Challenges and Pitfalls of Peacekeeping Economies

Bernd Beber∗
New York University

Michael Gilligan†
New York University

Jenny Guardado‡
Georgetown University

Sabrina Karim§
Emory University

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∗Corresponding author, bernd.beber@nyu.edu
†michael.gilligan@nyu.edu
‡jgr45@georgetown.edu
§skarim4@emory.edu
1 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, 2014b,a). They appear to have prolonged post-war peace, prevented conflict contagion, and reduced battlefield and civilian fatalities. However, peacekeeping deployments are not merely security interventions. They often have profound economic consequences, which are largely ignored by this literature.

The lack of recent systematic quantitative studies on the economic effects of peacekeeping is somewhat surprising, for two reasons. First, 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 their conceptualization, “international capacities” marshaled as part of a peacekeeping mission are needed for economic relief as much as security provision, but subsequent studies have focused almost exclusively on the latter. Second, practitioners tend to conceive of contemporary peacekeeping as multidimensional, i.e. they view peacekeeping missions as security as well as economic interventions in the pursuit of long-term stability. The UN Security Council has explicitly endorsed a multidimensional approach to peacekeeping, unanimously and with a resolution that was co-sponsored 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).

Yet despite the fact that decision-makers at the UN believe peacekeeping deployments have important economic effects, we know little about what these effects are. This paper sheds light on this question. First, we use macro-level, cross-country data to show that UN peacekeeping missions are in fact large-scale economic interventions. The amounts of money that are injected into local economies by peacekeeping deployments may not seem
large in absolute terms, but it is hard to overstate their significance in the context of the ravaged economies of post-war societies. Peacekeeping missions stimulate demand in depressed economic environments, and we find that economic growth is significantly higher in their presence compared to cases in which no peacekeepers are deployed. However, there are potential downsides, such as economic disruption when peacekeeping forces withdraw, and indeed we estimate that economic growth rapidly declines when missions end. The fact that the withdrawal of peacekeepers can trigger a collapse in economic growth suggests that the benign economic effects of missions may not be sustainable. Local spending associated with peacekeeping missions can amount to a short-term spike in the demand for certain goods and services, but is not the sort of spending that necessarily promotes long-term economic stability and development.\textsuperscript{1}

Second, we provide evidence in this vein by turning to micro-level survey data that we collected in Monrovia, the capital of Liberia, where the United Nations Mission in Liberia (UNMIL) has had a large peacekeeping presence since 2003. We find that UNMIL’s presence does appear to shape local markets, for example in the sense that a large number of businesses have sprung up that cater exclusively to foreigners. Our data suggests that UNMIL’s spending has particularly created demand for low-skill employment in the service sector.\textsuperscript{2} UNMIL does not appear to facilitate skill transfers, loosen credit constraints for existing and prospective business owners, or otherwise enable 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 non-traded products, particularly low-skill services, which may not be sustainable beyond the peacekeeping mission’s withdrawal.

\textsuperscript{1}Jennings (2010), Jennings and Nikolić-Ristanović (2009), and Allred (2006), among other—mostly qualitative—studies, suggest that peacekeeping missions can have large, but not necessarily desirable economic impacts.

\textsuperscript{2}The UN deployment is also associated with a burgeoning market for transactional sex, perhaps the most troubling outgrowth of an reorientation of the economy toward UN personnel. From our survey data, we estimate that roughly 3\% of the UN’s contribution to Liberia’s GDP in 2012 came from UN personnel buying sex in Monrovia alone. Put differently, nearly one out of every 1,000 US dollars moving through Liberia’s economy on an annual basis is paid by UN personnel for transactional sex in Monrovia. We discuss the issue of peacekeeping and transactional sex in Beber et al. (forthcoming).
This does not mean that the peacekeeping presence has not improved the economic lives of ordinary individuals in Liberia. UNMIL has played an important role in stabilizing the country and has 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. Approval rates for UNMIL are very high, in particular among those who have received something of value from the mission, and a large majority wants UNMIL to stay in the country.

Yet one reason why few people in Monrovia want UNMIL to leave is because Monrovia’s fragile economy may have become dependent on the peacekeeping mission’s spending. 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, and it should consider deployment and procurement strategies that can help put host country’s long-term economic development on solid footing. We conclude the paper with recommendations along these lines.

2 The “Peacekeeping Economy”

The term “peacekeeping economy” refers to the economic activities associated with the presence of a peacekeeping mission 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, all 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 in the absence of the mission.

A useful starting point in considering the economic impacts of peacekeeping missions is the existing literature on the effects of revenue windfalls deriving from foreign aid, com-

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3Our fieldwork was completed prior to the Ebola outbreak that affected Liberia, which has of course left the country’s economy in an even more vulnerable state.

4See 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.
modity price shocks, and oil and mineral discoveries. As a peacekeeping mission—with its thousands of staff members and foreign-funded consumption—increases the demand for non-traded goods, we might expect its short-run effects to be similar to those of foreign aid receipts or other external windfalls. For example, we would ordinarily expect an increase in the wages in the construction, health, or education sectors, if resources are funneled into these sectors (Corden and Neary, 1982).5

At the same time, a prominent part of the literature on revenue windfalls warns that countries experiencing such windfalls can come to be haunted by a “resource curse,” characterized by unaccountable elites capturing 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; Rajan and Subramanian, 2008; Easterly, 2003) or that it has a positive effect only in “good policy environments” (Burnside and Dollar, 2000).6 We find in this paper a positive macro-level association between the presence of peacekeeping missions and economic growth, and one reason why our results diverge from those concerning foreign aid lies in how funds are disbursed: Peacekeeping missions directly boost demand for goods and services at deployment sites, while foreign aid is often distributed to governments and may be captured by corrupt officials (Knack, 2001; Svensson, 2000) or be used to substitute for existing government expenditures in certain areas (Feyzioglu, Swaroop, and Zhu, 1998; Chatterjee, Giuliano, and Kaya, 2012).

One limitation of the cross-country evidence is that it cannot tell us to what extent a positive association between peacekeeping and growth reflects direct spending, downstream economic effects, or perhaps peacekeeping-driven improvements in the security environment. The paper therefore closely examines the case of the UN deployment in Liberia in order to help identify the ways in which peacekeeping affects local economic environments. Our micro-level findings from the Liberian case document in particular that the deployment of the peacekeeping mission likely boosted the demand for non-traded goods. First, we

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5For a meta-analysis of the literature on foreign aid and growth, see Doucouliagos and Paldam (2009).
6Burnside and Dollar (2000) create an index of the quality of policy environments in countries receiving aid based on fiscal policies, inflation, and trade openness.
suggest that UNMIL is linked to the fact that a large share of businesses—around 24% of all businesses reported in our survey—exclusively cater to foreigners and that about 85% of businesses count foreigners among their customers. Second, the bulk of the business activity geared towards foreigners appears to be concentrated in the low-skill service sector. These results are consistent 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, 2008) leads to demand for non-tradable products and an expansion of the service sector.

Although our analysis shows that peacekeeping missions can have positive economic effects, these micro-level results also highlight that these gains may not be sustainable once a mission has withdrawn. Cooks, drivers, maids, and other service workers have to find employment in other areas of the economy at this point, and an economic downturn can occur if excess labor and capital are not immediately absorbed by other sectors. In some instances, the high wages and low labor availability caused by a boom in the non-traded sector (Durch, 2010) will crowd out manufacturing and other activities and shrink the traded sector,\(^7\) which may not immediately recover after the demand for non-traded products falls (Matsuyama, 1992), causing prolonged economic pain and potentially stunted economic growth (Sachs and Warner, 1995; Gylfason, Herbertsson, and Zoega, 1999).

Our own evidence and other accounts of the Liberian case (Aning and Edu-Afful, 2013) therefore suggest that the country’s economy may be adversely affected by the withdrawal of the peacekeeping mission. This would be in line with other recent cases, such as Afghanistan, where the withdrawal of U.S. and international troops brought about economic pain, despite its highly anticipated nature (O’Donnell, 2014).

In light of these potential effects, it is surprising that peacekeeping economies have not been studied extensively. Some aspects have received scholarly attention: Numerous studies examine the gendered economic consequences of a peacekeeping presence (Jennings, 2010; Rajan and Subramanian, 2011) finds that countries receiving more aid as a share of GDP exhibit lower growth in manufacturing exports.\(^8\)}
Jennings and Nikolić-Ristanović, 2009; Jennings, 2014; Higate and Henry, 2004; Aning and Edu-Afful, 2013; Beber et al., forthcoming). Edu-Afful and Aning (2015) suggests that the positive economic effects of a peacekeeping presence may be unequally distributed. Caruso et al. (2016) finds that the presence of peacekeepers in South Sudan is associated with increased agricultural production, although this may be due to conflict reduction as opposed to the peacekeeping missions’ local spending.  

One of the few studies that does systematically explore the economic advantages and disadvantages of peacekeeping operations is Carnahan, Durch, and Gilmore (2006) and its follow-up (Durch, 2010). They conclude that there is a net positive impact of peacekeeping missions on certain economic outcomes such as labor productivity and taxation capacity. Yet, as we argue, this boom in non-traded products might not be sustainable in the long term if it crowds out other economic activity.

3 Cross-country evidence

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

Consider Figure 1, which displays data compiled by Durch (2010). We show the share of the host country economy that is constituted by direct mission-related UN spending, for all available fiscal years (i.e. 2004/05–2007/08) and peacekeeping missions. These estimates include only mission funds that are very likely to be disbursed and spend in-country, namely 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 are frequently deposited in staff members’ countries of origin.

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8 Rolandsen (2015) argues that spending had only a minor impact in the case of South Sudan.
9 The authors recognize disadvantages such as inflationary pressures arising from greater demand and low local content of goods procurement.
11 Note that missions did not necessarily start in fiscal year 2004/05 or end in fiscal year 2007/08.
procurement of imported goods and services, and spending on quick impact projects. In this respect, the numbers shown in Figure 1 likely underestimate the true magnitude of peacekeeping-funded economic activity.\footnote{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 fiscal year 2004/05.}

We see that peacekeeping missions amounted to about 1.7% of the host country economy on average and a maximum of 6% 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% of the country’s economy (for a period of four years, and counting only actual spending and ignoring debt relief).\footnote{This figure depends on exchange rate and base year assumptions, and some argue that Marshall Plan}
2009 U.S. stimulus package, provided a one-time stimulus of 5.5% of the country’s economy, and Franklin D. Roosevelt’s Public Works Administration, created in 1933, was funded with the equivalent of 5.9% of GDP. Remarkably, these massive economic interventions appear similar in scale to the multi-year economic contributions of contemporary peacekeeping missions. The budgets of peacekeeping deployments are of course small in nominal terms, but so are the wrecked economies of post-conflict societies, and peacekeeping missions can play a central role in providing economic stimulus in these contexts.

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 economic growth than similarly situated countries without peacekeepers.


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 (i.e. separate lagged variables for each of the ten
Table 1: Peacekeeping and economic growth

preceding years). Across estimations, we see a substantial positive and statistically significant association between peacekeeping missions and economic growth. 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 post-conflict 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, but even so it remains statistically significant and large, linking peacekeeping to a 1.5% increase in the growth rate.

In column (2), we include only countries that have experienced major armed conflict during the time period under study, i.e. a conflict that produced in excess of 1000 fatalities in at least one year. In column (3), we look only at post-conflict countries, which are those that have experienced armed conflict in the last ten years but are currently peaceful. In column (4), we limit our sample to the post-Cold War era. Finally, in column (5) we report results from a matching estimation, namely the coefficient from a bivariate regression using cross-sections that have been 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.

<table>
<thead>
<tr>
<th>GDP per capita growth</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN peacekeeping</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.50</td>
<td>2.54</td>
<td>5.21</td>
<td>4.03</td>
<td>2.80</td>
</tr>
<tr>
<td></td>
<td>(.73) **</td>
<td>(.95) ***</td>
<td>(2.11) **</td>
<td>(1.01) ***</td>
<td>(1.17) **</td>
</tr>
<tr>
<td>Observations</td>
<td>5680</td>
<td>1775</td>
<td>676</td>
<td>3106</td>
<td>99</td>
</tr>
<tr>
<td>Sample</td>
<td>All</td>
<td>Major conflict</td>
<td>Post-conflict</td>
<td>Post-Cold War</td>
<td>Matching</td>
</tr>
</tbody>
</table>

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% level, ** 95% level.
Cold War era) in Tables 2 and 3.

Peacekeeping and economic growth go hand-in-hand across all of these models. Per capita GDP growth in countries that have experienced conflict averages about 2% with a standard deviation of 7%, so a coefficient of 2.5% like the one reported in column (2) implies an increase in economic growth by more than a third of a standard deviation. Given the scale of the spending reported above (recall we estimated that mission spending accounts for roughly 1.7% of the economy on average), these estimates imply a multiplier substantially larger than one, although this claim can only be tentative in the absence of spending data for all missions.

<table>
<thead>
<tr>
<th>ΔGDP per capita growth (annual %)</th>
<th>(1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ΔUN peacekeeping</td>
<td>3.87</td>
</tr>
<tr>
<td></td>
<td>(1.45) ***</td>
</tr>
<tr>
<td>Observations</td>
<td>5591</td>
</tr>
</tbody>
</table>

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. *** significant at the 99% level, ** 95% level.
Table 5: Deployments versus withdrawals

Table 4 shows the coefficient we obtain from a difference-in-differences estimation, which indicates the same overall result in terms of both the size of the association and its statistical significance. The difference-in-differences approach focuses our attention on episodes of within-country change regarding the presence of peacekeepers, 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 5 reports separate results for deployments and withdrawals.

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 the economic stimulus that peacekeeping missions provide is not invested 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

<table>
<thead>
<tr>
<th>∆GDP per capita growth (annual %)</th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>∆UN peacekeeping (deployments)</td>
<td>.90</td>
<td>(1.73)</td>
</tr>
<tr>
<td>∆UN peacekeeping (withdrawals)</td>
<td>-10.73</td>
<td>(2.70) ***</td>
</tr>
<tr>
<td>Observations</td>
<td>5584</td>
<td>5574</td>
</tr>
</tbody>
</table>

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. *** significant at the 99% level.

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15 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.

16 The data includes 43 deployments and 30 withdrawals. Without regression adjustments, per capita GDP growth changes from an average of 6.2% to 3% in the aftermath of a withdrawal.
Figure 2: Conflict and recovery in El Salvador

at the beginning of an armed conflict), recovered as the war ended and the United Nations Observer Mission in El Salvador (ONUSAL) was deployed, 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 towards 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 do not want UNMIL to leave, despite a stable security situation.
4 Survey data from Monrovia, Liberia

4.1 Background

The UN Mission in Liberia (UNMIL) was initially established in September 2003 in order to facilitate the implementation of the Comprehensive Peace Agreement signed in Accra one month earlier.\textsuperscript{17} UNMIL’s mandate in 2003 entailed the deployment of 15,000 soldiers, police officers, and civilians to Liberia. The largest concentration of personnel has been stationed 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 to which a large-scale UN peacekeeping mission has been deployed, is scheduled for withdrawal in the near future, and is widely considered a success as far as its mandated security objectives are concerned.

4.2 Data collection

In order to examine micro-level economic interactions with peacekeepers in the Liberian context, we conducted a representative survey of a random sample of 1381 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 and then randomly selected residences in 39 sampled enumeration areas. Figure 3 shows all dwellings (in blue) as well as those selected (in yellow) within greater Monrovia. GPS-equipped

\textsuperscript{17}UNMIL followed in the footsteps of peacekeepers from the Economic Community of West African States (ECOWAS), and in fact a large share of the initial UN deployment consisted of “re-hatted” ECOWAS forces from other West African countries, principally Ghana and Nigeria.
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 were time-stamped, we were able to ensure that research assistants followed assigned enumeration paths.\textsuperscript{18}

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

\textsuperscript{18}Survey instruments and other materials are available at http://dx.doi.org/10.7910/DVN/BY1VXH. See also Beber et al. (forthcoming) for additional information.
attempts (0.9%).

4.3 Results

In the following we suggest that UNMIL has reshaped Liberia’s economy, but not in a way that would optimally promote long-term development or ensure that the economy can withstand UNMIL’s eventual withdrawal. At the same time, UNMIL’s spending does improve economic outcomes for ordinary Liberians in the short term, and perhaps as a result, the overwhelming majority of respondents approve of UNMIL and support a continuation of the mission.

First, Figure 4 shows that about 84% of the businesses run by respondents in our sample sell to foreigners, a large number of whom are UNMIL personnel or otherwise affiliated with the UN. The customer base is entirely foreign for 24% of these businesses. In other words, many businesses depend exclusively on foreign spending and UNMIL-generated demand and are hence particularly vulnerable to any economic disruptions caused by UNMIL’s withdrawal.

One could think that UNMIL-related spending, i.e. business generated by foreigners, might help build aspiring, robust companies that can create value even if and when UNMIL withdraws. But most of the UNMIL-related demand is for low-skill services: Drivers, security guards, cooks, maids, and so on. Figure 5 makes this point by showing employee occupations according to their top-level ILO classification for each type of customer base. Employees catering to foreigners are 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 do not benefit from skills transfers that might enable a business to persist in a post-peacekeeping Liberia.

There is also little reason to believe that UNMIL has 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 and shows that the overwhelming

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19Businesses include sole proprietorships without employees, i.e. respondents working for themselves.
Figure 4: UNMIL presence reshapes markets
Figure 5: Occupations for employees, by ILO classification
Figure 6: Funding and problems running a business

The majority of businesses continue to be funded with personal savings or a family gift. The widespread unavailability of credit surely stands in the way of robust post-UNMIL economic growth, but the problem remains, despite the large amounts of UNMIL funds that have been injected into the Liberian economy over the years.

To be clear, UNMIL economic activity does not generally impose hardships on ordinary individuals. On the contrary, respondents benefit when they engage in economic exchange with peacekeepers. The peacekeeping mission may not have laid all of the groundwork it could have laid in order to enable long-term growth in Liberia, but neither is UNMIL an extractive operation.

Table 6 shows how selling goods or services to UNMIL personnel affects respondents’ eco-
Table 6: Any sales to UNMIL personnel and economic well-being

<table>
<thead>
<tr>
<th>Sold good or service to UNMIL</th>
<th>Log total earnings</th>
<th>Log total liquid assets</th>
<th>Asset index</th>
<th>Has savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>... within last month</td>
<td>.36</td>
<td>1.56</td>
<td>.37</td>
<td>.20</td>
</tr>
<tr>
<td></td>
<td>(.08) ***</td>
<td>(.38) ***</td>
<td>(.07) ***</td>
<td>(.03) ***</td>
</tr>
<tr>
<td>... within last year</td>
<td>.26</td>
<td>1.29</td>
<td>.19</td>
<td>.08</td>
</tr>
<tr>
<td></td>
<td>(.11) **</td>
<td>(.86) †</td>
<td>(.09) **</td>
<td>(.07)</td>
</tr>
<tr>
<td>... over a year ago</td>
<td>.12</td>
<td>.27</td>
<td>.03</td>
<td>.19</td>
</tr>
<tr>
<td></td>
<td>(.11)</td>
<td>(.62)</td>
<td>(.12)</td>
<td>(.06) ***</td>
</tr>
<tr>
<td>Observations</td>
<td>1285</td>
<td>1168</td>
<td>1319</td>
<td>1316</td>
</tr>
</tbody>
</table>

Survey-weighted 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 (Bassa, English, Gbandi, Gio, Grebo, Kpelle, Krahn, Lorma, Mandingo, Mano, Vai).

**significant at the 99% level.

Table 7: Recent sales to UNMIL personnel and economic well-being

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 owns specific items such as a bicycle, a generator, a television, livestock, and so on; and an indicator for whether the subject has any savings.\(^{20}\)

We report survey-weighted 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, Vai).

Across different outcome measures, the estimates indicate that subjects are better off when they provide goods or services to UNMIL personnel. We see a roughly one-third increase in earnings, an increase of a quarter of a standard deviation in the asset index (which is approximately measured in standard deviations), and an increase of 17 percentage points.

\(^{20}\)In order to not lose observations, we add one dollar to reported earnings and assets before taking the log.
Table 8: Sales to UNMIL personnel, post-1999 arrivals only

points in the probability that a subject has 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 at just 65 Liberian dollars, which is less than one US dollar.\(^{21}\)

Table 7 shows that the estimated coefficients are generally larger if the sale to UNMIL personnel occurred relatively more recently, i.e. the economic benefits of transacting with UNMIL personnel dissipate over time, as we would expect.

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 8, we try to address this issue by including only those subjects in the analysis who were not in Monrovia in 1999, i.e. only those subjects who are unlikely to have had any significant preexisting assets when the war ended and UNMIL was deployed. The estimated effects persist in this analysis and are, if anything, even larger.

We also do not see any clustering of well-off subjects around UN locations in Monrovia. While our estimations include fixed effects for primary sampling units, we could still be concerned that proximity to a base improves subjects’ safety and hence their earnings, but also increases their probability of selling goods or services to peacekeepers simply due

\(^{21}\)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.
Median log asset score
-0.6 to -0.5
-0.5 to -0.4
-0.4 to -0.3
-0.3 to -0.2
-0.2 to -0.1
-0.1 to 0.0
0.0 to 0.1
0.1 to 0.2
0.2 to 0.4
0.4 to 0.5

Figure 7: Asset index and UN locations in Monrovia

...to being collocated. This could induce a spurious correlation between transactions with UNMIL personnel and measures of economic well-being. The maps in Figures 8 and 7 suggest that this need not be a concern. 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, while wealthier parts of the city include areas in central Monrovia, along Duport Road in the east, along Somalia Drive, and portions of Paynesville, but these do not obviously correspond to the locations of UN sites marked in azure. In addition Figure 9 shows that subjects who sold goods or services to UNMIL personnel are dispersed across the metropolitan area.

Finally, note that transacting with UNMIL does not only pay well, it also appears to
Figure 8: Wall quality and UN locations in Monrovia
Figure 9: Geographic distribution of respondents making sales to UNMIL personnel
help smooth out shocks such as the death of a household member. About 14% 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, but since wealthy households presumably have an advantage in protecting against disease, our analysis of household shocks focuses on the 4% of deaths that were accidental (i.e. not caused by disease, war, or old age). We then analyze whether transfers from UNMIL to the household moderate the effect of such a shock on the household’s economic well-being, and Table 9 suggests that this is the case. Since relatively wealthy people may also be less likely to die from accidents, we then code any household in which a severely injured or disabled accident survivor is present as also having undergone a household shock and re-run the analysis. Results are similar, as shown in Table 10.

Given 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 have overwhelmingly positive views of the peacekeeping deployment. Figure 10 shows that 71% of respondents

Table 9: UNMIL and household deaths as economic shocks

<table>
<thead>
<tr>
<th></th>
<th>Log total liquid assets</th>
<th>Asset index</th>
<th>Adequate food</th>
<th>Adequate housing</th>
<th>Electricity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Death or disability, no UNMIL transfers</td>
<td>-.05</td>
<td>-.13</td>
<td>-.02</td>
<td>-.17</td>
<td>-.05</td>
</tr>
<tr>
<td></td>
<td>(.64)</td>
<td>(.13)</td>
<td>(.14)</td>
<td>(.13)</td>
<td>(.06)</td>
</tr>
<tr>
<td>Death or disability, UNMIL transfers</td>
<td>2.82</td>
<td>.50</td>
<td>.23</td>
<td>.01</td>
<td>.24</td>
</tr>
<tr>
<td></td>
<td>(.90) ***</td>
<td>(.17) **</td>
<td>(.07) ***</td>
<td>(.10)</td>
<td>(.11) **</td>
</tr>
<tr>
<td>No death or disability, UNMIL transfers</td>
<td>1.10</td>
<td>.23</td>
<td>.04</td>
<td>.02</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>(.28) ***</td>
<td>(.05) ***</td>
<td>(.04)</td>
<td>(.04)</td>
<td>(.03)</td>
</tr>
<tr>
<td>Observations</td>
<td>1182</td>
<td>1335</td>
<td>1334</td>
<td>1334</td>
<td>1333</td>
</tr>
</tbody>
</table>

Survey-weighted regression estimates, adjusted for gender, age, marital status, cognitive score, education splines, fixed effects for primary sampling unit and language spoken at home (Bassa, English, Gbandi, Gio, Grebo, Kpelle, Krahn, Lorma, Mandingo, Mano, Vai). *** significant at the 99% level, ** 95% level.

Table 10: Death and disability as economic shocks

<table>
<thead>
<tr>
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<th>Log total liquid assets</th>
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<tr>
<td></td>
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<td>Death or disability, UNMIL transfers</td>
<td>2.82</td>
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<tr>
<td></td>
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<td>(.10)</td>
<td>(.11) **</td>
</tr>
<tr>
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<td>1.10</td>
<td>.23</td>
<td>.04</td>
<td>.02</td>
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Survey-weighted regression estimates, adjusted for gender, age, marital status, cognitive score, education splines, fixed effects for primary sampling unit and language spoken at home (Bassa, English, Gbandi, Gio, Grebo, Kpelle, Krahn, Lorma, Mandingo, Mano, Vai). *** significant at the 99% level, * 90% level.
Figure 10: UNMIL’s popularity, regression-adjusted effects of receiving something of value
want UNMIL to stay, 88% believe that UNMIL has improved security in Monrovia, 74%
think the mission has improved their personal security, 68% believe UNMIL has had positive
consequences other than security, and 65% think there have not been any negative conse-
quences of the mission at all. These numbers increase further when we consider (regression-
adjusted) approval rates for those who have received something of value from UN personnel,
as indicated by the shaded areas in Figure 10. All of these differences are statistically sig-
nificant and large, given that baseline levels of support are already high: With a baseline
of 71%, an increase of 14.8 percentage points corresponds to roughly half of the potential
maximum effect. When respondents are asked to name negative aspects of the presence of
UN peacekeeping forces in Liberia, relatively few can name any, and reckless driving is the
most common complaint among those that can, as shown in Table 11.

But high approval ratings do not change the fact that there is little reason to think
UNMIL’s eventual complete withdrawal will be any less economically disruptive than other
mission drawdowns. UNMIL exemplifies the challenges that we suspect underpin the neg-
Negative aspects related to the presence of UN peacekeeping forces in Liberia? (All complaints reported by at least 1%)

<table>
<thead>
<tr>
<th>Complaint</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive recklessly</td>
<td>10%</td>
</tr>
<tr>
<td>Peacekeepers sexually or otherwise harass local women</td>
<td>6%</td>
</tr>
<tr>
<td>Increase teenage pregnancy</td>
<td>5%</td>
</tr>
<tr>
<td>Peacekeepers harm the economy/cause shortages/drive up prices</td>
<td>3%</td>
</tr>
<tr>
<td>Peacekeepers slow down traffic</td>
<td>2%</td>
</tr>
<tr>
<td>Use cash or violence to take our boyfriends/girlfriends</td>
<td>2%</td>
</tr>
<tr>
<td>Peacekeepers bully/boss/mistreat/disrespect local citizens</td>
<td>1%</td>
</tr>
<tr>
<td>None/don’t know</td>
<td>65%</td>
</tr>
</tbody>
</table>

Table 11: Complaints about UNMIL

ative relationship between withdrawals and the host country’s rate of economic growth: Large amounts of consumption spending and demand for low-skill services, including transactional sex, 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 are high might be that respondents recognize that their economic livelihoods depend on UNMIL’s continued presence.

5 Conclusion

In this paper we presented cross-country evidence and micro-level data from Liberia to show that UN peacekeeping missions are major economic interventions that risk falling short of effectively contributing to host countries’ long-term 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 try to reduce the UN’s economic footprint when it deploys a peacekeeping mission. On the contrary, peacekeeping
missions should increase the shares of national staff and local procurement to promote local business ownership and skills transfers. They should aim to provide job opportunities in particular for underage women, who may otherwise be at risk of entering the transactional sex market, and they should try to fulfill the promise of integrated missions and implement a comprehensive economic plan in full cooperation with other UN agencies. Finally, the UN should consider withdrawing peacekeeping contingents slowly and take into account possible economic disruptions when drafting withdrawal plans. Peacekeeping missions have large budgets relative to the size of a typical post-war economy, and the UN has an opportunity to use these funds not only to accomplish mandated security goals but also to fulfill the promise of sustained economic growth.
References


