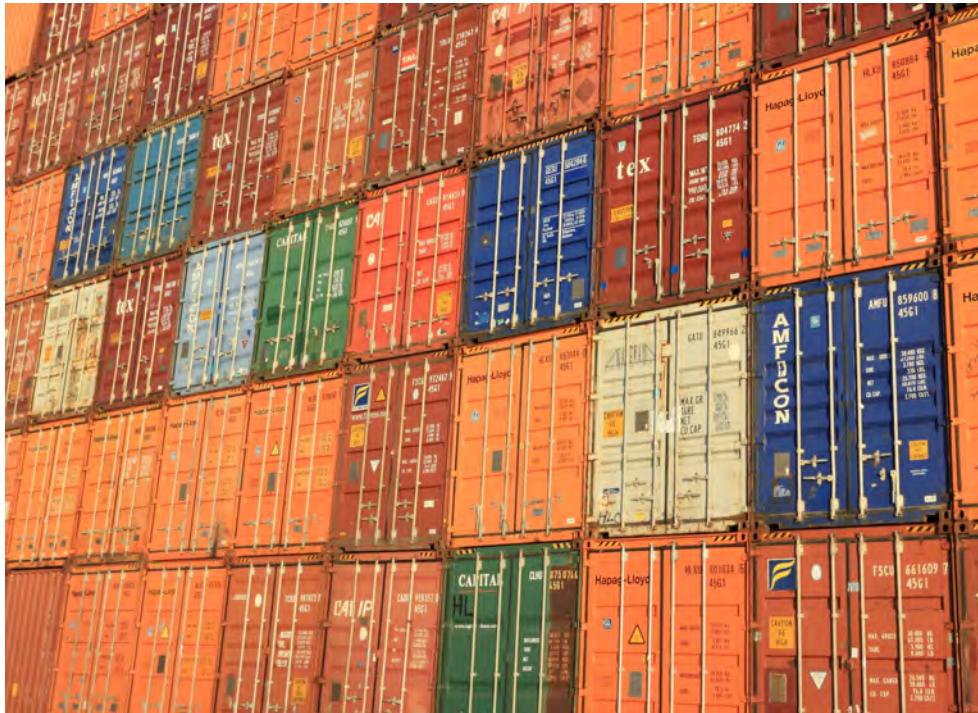




# POLICY BRIEF

PB-2017-06



## Trade restrictions lead to lower wages and more violence:

**Although motivated by security considerations, the Israeli restrictions on imports to the OPT have negative economic and political consequences**

To address security concerns, governments often implement trade barriers and restrictions on the movement of goods and people. A new study from the Occupied Palestinian Territories documents the negative effects of these trade restrictions on the target economy, and their implications for political violence. Amodio, Baccini and Di Maio (2017) show that the import restrictions imposed by Israel on the West Bank have a negative effect on industrial output and wages in those sectors and localities where production is more dependent upon restricted inputs. They also find that episodes of political violence increased in these localities relative to others.

### WHAT'S AT STAKE?

Issues of security and trade dominate the current political debate, and these issues are often interlinked. States routinely implement restrictions on trade that are motivated by security reasons. The most recent example is China who has issued a lengthy list of

### KEY RESULTS

- Import restrictions of dual-use goods and materials led to lower output and wages paid in sectors using those materials more intensively as production inputs
- Local labor market conditions worsened in areas where employment is concentrated in these sectors
- Episodes of political violence were more likely to occur in those same localities as a consequence
- Security-motivated trade restrictions have a negative effect on industrial output and local labor markets
- Economic integration could bring possibly high return in terms of political stabilization

products and technologies banned from export to North Korea, fearing their possible use in building weapons of mass destruction.

While these restrictions are all but uncommon, their effect is not clear. What are their effects on the target economy? Do they increase or decrease political instability? As it often happens with very crucial questions, the available evidence is mixed.

In Amodio, Baccini and Di Maio (2017), we try to answer these questions by studying the economy and politics of the Occupied Palestinian Territory before and after the imposition of trade restrictions on behalf of Israel.

Motivated by security considerations, in 2008 Israel started to severely limit the imports of selected inputs to the West Bank. These restrictions affected those goods and materials labeled as dual-use, meaning they can have military applications. Combining several datasets, a novel methodology, and rigorous econometric analysis, we explore the effect of this policy.

The results indicate that the import restrictions of dual-use goods and materials led to lower output and wages paid in those sectors that use those materials more intensively as production inputs. Moreover, local labor market conditions worsened differentially in those localities where employment is concentrated in these sectors, and episodes of political violence were more likely to occur in those same localities.

## Background: the Occupied Palestinian Territories, Israel, and the dual-use list

The economy of the Occupied Palestinian Territory (OPT, comprising the West Bank and the Gaza Strip) has always been strictly dependent on the Israeli one. In 2006, just after the end of Second Intifada, Israel was the main trade partner of the OPT, with around 70% of Palestinian imports coming from Israel. Since the beginning of the occupation, Israel has been controlling the external trade of the OPT, e.g. it collects all the import duties and then transfers them to the Palestinian Administration.

Israel has imposed on the OPT restrictions on the import and use of certain inputs since the 1970s. These are goods, services, or technologies that are intended for civilian use, but can also have military applications, from here the name dual-use inputs. Starting from January 1st 2008, these restrictions and their enforcement were given a proper regulatory framework and became systematic. From one day to the other, imports of 56 items were severely restricted to the point that they were *de facto* banned from entry in the West Bank<sup>1</sup>.

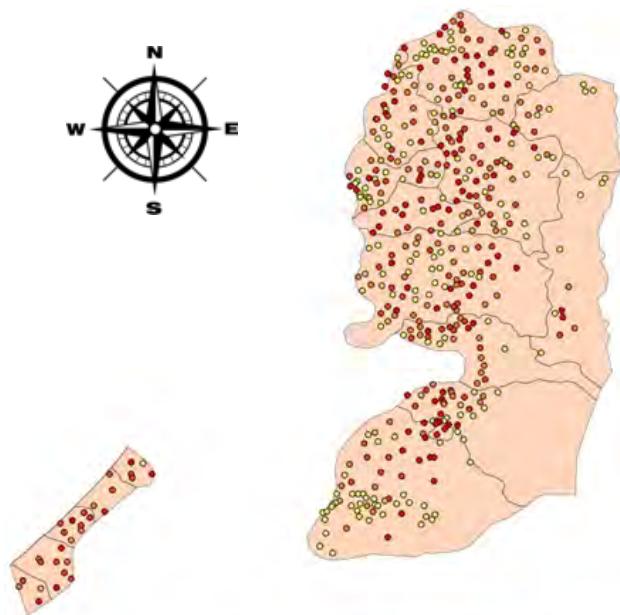
These restrictions add an additional layer to the full trade blockade already imposed on the Gaza Strip since 2006.

Trade of dual-use goods is regulated internationally by several treaties. But, the 2008 Israeli list of dual-use materials subject to restriction is unusually extensive. The list includes chemicals, fertilizers, raw materials for industry, steel pipes, lathe and milling machines, optical equipment, and navigation aids. Anecdotal evidence indicates that most Palestinian industries are affected by the dual-use list, especially food and beverages, pharmaceuticals, textiles, information technology, agriculture, and metal processing (World Bank 2013).

## Data

For the purpose of the analysis, we combine several different data sources. In particular, we use:

1. Detailed firm-level data on 30,000 Palestinian establishments in the years 1999 to 2012 (Palestinian Central Bureau of Statistics);
2. Census data on employment for each locality in the West Bank and individual information on employment status, sector of employment, and wage rate for a representative sample of Palestinian workers in the period 1999-2012 (Palestinian Central Bureau of Statistics);
3. Geo-referenced information on all politically violent events from 1999 through 2014 occurred in the OPT (Integrated Crisis Early Warning System).



The Figure shows the location of each locality in both the West Bank and the Gaza Strip. Colors capture the extent of employment concentration in dual-use intensive industries, from yellow to red (Sources: Amodio, Baccini and Di Maio (2017), Palestinian Central Bureau of Statistics).

<sup>1</sup> The control system requires Palestinian importers to obtain a license in order to import items included on the dual-use list. The license application process must be repeated for every truckload of a dual-use item, even for the same category of imports. The average time to receive a license can reach eight weeks, and each license lasts 21 days (TIDCA 2012). It follows that, while formal authorization to import dual-use items can be obtained, the process is extremely burdensome and slow, implying that, in effect, the goods are banned.

Using data from the US as benchmark, we constructed an index that captures the extent to which each manufacturing sector relies on “banned” inputs for production. Simply put, this dual-use input intensity index provides a measure of how much each sector depends on dual-use inputs. Using employment data from the late 1990s, we also computed a measure of employment concentration in dual-use input intensive sectors for each locality in the West Bank.

## Results: what did we learn?

Our analysis shows that the issuance of the dual-use list has three effects:

### **Sectors more dependent on banned inputs have lower industrial output and pay lower wages**

Our estimates suggest that aggregate output value in the West Bank would have been 4.5% higher in the period 2008 to 2012 in absence of the dual-use list

### **Average wages decrease in those localities where employment is more concentrated in dual-use input intensive sectors.**

Moving from the 25th to the 75th percentile of the locality-level measure of intensity in dual-use inputs leads to a 1% differential decrease in average daily wages

### **Political violence increases in those localities where employment is more concentrated in dual-use input intensive sectors.**

The differential effect on violence persists well after 2010, suggesting that the negative economic shock induced by the dual-use list has a long-lasting impact on violence. According to our estimates, the dual-use list policy can explain 17.6% of the total number of violent events in the West Bank between 2008 to 2014.

The third set of results is particularly important, as it suggests that security-motivated trade restrictions may end up fueling political violence through their negative consequences on the economy. Policy makers need therefore to take this trade-off into account when designing and implementing these measures.

There are two main limitation to our analysis. First, our argument and results focus on labor as the most important input in the generation of violence. Economic hardship leads to more violence through an opportunity cost and/or grievance mechanism, whose salience depends on the production structure of the economy. However, this is not necessarily the case if a

significant amount of resources other than labor (such as capital) are used in generating violence, as the availability of these other inputs may decrease when economic conditions deteriorate (Miguel et al., 2004; Dube and Vargas, 2013).

Second, our research design compares sectors and localities that were all affected by the policy, but to a different extent. It is therefore unsuitable to produce an overall assessment of the aggregate benefits and costs of the dual-use list policy, i.e. of the trade-restriction *per se*. We are not able to predict what would have happened to the Palestinian economy in the absence of the policy.

On the other hand, the choice of OPT as a case study has the advantage of providing a very tough test for the main hypothesis. Indeed, Israel has one of the most efficient and effective armies in the world, with a long experience in military controlling a territory. We therefore speculate that the salience of our argument would be even higher in countries with average military capabilities

## POLICY INSIGHTS

While the determinants of the Israeli-Palestinian conflict are several and have changed over the decades, this study shows there have been phases (and there will possibly be in the future) in which economic factors play a crucial role. Our results indirectly suggest that an improvement in the economic conditions in the West Bank could lead to a reduction in violence. In this sense, an increase in the economic integration between the OPT and the rest of the world could be seen as a low-cost policy that could bring possibly high returns in terms of stabilization of the region.

Are these results relevant outside the OPT? Given the new wave of protectionist trade policies (or at least the discussion about their return), these results are more relevant than ever in analysis of the relationship between trade and political instability (Martin et al. 2008). As long as economic factors motivate political violence, it is clear that any trade-induced reduction in economic performance is likely to increase political instability.

This study presented robust evidence that security-motivated trade restrictions have a negative effect on industrial output and local labor markets. The analysis also shows that this policy can increase violence in some localities relative to others.

These results resonate with those in Amodio and Di Maio (2017), who explore the effect of conflict-related instability on firm input usage and performance. This evidence altogether suggests that trade and security issues are interlinked, and the trade-offs that link them need to be taken into account in the design of policies aimed to reduce political instability

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