In addition Figure 9 shows that subjects who sold goods or services to UNMIL personnel are dispersed across the metropolitan area.

Finally, transacting with UNMIL did not only pay well, it also appears to have helped smooth out shocks such as the death of a household member. About 14 percent of the households in our sample experienced at least one death of a working-age adult (aged 15–64, as defined by the World Bank) since 2009. Given that wealthy households have an advantage in protecting against disease, our analysis of

[32] The wealthiest individual in our sample claims assets of about 175,000 US dollars. Roughly half of our sample does not have any assets at all.

[33] One concern with these estimates is that perhaps subjects who were relatively well-off when UNMIL first arrived were simply able to capture UNMIL contracts, in which case economic well-being would cause subjects to sell goods and services to peacekeepers as opposed to the other way around. In Table S.3 in the supplementary information, we try to address this issue by including only those subjects in the analysis who were not in Monrovia in 1999. These subjects are arguably less likely to have had any significant preexisting assets when the war ended and UNMIL deployed. The estimated effects persist in this analysis. However, its utility is limited by the fact that many of those who would have had assets in Monrovia in 2003, such as diaspora Liberians, would also have been absent from Monrovia in 1999.

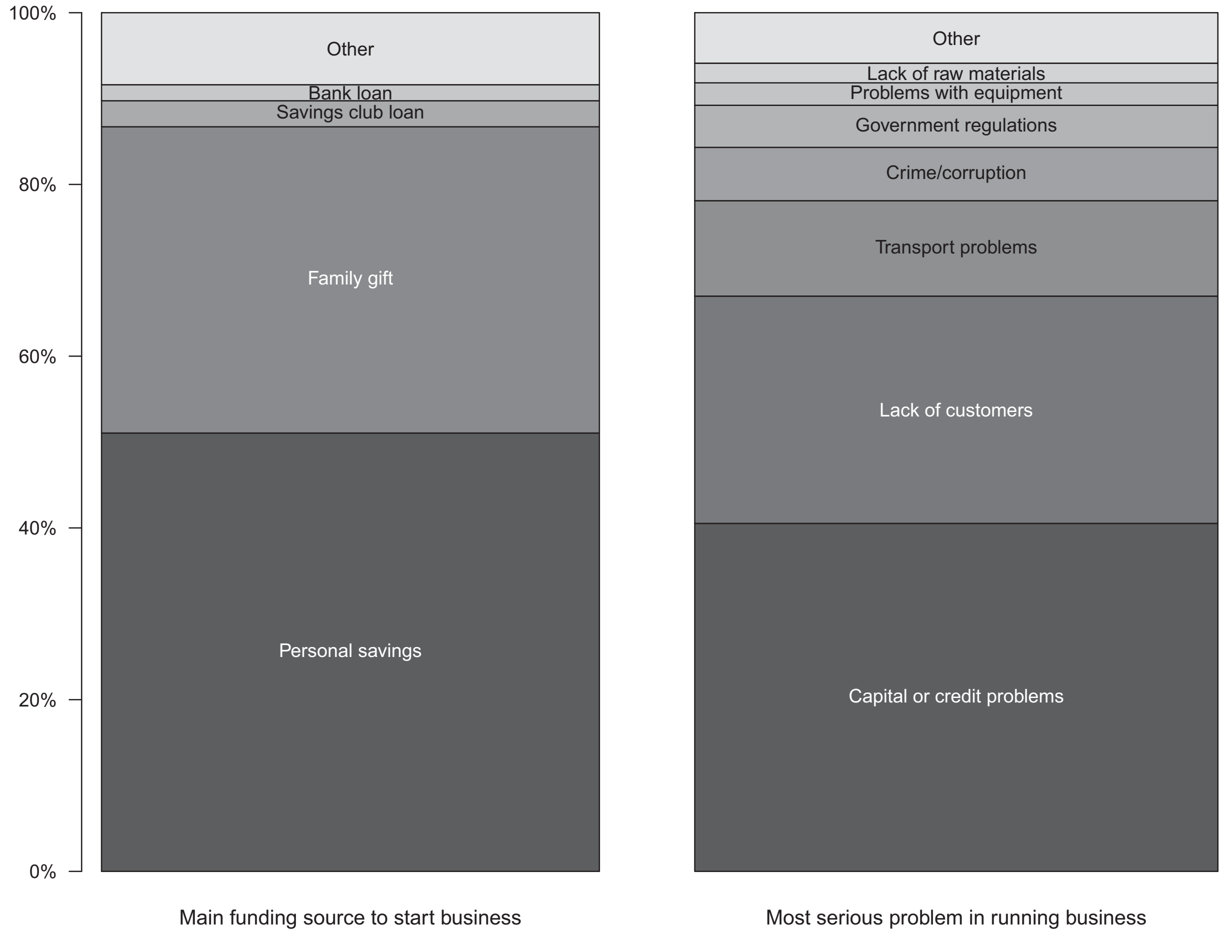

Figure 6. Funding and problems running a business

Table 5. Any sales to UNMIL personnel and economic well-being

	Log total earnings	*Log total liquid assets*	*Asset index*	*Savings*
Ever sold good or service to UNMIL personnel	0.29	1.20	0.26	0.17
	(0.05)**	(0.33)**	(0.05)**	(0.03)**
Observations	1285	1168	1319	1316

Notes: Survey regression estimates, adjusted for gender, age, marital status, cognitive score, household size, business ownership, employment status, education splines, fixed effects for primary sampling unit, and language spoken at home. **significant at the 99 percent level.

household shocks focuses on the 4 percent of deaths that were accidental (not caused by disease, war, or old age). We then analyze whether transfers from UNMIL to the household moderated the effect of such a shock on the household's economic well-being. Table 7 suggests that this is the case.[34]

Considering UNMIL's contribution to security and stability in Liberia and the mission's apparent effects on economic well-being, it is no surprise that respondents had overwhelmingly positive views of the peacekeeping deployment. We estimate that 69 percent of Monrovia's residents wanted UNMIL to stay, 88 percent believed that UNMIL has improved security in Monrovia, 75 percent thought the mission has improved their personal security, 72 percent believed UNMIL has had positive consequences other than security, and 65 percent thought there have not been any negative consequences of the mission at all. Figure 10 shows that these numbers increase further when we consider (regression-adjusted) approval rates for those who have received something of value from UN personnel. The shaded areas indicate the marginal differences between those who have and those who have not received something of value. All of these differences are statistically significant and large, given that baseline levels of support are already high: with 65 percent as a baseline, an increase of 14.8 percentage points corresponds to almost half of the potential maximum effect. When we asked respondents to name negative aspects of the presence of UN peacekeeping forces in Liberia, relatively few could name any, and reckless driving was the most common complaint among those that could, as shown in Table 8.[35]

[34] Since relatively wealthy people may also be less likely to die from accidents, we perform additional analysis in which we code any household with a severely injured or disabled accident survivor as having undergone a shock. Results are similar and shown in Table S.4 in the supplementary information.

[35] On the issue of sexual exploitation and abuse, see Beber et al. (2017).

Table 6. Recent sales to UNMIL personnel and economic well-being

Sold good or service to UNMIL	*Log total earnings*	*Log total liquid assets*	*Asset index*	*Savings*
…within last month	0.36	1.56	0.37	0.20
	(0.08)**	(0.38)**	(0.07)**	(0.03)**
…within last year	0.26	1.29	0.19	0.08
	(0.11)*	(0.86)	(0.09)*	(0.07)
…over a year ago	0.12	0.27	0.03	0.19
	(0.11)	(0.62)	(0.12)	(0.06)***
Observations	1285	1168	1319	1316

Notes: Survey regression estimates, adjusted for gender, age, marital status, cognitive score, household size, business ownership, employment status, education splines, fixed effects for primary sampling unit, and language spoken at home. **significant at the 99 percent level, *95 percent level.

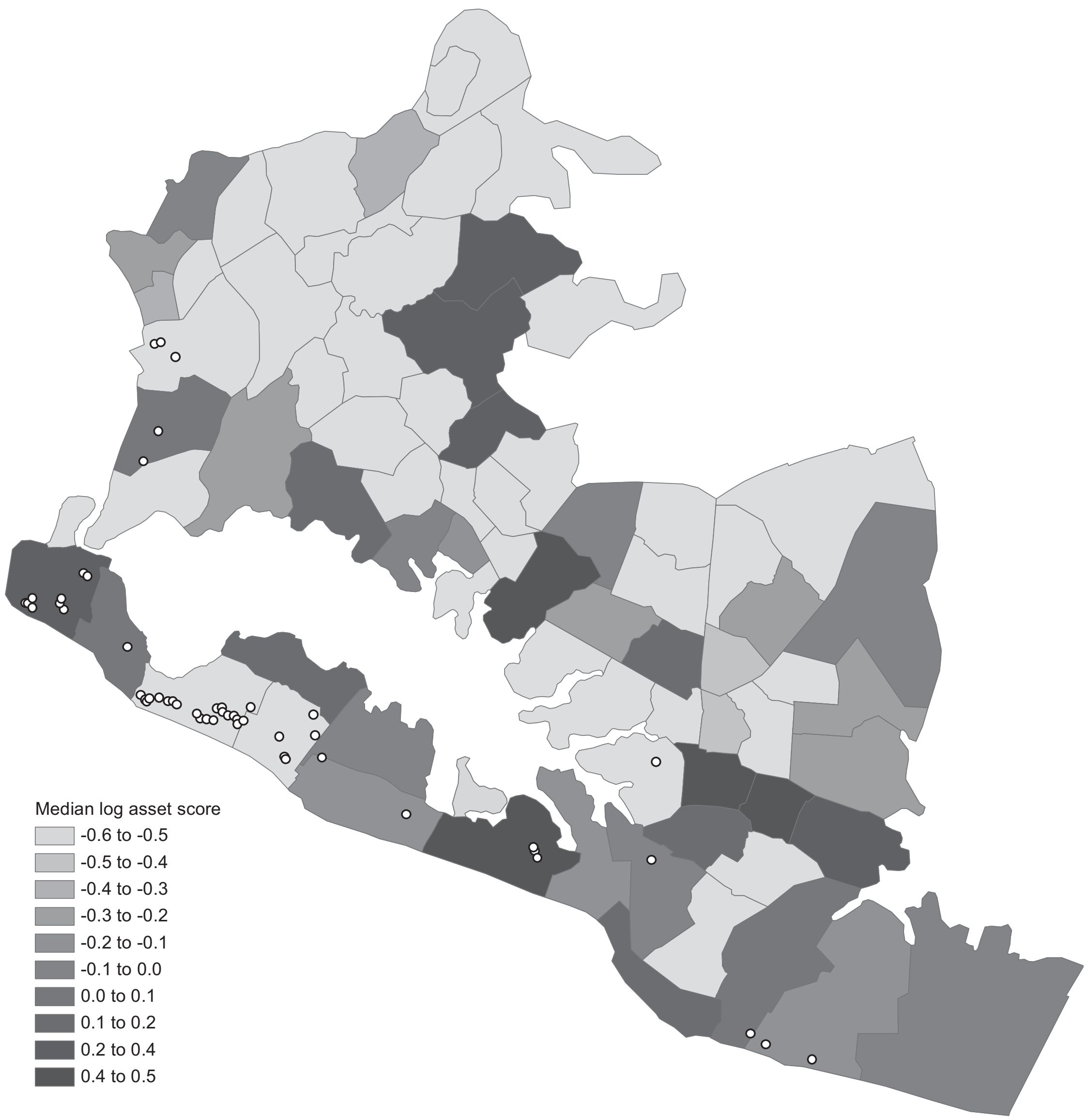

Figure 7. Asset index and UN locations in Monrovia

But high approval ratings do not change the fact that UNMIL's complete withdrawal threatens to be as economically disruptive as other mission drawdowns. UNMIL exemplifies the challenges that we suspect underpin the negative relationship between withdrawals and the host country's rate of economic growth: large amounts of consumption spending and demand for low-skill services and no indication of concomitant skills transfers for employees or a loosening of credit constraints for current and prospective business owners. In fact, one reason why approval rates were high might

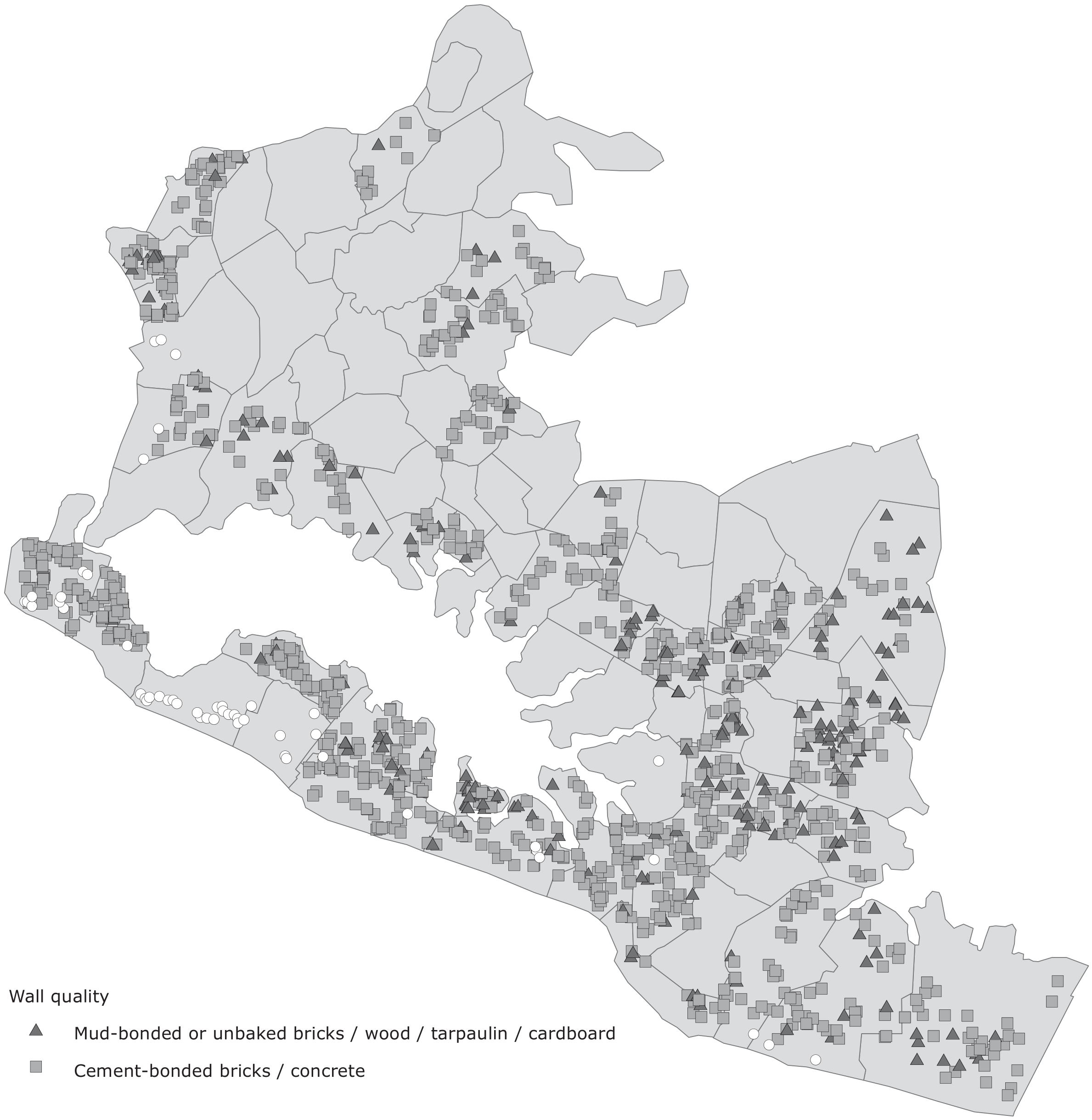

Figure 8. Wall quality and UN locations in Monrovia

be that respondents recognized that their economic livelihoods depended on UNMIL's continued presence.

Conclusion

In this note, we present cross-country evidence and microlevel data from Liberia to show that UN peacekeeping missions amount to major economic interventions that risk falling short of sustainably contributing to host countries' economic success. We find that peacekeeping missions are associated with economic growth, but we also find that withdrawals are more economically disruptive than they ought to be. The survey data we collected in Liberia's capital Monrovia suggests that one reason for this could be that peacekeeping forces fuel demand for low-skill services and do not effectively assist in building a local economy that can weather the peacekeeping mission's withdrawal.

We do not believe that the solution to this challenge is to reduce the UN's economic footprint when it deploys a peacekeeping mission. On the contrary, missions should increase the shares of national staff and local procurement to promote local business ownership and skills transfers. They constitute a major employer in postconflict countries and should be understood as such. We suggest that the UN should, at every opportunity, hire and procure services from a diverse array of locals, boosting host country employment and human capital.

In the context of UNMIL, its awareness of the role it could play for the local labor market found expression in a series of mission-organized job fairs. Still, the mission lacked a comprehensive postwithdrawal plan for not only its local employees, but for those it touched more indirectly, particularly other low-skill workers. We therefore suggest that missions such as UNMIL should, at minimum, take three

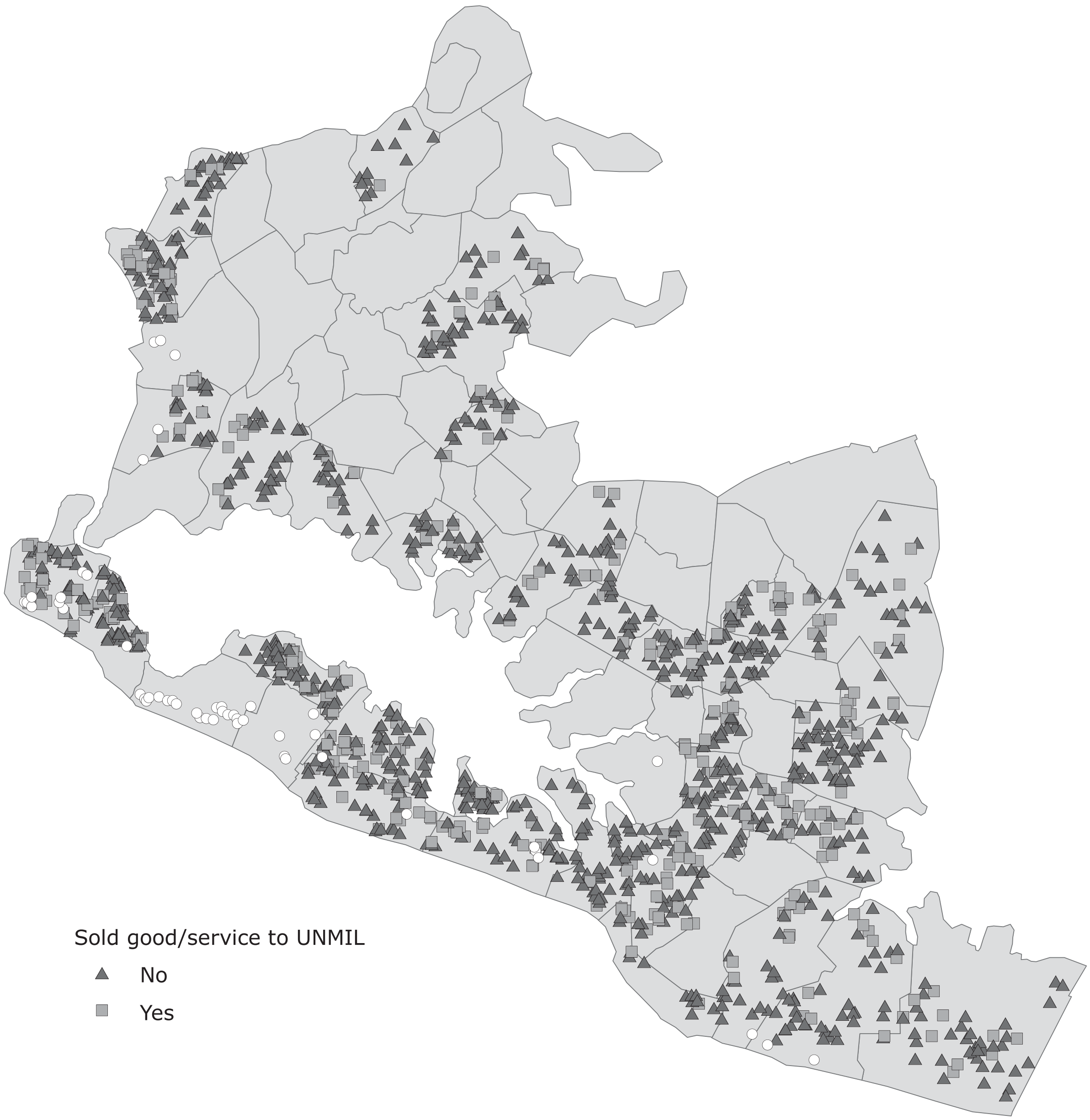

Figure 9. Geographic distribution of respondents making sales to UNMIL personnel

steps: First, hold regular skills training programs for employees as well as communities at large. One feasible way to accomplish this would be to open up training classes offered to international peacekeepers to locals. Second, hold networking events so that local mission employees can engage with other potential (postwithdrawal) employers. Third, refer as many local employees and contractors as possible to other potential employers and principals, preferably using a database of local contractors that should be distributed among international actors on the ground. These straightforward suggestions could be a first step toward broadly institutionalized hiring and training practices that could make peacekeeping missions affect local economies beyond simply creating an influx of consumption spending.

Civilian offices have the potential to play a particularly important role in locals' economic advancement, in Liberia and elsewhere. Civilians make up a substantial portion of peacekeeping deployments, and their broad mandates in peacekeeping missions translate into far more opportunities for local employment than are available through military or police contingents. In civilian UN jobs, locals arguably also learn a broader set of skills that can be transferable to other employment, acquire specific bureaucratic skills that are necessary for employment in other international organizations (Autesserre 2014), and learn the language of international donors, which can be helpful in finding other jobs. Conversely, military or police contingents usually hire locals as low-skill workers, who then tend not to acquire a broad range of skills. For safety reasons, these contingents are also less likely to hire locals. International organizations should comprehensively coordinate employment and training opportunities, in particular those involving civilian offices and agencies. This did not happen in Liberia, but we suspect that incorporating such coordination in planning meetings

Table 7. UNMIL and household deaths as economic shocks

	Log total liquid assets	*Asset index*	*Adequate food*	*Adequate housing*	*Electricity*
Death, no UNMIL transfer	–.003	–0.11	–0.03	–0.13	–0.04
	(0.72)	(0.14)	(0.15)	(0.14)	(0.07)
Death, UNMIL transfer	2.85	0.47	0.22	–0.01	0.24
	(1.03)**	(0.19)*	(0.07)**	(0.11)	(0.11)*
No death, UNMIL transfer	1.11	0.24	0.04	0.02	0.01
	(0.28)**	(0.05)**	(0.04)	(0.04)	(0.03)
Observations	1182	1335	1334	1334	1333

Notes: Survey regression estimates, adjusted for gender, age, marital status, cognitive score, education splines, fixed effects for primary sampling unit, and language spoken at home. **significant at the 99 percent level, *95 percent level.

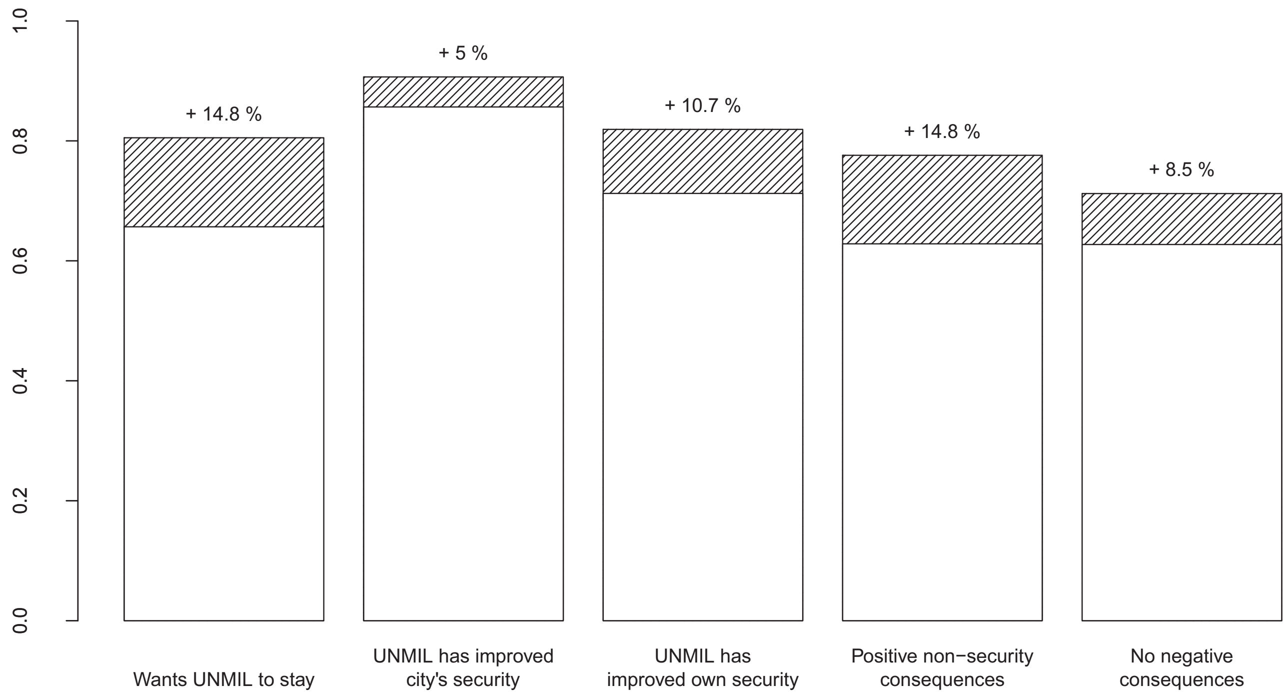

Figure 10. UNMIL's popularity, regression-adjusted effects of receiving something of value

Table 8. Survey-adjusted rates of complaints about UNMIL

Negative aspects related to the presence of UN peacekeeping forces in Liberia? (all complaints reported by at least 3%)	
Drive recklessly	16%
Use cash or violence to take our boyfriends/girlfriends	13%
Increase teenage pregnancy	12%
Peacekeepers slow down traffic	10%
Peacekeepers sexually or otherwise harass local women	8%
Peacekeepers harm the economy/cause shortages/drive up prices	4%
Peacekeepers bully/boss/mistreat/disrespect local citizens	3%
None/don't know	64%

could help equip international actors to absorb some of the shock of a UN peacekeeping mission's withdrawal.

In addition to institutionalizing hiring and training processes, UN missions should consider privileging local citizens in their hiring and procurement options—in Liberia, this might have meant disadvantaging Lebanese and other expatriate business owners. Expatriates oftentimes reap disproportionate benefits from the presence of international actors, because they have access to capital to start businesses or have other comparative advantages. While internal rules for hiring need not be discriminatory, the mission can highlight the benefits of contracting with local citizens and how doing so helps stimulate the economy and fulfill mandate goals. Missions should also consider providing training courses so that locals can learn skills needed to develop their own procurement businesses. Missions should also keep up-to-date databases of local contractors and employees so that they are able to maintain connections with local citizens as contingents rotate.

The UN should also consider withdrawing peacekeeping contingents slowly, and it should broadly acknowledge a need for mandates to reflect the potential effects of mission withdrawals on local economies. Currently, such provisions do not exist. Without them, missions are unlikely to deeply engage with any of the above recommendations. Drawing down slowly allows the country's economy to ease into the transition and gives locals time to find alternative jobs or become trained in other skills.

The policy proposals outlined above amount to small steps toward addressing the sizable challenges of peacekeeping economies. Programs targeting mission employees and contractors, for example, will not reach those whose livelihoods are only indirectly or contextually intertwined with a peacekeeping economy—which is to say, most of those affected by the economic changes that the operation and withdrawal of a peacekeeping mission brings. The paucity of policy options stands in disconcerting contrast to the weightiness of the "perils" of peacekeeping economies. The UN's focus on risk minimization, lack of political will, and complex decision-making structures further constrain effective action.

Still, we hope research such as ours can help pave the way for a broad conversation on the UN's role in local economies. This discourse should highlight not only the UN's effects on economic growth, but also challenges of informal economies that others have emphasized. For example, missions should take into consideration that hybrid and informal economies tied to patronage networks or militias tend to persist. Cheng (2013) suggests that state-builders, such as peacekeeping missions, can inadvertently institutionalize informal practices and institutions, with potentially dire consequences for long-term economic development. International peacekeepers should recognize that corruption, patronage, and extractive rent-seeking are a part of the transition to peace, especially in places with natural resources (Strazzari and Kamphuis 2012; Cheng and Zaum 2013; Belloni and Strazzari 2014). Viewing conflict and intervention through an economic lens might shed light on the conditions under which informal economic structures play a part in either weakening or strengthening both the economy at large and the rule of law (Raeymaekers 2013).

Our data suggests that peacekeeping missions both help countries' economies grow and disrupt economic upswings when they leave. The latter does not imply an indefinite slump; in the long run, economies can bounce back from withdrawals, as seen in the case of the mission in El Salvador; we hope that future research will provide insight into how postpeacekeeping economies can best recover from the challenges of mission closure and how the UN can best assist in this process. Peacekeeping missions have large budgets relative to the size of a typical postwar economy, and the UN should seize the opportunity to use these funds not only to accomplish mandated security goals but also to fulfill the promise of sustained economic growth.

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Supplementary Information

Supplementary information is available at https://doi.org/10.7910/DVN/T6GPSX and at the *International Studies Quarterly* data archive.

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