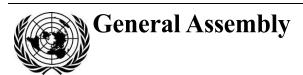
United Nations A/78/303



Distr.: General 10 August 2023

Original: English

Seventy-eighth session
Item 36 of the provisional agenda\*
Question of Palestine

# Economic costs of the Israeli occupation for the Palestinian people: the welfare cost of the fragmentation of the occupied West Bank

#### Note by the Secretary-General

The Secretary-General has the honour to transmit to the General Assembly the report prepared by the secretariat of the United Nations Conference on Trade and Development.

\* A/78/150.





Report prepared by the secretariat of the United Nations Conference on Trade and Development on the economic costs of the Israeli occupation for the Palestinian people: the welfare cost of the fragmentation of the occupied West Bank

#### Summary

The present report is submitted pursuant to General Assembly resolution 77/22, in which the Assembly requested the United Nations Conference on Trade and Development (UNCTAD) to continue to report to it on economic development in the Occupied Palestinian Territory, including East Jerusalem, and the economic costs of the Israeli occupation for the Palestinian people. The report complements previous UNCTAD reports submitted to the Assembly (A/71/174, A/73/201, A/74/272, A/75/310, A/76/309 and A/77/295).

In the occupied West Bank, Israel implements a series of administrative and physical barriers that control the movements of Palestinian people and limit their access to markets, both domestic and foreign, and to natural and economic resources. Area C accounts for more than 60 per cent of the area of the West Bank and is fully under the control of Israel. In tandem with the expansion of settlements, Israel imposes stricter restrictions on Palestinian economic activities in Area C over and above those imposed in Areas A and B of the West Bank.

The present report quantifies the impact of the relative share of Area C in Palestinian localities on household welfare, measured by expenditure using two cross-sectional data sets on 457 localities in 10 governorates. The exercise reveals that the greater the share of Area C in a locality, the stronger the negative impact on total household expenditure. The extent of this negative effect, however, is heterogeneous across West Bank governorates.

The present report complements previous reports and concludes that removing the additional restrictions on all of Area C would more than double household expenditure in the West Bank and significantly reduce poverty in Area C. Reducing restrictions in Area C to levels similar to Areas A and B, as a step towards ending the occupation, in line with relevant United Nations resolutions, could boost total Palestinian household expenditure substantially, by up to 200 per cent in some localities, and help to reduce poverty substantially across much of the Occupied Palestinian Territory. For instance, in 2017, total household expenditure in the West Bank, excluding Jerusalem Governorate, could have been \$4.4 billion higher (in constant 2015 United States dollars) than it actually was. This is equivalent to a 57 per cent increase in total household expenditure in the West Bank. Transferring land currently categorized as Area C, as stipulated in the Oslo Accords, to Area A or B would amount only to a partial removal of restrictions, however. If all restrictions in the three Areas were removed, as a step towards ending the occupation, the positive economic impact would be much greater.

The report concludes that ending and reversing settlement activities, in line with Security Council resolution 2334 (2016), and lifting all restrictions on Palestinian economic development, including in Area C, is a sine qua non for the eradication of poverty and achievement of the Sustainable Development Goals in the Occupied Palestinian Territory and the emergence of a viable, contiguous Palestinian State, based on the two-State solution, in line with relevant United Nations resolutions.

#### I. Objective and limitations

- 1. The present report is an addition to six previous reports, prepared by the United Nations Conference on Trade and Development (UNCTAD) and submitted to the General Assembly, on the economic costs of the Israeli occupation for the Palestinian people. The report sheds light on the extensive economic cost exacted by the Israeli occupation of Area C and the fragmentation of the West Bank that it entails.
- 2. While the occupation imposes significant restrictions on Palestinian economic activity in Areas A and B, it enforces additional restrictions in Area C. The present report adds to the findings of the 2022 report (A/77/295) on the economic cost of the additional restrictions imposed by the occupation in Area C, which represents about 60 per cent of the total area of the occupied West Bank.
- 3. The present report quantifies the welfare impact of the relative share of Area C in Palestinian localities on household welfare, using expenditure as a proxy, by assuming a counterfactual scenario in which the share of Area C in each locality is set to zero. This implies that the restrictions in Area C are set at the level of the significant, but relatively less severe, restrictions imposed in Areas A and B.
- 4. The report estimates the above-mentioned cost from a microeconomic vantage point. Given the census and survey data sets used and the microeconometric nature of the exercise, the cost is estimated for one year, 2017, but the results apply to other years.

#### II. Background and context

- 5. With the onset of the occupation in 1967, Israel began establishing settlements in Area C of the West Bank. According to the non-governmental organization Peace Now, the settler population in the West Bank, including East Jerusalem, rose from 198,315 in 2000 to almost 700,000 at the end of 2022. These settlements inflict a significant economic cost on the Palestinian people, dispossess them of their inalienable right to development, entrench occupation and pre-empt a meaningful, sustainable two-State solution.
- 6. The Security Council, in several resolutions, has emphasized the illegality of settlements and the inadmissibility of the acquisition of territory by force. In its resolution 2334 (2016), the Security Council reaffirmed that the establishment by Israel of settlements in the Palestinian territory occupied since 1967, including East Jerusalem, has no legal validity and constitutes a flagrant violation under international law and a major obstacle to the achievement of the two-State solution and a just, lasting and comprehensive peace.
- 7. In accordance with the 1993 Oslo Accords, the occupied West Bank was divided into three administrative areas. Area A was placed under the civil and security administration of the Palestinian Authority. It represents about 18 per cent of the total area of the West Bank, includes the Palestinian cities and is home to most of the Palestinian population of the West Bank. Area B represents approximately 22 per cent of the area of the West Bank, is largely rural and is subject to Palestinian civil control and joint Israeli-Palestinian security control. Area C, which accounts for about 60 per

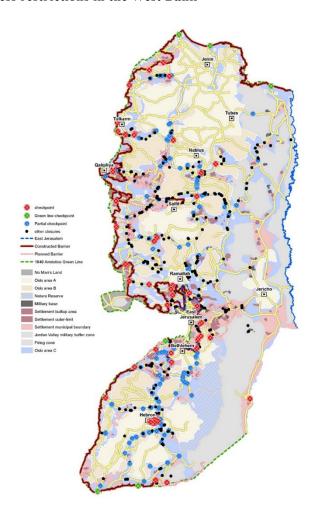
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<sup>&</sup>lt;sup>1</sup> See Peace Now, "West Bank population", Settlements Watch database. Available at https://peacenow.org.il/en/settlements-watch/settlements-data/population (accessed May 2023; 465,400 in the West Bank); and Peace Now, "Jerusalem population", Settlements Watch database. Available at https://peacenow.org.il/en/settlements-watch/settlements-data/jerusalem (accessed May 2023; 229,377 in East Jerusalem).

cent of the West Bank, incorporates all Israeli settlements and is fully under Israeli civil and security control (see A/77/295, p. 2).

- 8. As such, Palestinian physical and economic geography is fragmented by subdividing Areas A and B into 166 disconnected islands, leaving Area C as the only contiguous part of the West Bank (figure II). The Oslo Accords envisioned the gradual transfer of Area C to the Palestinian Authority over a five-year period ending in 1999. However, to the present day, the occupation continues, and Area C is largely inaccessible to Palestinian producers, although it is the largest of the three Areas and has the most valuable natural resources, such as water, fertile land, minerals and stone, as well as tourist attractions and Dead Sea resources for cosmetic products.
- 9. Instead of transferring Area C to the Palestinian Authority, Israel has continued to use a complex matrix of administrative and physical controls over the movement of Palestinian people and their access to their land and natural resources, citing security reasons (figure I). These restrictions on movement, trade and investment, combined with settlements, violence and the wall, serve to foster a coercive environment that alters the demographic composition by pushing Palestinians out of their land while settlements and the settler population grow (figure II) (see A/77/295).

Figure I
Israeli access restrictions in the West Bank



Source: United Nations, Office for the Coordination of Humanitarian Affairs, occupied Palestinian territory.

Governorate Boundary

Armistice Green Line
Constructed Barrier
Under Construction Barrier
Area Ballotte Barrier
Area A Area A Area C

Catalitya

Ramallah

Bethlehem

Hebron

Bethlehem

Hebron

O 5 10 20

Figure II

Israeli barrier route in the West Bank

Source: United Nations, Office for the Coordination of Humanitarian Affairs, occupied Palestinian territory.

10. The Israeli occupation exacts a significant negative impact on development by preventing Palestinians from building on over 99 per cent of Area C.<sup>2</sup> It is extremely difficult for Palestinians to obtain permits from the Israeli authorities to build residential structures or structures for investment or to develop infrastructure such as roads and networks for water and power. If a structure is built without a permit, as is often the case, the occupying Power demolishes it at the owner's expense. Over the years, the demolition and seizure of Palestinian structures and the human displacement they entail have increased. Schools, water pipes and donor-funded humanitarian structures are not exempt from demolitions.<sup>3</sup> Owners are forced to demolish their own property, at their own expense, to avoid paying for the cost of demolition if carried out by the occupying Power, which may include additional fines.

Office of the European Union Representative (West Bank and Gaza Strip, United Nations Relief and Works Agency for Palestine Refugees in the Near East), "One-year report on demolitions and seizures in the West Bank, including East Jerusalem. Reporting period: 1 January-31 December 2021", 14 February 2022. Available at

https://www.eeas.europa.eu/sites/default/files/documents/EU%20Demolition%20Report%202021.pdf.

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<sup>&</sup>lt;sup>3</sup> United Nations, Office for the Coordination of Humanitarian Affairs, "West Bank demolitions and displacement: December 2022", 21 February 2023.

It is estimated that between 2009 and 2021, in the West Bank, including East Jerusalem, 7,400 Palestinian-owned structures were destroyed. <sup>4</sup> Recently, both demolition and "self-demolition" have been increasing. The year 2022 witnessed the highest number of demolitions of Palestinian structures in over a decade. Israel demolished 954 structures, including water cisterns, storerooms, agricultural buildings, businesses and public buildings. As a result of the demolition of 193 residential structures, 1,032 Palestinians were displaced, half of them (508) minors. According to the Office for the Coordination of Humanitarian Affairs, 144 structures were demolished in East Jerusalem, including 74 demolished by their owners to avoid additional fines.<sup>5</sup>

- 11. Over the years, UNCTAD has published studies and reports for the General Assembly and the Trade and Development Board that have assessed various dimensions of the economic costs of the Israeli occupation for the Palestinian people. These covered a wide range of topics, including the impact of the occupation on the Palestinian people's human right to development, the economic cost of the unrealized oil and natural gas potential, the leakage of Palestinian fiscal resources to the Israeli treasury and the contribution of the occupation to widespread poverty in Gaza, the West Bank and East Jerusalem.
- 12. UNCTAD (2022) estimated the annual cost of the additional restrictions imposed by Israel in 30 per cent of Area C at 25.3 per cent of West Bank gross domestic product (GDP). UNCTAD (2021) assessed the cost of restrictions and closure policy implemented by the occupying Power following the outbreak of the second intifada in 2000<sup>7</sup> and concluded that those restrictions cost the economy of the West Bank 35 per cent of its GDP and increased the poverty rate by 200 per cent. UNCTAD (2020) concluded that, in Gaza, military operations, restrictions on movement and blockade increased the poverty rate from 40 to 64 per cent between 2007 and 2017. UNCTAD (2019) reflected on the economic cost of the unrealized oil and natural gas potential in Gaza and Area C (Meged oil and natural gas field) located inside the occupied West Bank and exploited by Israel. UNCTAD (2019) estimated the Palestinian fiscal resources that leak to the treasury of the occupying Power at 13.1 per cent of Palestinian GDP.
- 13. The World Bank (2013, 2014 and 2018) has found that closures in the occupied West Bank substantially reduce the probability of being employed, hourly wages and the number of days worked while increasing the number of working hours per day. Checkpoints alone cost the West Bank economy about 6 per cent of its GDP. 11 Lifting road obstacles within the West Bank enough to improve Palestinians' market access by 10 per cent would increase local output by 0.6 per cent, and, in the absence of roadblocks, GDP per capita in the West Bank would have been 4.1 to 6.1 per cent

<sup>&</sup>lt;sup>4</sup> Ibid.

<sup>&</sup>lt;sup>5</sup> Ibid.

<sup>&</sup>lt;sup>6</sup> UNCTAD, The Economic Costs of the Israeli Occupation for the Palestinian People: The Cost of Restrictions in Area C Viewed from Above (UNCTAD/GDS/APP/2022/1).

<sup>&</sup>lt;sup>7</sup> UNCTAD, The Economic Costs of the Israeli Occupation for the Palestinian People: Arrested Development and Poverty in the West Bank (UNCTAD/GDS/APP/2021/2 and Corr.1).

<sup>&</sup>lt;sup>8</sup> UNCTAD, The Economic Costs of the Israeli Occupation for the Palestinian People: The Impoverishment of Gaza under Blockade (UNCTAD/GDS/APP/2020/1).

<sup>&</sup>lt;sup>9</sup> UNCTAD, The Economic Costs of the Israeli Occupation for the Palestinian People: The Unrealized Oil and Natural Gas Potential (UNCTAD/GDS/APP/2019/1).

<sup>&</sup>lt;sup>10</sup> UNCTAD, The Economic Costs of the Israeli Occupation for the Palestinian People: Cumulative Fiscal Costs (UNCTAD/GDS/APP/2019/2).

Massimiliano Calì and Sami H. Miaari, "The labor market impact of mobility restrictions: evidence from the West Bank", Policy Research Working Paper, No. 6457 (Washington, D.C., World Bank, 2013).

higher each year. <sup>12</sup> Overall, according to the World Bank, if restrictions on Palestinian producers in Area C were removed, with the occupation still in place, the potential additional output gains would amount to at least \$2.2 billion annually, or 23 per cent of Palestinian GDP. <sup>13</sup>

#### III. Methodology and data

#### A. Special economic zones

- 14. Special economic zones are a policy instrument commonly used in most developing and many developed economies to accelerate development. They are geographically defined areas within which governments aim to promote investment, achieve structural transformation and accelerate development by providing fiscal, regulatory and other incentives, land use rights and other advantages, and infrastructure support. Among other goals, special economic zones may be used to target poorer regions. Special economic zones are typically subject to different economic regulations than other regions within the same country. <sup>14</sup> Under the right circumstances, gains from special economic zones include boosting income, promoting exports, attracting foreign direct investment, job creation and advancing the development of targeted regions. <sup>15</sup>
- 15. UNCTAD (2019) explores the explosive growth of special economic zones and documents that more than 1,000 special economic zones were developed worldwide between 2014 and 2019. By 2019, there were some 5,400 zones in 147 countries, with more in the pipeline. In many cases, special economic zones have played a key role in structural transformation and have led to greater participation in global value chains. <sup>16</sup>
- 16. As shown above, the multilayered restrictions in Area C have a negative impact on Palestinian development. The share of Area C in Palestinian West Bank localities plays a role akin to an adverse (negative) special economic zone that, instead of fostering investment, suppresses it and prevents development. A cursory examination of the disincentives emanating from the restrictions imposed by the occupation in Area C suggests that designating part of a Palestinian locality as Area C introduces an adverse special economic zone whose negative impact spills over beyond the limits of the zone. The welfare cost of these adverse special economic zones will be explored in subsequent sections of the present report. It will be shown that ensuring that Palestinian investors have more access to Area C could eliminate poverty and boost total Palestinian household expenditure substantially.

#### B. Estimation of total household expenditure at the locality level

17. The 2007 and 2017 censuses of the Palestinian Central Bureau of Statistics divide the West Bank into 523 localities in 11 governorates: Ramallah, Janin, Tubas, Tulkarm, Nablus, Qalqiliyah, Salfit, Jericho, Jerusalem, Bethlehem and Hebron. The

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World Bank, Unlocking the Trade Potential of the Palestinian Economy: Immediate Measures and a Long-Term Vision to Improve Palestinian Trade and Economic Outcomes, Report No. ACS22471 (Washington, D.C., 2017).

World Bank, West Bank and Gaza: Area C and the Future of the Palestinian Economy, Report No. AUS2922 (Washington, D.C., 2013).

<sup>&</sup>lt;sup>14</sup> UNCTAD, World Investment Report 2019: Special Economic Zones (UNCTAD/WIR/2019).

Douglas Zhihua Zeng, "Global experiences with special economic zones: focus on China and Africa", Policy Research Working Paper, No. 7240 (Washington, D.C., World Bank, 2015).

<sup>&</sup>lt;sup>16</sup> UNCTAD, World Investment Report 2019.

analysis hereafter excludes Jerusalem Governorate, as it is completely under Israeli control and no data are available. <sup>17</sup> The analysis covers 457 localities in the 10 remaining governorates, excluding Jerusalem and its localities.

18. Table 1 presents a summary of the geographical characteristics of localities in the West Bank, excluding the governate of Jerusalem and its localities. It shows that the average share of Area C per locality area is 52 per cent. The distribution is presented in figure III. The average shares of Areas A and B per West Bank locality area are 26 and 20 per cent, respectively (see table 1). Some localities are fully accounted for by Areas A, B or C. In addition, the average share of Palestinian locality area that falls within the municipal boundaries of Israeli settlements is 7.5 per cent, but varies significantly, from 0 to 93.5 per cent. <sup>18</sup>

Table 1

Summary: geographical characteristics of West Bank localities

Variable	Mean	Standard deviation	Median	Minimum	Maximum
Locality area (km²)	114.0	216.0	61.3	0.3	2 140.0
Share of Area A in locality	0.209	0.343	0.000	0.000	1.000
Share of Area B in locality	0.259	0.298	0.145	0.000	1.000
Share of Area C in locality	0.517	0.366	0.555	0.000	1.000
Share of Israeli settlements in locality	0.075	0.141	0.000	0.000	0.935
Number of observations: 457					

Sources: UNCTAD calculations based on censuses of the Palestinian Central Bureau of Statistics; and United Nations, Office for the Coordination of Humanitarian Affairs, occupied Palestinian territory data.

Note: The data exclude Jerusalem and its localities.

<sup>&</sup>lt;sup>17</sup> Jerusalem Governorate covers East Jerusalem (J1, under Israeli control) and the rest of Jerusalem governorate (J2). There are many Israeli settlements in J2 and, consequently, many parts of the governorate are inaccessible to Palestinians.

The Palestinian Central Bureau of Statistics' division of the West Bank into localities was done for statistical reasons. The locality is the smallest geographical statistical unit in the census. It does not consider the Israeli settlements that are built on Palestinian land. Thus, some of the localities are within the Israeli settlements' municipal boundaries, but remain Palestinian land taken over by the occupying Power.

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Figure III

Share of Area C in locality

0.00

20

19. Total household expenditure by locality is estimated by the empirical best prediction method, which follows two steps to estimate the poverty headcount. The same methodology was used in previous UNCTAD reports submitted to the General Assembly (A/75/310 and A/76/309). First, data from the Palestinian Expenditure and Consumption Surveys are used to estimate regression equations for household expenditure per adult equivalent on the basis of the observable characteristics of households. Second, the estimated coefficients of the regressions are combined with census data to impute household expenditure per adult equivalent for the larger set of households included in the census. In order to estimate the statistical relationship linking household expenditure per adult equivalent to the household characteristics, this information must be available in both the survey and the census data. <sup>19</sup>

Share of locality area in Area C

0.75

- 20. Palestinian censuses, like those of other countries, do not include data on household or individual consumption, expenditure or income. However, the Palestinian Expenditure and Consumption Surveys of 2011 and 2017 and the censuses of 2007 and 2017 compile data on a relatively broad set of common variables, including location, whether urban, rural or a refugee camp; characteristics of the head of household, such as education level and employment status; sector of employment; demographic characteristics of the household; access to basic services such as water; characteristics of the household dwelling; and household assets.
- 21. Estimates of expenditure per adult equivalent are based on the regression results provided in the annex to the present report. The results of weighted regressions of log expenditure per adult equivalent (in constant 2015 dollars) on the set of standard covariates interact with regional dummy variables of both the West Bank and Gaza for better regional estimates. <sup>20</sup> Inclusion of all census data enhances the efficiency of

<sup>19</sup> Chris Elbers, Jean O. Lanjouw and Peter Lanjouw, "Micro-level estimation of poverty and inequality", *Econometrica*, vol. 71, No. 1 (January 2003); and Isabel Molina, J.N.K. Rao and Gauri Sankar Datta, "Small area estimation under a Fay-Herriot model with preliminary testing for the presence of random area effects", *Survey Methodology*, vol. 41, No. 1 (June 2015).

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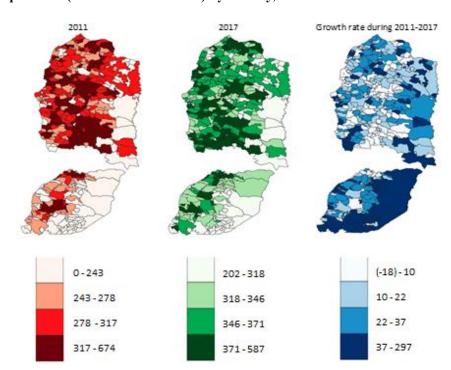
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The estimates of West Bank expenditure using only the West Bank data subset yield the exact results, but with a higher error term. Thus, using the full data set, which includes Gaza, and assigning regional dummies yield more efficient and less noisy estimates of expenditure.

regional estimates, as the larger sample size improves precision and lowers the error term.

- 22. In order to maximize comparability between the synthetic expenditure measures constructed using census data and the estimated coefficients, a common set of covariates over the two sample surveys were maintained in the regressions for 2011 and 2017.<sup>21</sup>
- 23. The estimated average expenditure per adult equivalent and poverty rates by locality are mapped in figures IV and V. Expenditure per adult equivalent in general shows an increase between 2011 and 2017. The spatial distribution of expenditure per adult equivalent does not change much in general; it shows convergence, as growth is higher in areas with initially lower expenditure per adult equivalent in 2011 (see figure IV).
- 24. Between 2011 and 2017, the spatial distribution of poverty remained stable (see figure V), with the east and south poorer than the rest of the West Bank. In addition, the poorest regions in the West Bank are those that are fully or partially in Area C, namely, across the Jordan Valley and the south.

Figure IV Estimated level and growth of average monthly expenditure per adult equivalent (constant 2015 dollars) by locality, 2011–2017



Source: UNCTAD calculations.

Note: The legend value is classified by quartile.

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<sup>&</sup>lt;sup>21</sup> These estimates differ from those in A/75/310 and A/76/309 in three ways: first, A/75/310 and A/76/309 use a sample of the censuses (about 20 per cent) while the present report uses the full census. Second, in A/75/310 and A/76/309, Jerusalem is included, whereas it is not included in the present report. Third, in the present report, the regression is weighted; i.e. it incorporates household weight (the inverse of the selection probability of the household). These weights are used to correct or adjust baseline expansion factors in the regression.

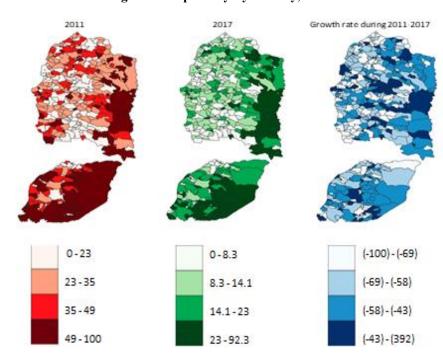


Figure V Estimated rate and growth of poverty by locality, 2011–2017

Note: The legend value is classified by quartile.

25. Estimated total expenditures at locality level are quite heterogeneous, as shown in the histograms, using a logarithmic scale (figure VI). In 2011, mean total locality expenditure was \$9.9 million and the median was \$4.1 million. In 2017, the mean was \$15.5 million while the median was \$6.4 million. Large standard deviations of \$30.0 million and \$42.4 million, respectively, indicate significant inequality. As the two histograms show, the distribution shifted to the right between 2011 and 2017, reflecting a modicum of economic growth in the West Bank, with total expenditure increasing from \$4.54 billion in 2011 to \$7.11 billion in 2017.

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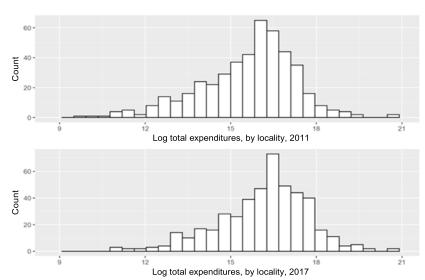


Figure VI West Bank: estimated total expenditure by locality, 2011 and 2017

26. Table 2 shows that, in real terms, estimated locality average expenditure per adult equivalent increased by 24.5 per cent between 2011 and 2017. However, given population growth, the average locality expenditure increased by 54 per cent, from \$277 in 2011 to \$345 in 2017.

27. Income measures constructed using survey or administrative data can be enhanced by recourse to night-time luminosity data. Locality-level average night-time luminosity, outside Israeli settlements' municipal boundaries, is used in the regression analysis to account for the unobserved variation in expenditure not captured by the small area estimates. Table 2 shows that locality average annual night-time luminosity outside Israeli settlements' municipal boundaries also increased by 34.5 per cent between 2011 and 2017.

Table 2
Summary statistics of West Bank locality night-time luminosity and estimated expenditure measures

Variable	Mean	Standard deviation	Median	Minimum	Maximum
Panel, 2011					
Average expenditure per adult equivalent (constant 2015 dollars) <sup>a</sup>	277	72	279	73	674
Total locality annual expenditure of households (constant thousand 2015 dollars) <sup>a</sup>	9 940	30 100	4167	4	404 000
Locality average annual night-time luminosity outside Israeli settlement municipal boundaries (nWcm <sup>-2</sup> sr <sup>-1</sup> )	5.8	8.5	3.1	0.0	67.8
Panel, 2017					
Average expenditure per adult equivalent (constant 2015 dollars) <sup>a</sup>	345	51	346	202	587
Total locality annual expenditure of households (constant thousand 2015 dollars) <sup>a</sup>	15 300	42 100	6 381	6	563 000

Variable	Mean	Standard deviation	Median	Minimum	Maximum
Locality average annual night-time luminosity outside Israeli settlement municipal boundaries (nW cm <sup>-2</sup> sr <sup>-1</sup> )	7.8	9.2	4.9	0.2	71.9
Number of observations: 457					

Source: UNCTAD calculations based on Palestinian Central Bureau of Statistics and National Aeronautics and Space Administration black marble night-time luminosity data.

### IV. The welfare cost of the fragmentation of the occupied West Bank

- 28. Area C accounts for more than 60 per cent of the total area of the West Bank, is the only contiguous part of the West Bank and has the most fertile land and the most valuable natural resources.
- 29. While occupation also imposes significant restrictions on Palestinian economic activity in Areas A and B, the restrictions it imposes in Area C are more stringent, forcing the Area to play a role akin to an "adverse special economic zone" that disincentivizes Palestinian investment and undermines household welfare. The ongoing expansion of settlements dispossesses Palestinians of most of Area C and its natural resources, thus exacting a significant socioeconomic toll.
- 30. Section IV estimates part of the economic cost of occupation in Area C in terms of lost household welfare. It is crucial to note that the estimated cost is partial and does not include the cost of the restrictions imposed in areas A and B, which, it is assumed, would persist after a hypothetical modification of restrictions in Area C to resemble the restrictions in Areas A and B. The exercise estimates the negative impact of the share of Area C in Palestinian localities on household welfare, using the level of expenditure as a proxy. The estimated cost leaves out several channels other than expenditure through which occupation seriously undermines the general welfare of the Palestinian people.
- 31. The cost, in terms of percentage and dollar value, is measured using a counterfactual scenario that reverses the negative impact of Area C share in Palestinian localities on total household expenditure. Section IV.A below estimates the cost in percentage terms, while section IV.B measures the cost in dollar value.

#### A. Area C as an "adverse economic zone"

32. Section IV.A investigates the relationship between the share of Area C in the locality and the latter's total household expenditure. An econometric model is developed with (a) total expenditure by locality as a function of a period dummy (= 1 for 2017 and 0 otherwise) to account for the growth in total expenditure and population, (b) nine governorate dummies (Ramallah is the excluded dummy) to account for the unobserved characteristics of the governorates, with Ramallah as the benchmark and (c) the logarithm of the locality's area. The results presented in column 1 of table 3 report the corresponding estimates, where total locality expenditures are expressed in logarithmic form and standard errors are clustered at the governorate level to account for common shocks affecting localities within a given governorate. Even this bare-bones specification accounts for 31.5 per cent of the variance of the response variable.

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<sup>&</sup>lt;sup>a</sup> Night-time luminosity data from settlements in Area C and from East Jerusalem are excluded.

Table 3
Regression results: log estimated total expenditure by locality with standard errors, clustered at the governorate level, in parentheses (457 localities, 10 governorates, two years (2011 and 2017))

Independent variables from the Palestinian Expenditure and Consumption Survey	(1)	(2)	(3)	(4)
Intercept	$6.435^{a}$	0.213	0.486	0.375
-	(1.692)	(1.256)	(0.785)	(0.841)
2017 dummy	$0.548^{a}$	$0.096^{c}$	0.111 <sup>c</sup>	$0.118^{c}$
•	(0.059)	(0.052)	(0.059)	(0.061)
Janin	$-0.456^a$	$0.483^{a}$	$0.300^{a}$	$0.145^{b}$
	(0.034)	(0.091)	(0.057)	(0.062)
Tubas	$-1.960^a$	$-0.566^a$	$-0.504^{a}$	$-0.467^{a}$
	(0.021)	(0.131)	(0.086)	(0.050)
Tulkarm	0.020	$0.313^{a}$	$0.273^{a}$	-0.050
	(0.029)	(0.034)	(0.021)	(0.047)
Nablus	$-0.199^a$	$0.313^{a}$	$0.117^{a}$	$0.143^{a}$
	(0.004)	(0.048)	(0.031)	(0.040)
Qalqiliyah	$-0.698^a$	$-0.804^{a}$	$-0.395^a$	-0.009
	(0.070)	(0.046)	(0.040)	(0.065)
Salfit	$-0.267^a$	$-0.522^a$	$-0.263^a$	$-0.281^a$
	(0.019)	(0.027)	(0.028)	(0.066)
Jericho	$-1.186^a$	$-0.716^a$	$-0.504^{a}$	-0.061
	(0.102)	(0.079)	(0.062)	(0.066)
Bethlehem	0.083	$-0.117^{b}$	0.008	$0.137^{b}$
	(0.068)	(0.048)	(0.029)	(0.058)
Hebron	$-0.711^a$	0.090	0.020	$0.299^{a}$
	(0.003)	(0.075)	(0.047)	(0.038)
Log locality area	$0.593^{a}$	$0.809^{a}$	$0.845^{a}$	$0.853^{a}$
	(0.103)	(0.071)	(0.044)	(0.051)
Log night-time luminosity outside settlements		$1.177^{a}$	$1.138^{a}$	$1.120^{a}$
		(0.110)	(0.070)	(0.070)
Share of Area C in locality			$-1.466^a$	
			(0.134)	
Share of Area C in locality C x Janin				$-1.066^a$
				(0.041)
Share of Area C in locality C x Tubas				-1.531 <sup>a</sup>
				(0.075)
Share of Area C in locality x Tulkarm				$-0.779^a$
				(0.037)
Share of Area C in locality x Nablus				-1.500 <sup>a</sup>
				(0.020)
Share of Area C in locality x Qalqiliyah				-1.919 <sup>a</sup>
				(0.078)

Independent variables from the Palestinian Expenditure and Consumption Survey	(1)	(2)	(3)	(4)
Share of Area C in locality x Salfit				-1.408 <sup>a</sup>
				(0.109)
Share of Area C in locality x Ramallah				$-1.426^a$
				(0.084)
Share of Area C in locality x Jericho				$-2.084^a$
				(0.173)
Share of Area C in locality x Bethlehem				-1.631 <sup>a</sup>
				(0.095)
Share of Area C in locality x Hebron				$-2.008^a$
				(0.044)
$\mathbb{R}^2$	0.323	0.601	0.693	0.699
Adjusted R <sup>2</sup>	0.315	0.595	0.689	0.691
Number of observations	914	914	914	914

Note: Standard errors are in parentheses.

- <sup>a</sup> Where p-value is less than 0.01.
- <sup>b</sup> Where p-value is less than 0.05.
- <sup>c</sup> Where p-value is less than 0.1.
- 33. The significant relationship between night-time luminosity outside settlements and Palestinian economic activity is established in the previous report by UNCTAD to the General Assembly.<sup>22</sup> In column 2, in order to capture a significant portion of the residual variance owing to the small area estimates of total expenditure, the logarithm of the mean luminosity of the locality (outside the municipal boundaries of Israeli settlements) is added. The point estimate of the elasticity is close to 1, indicating that a 1 per cent increase in mean luminosity is associated, ceteris paribus, with a 1 per cent increase in Palestinian expenditure. In this specification, R<sup>2</sup> increases to 0.595, corroborating a strong link between luminosity and expenditure.
- 34. Column 3 adds the share (which varies between 0 and 1) of Area C in locality area. The column captures the unrealized potential gains of transferring Area C to greater Palestinian control. These gains can be estimated by observing the substantial variation in the share of localities under effective Palestinian control (Areas A and B) and the substantial number of localities lying at each extreme. Nevertheless, this share is time-invariant and therefore cannot, from a statistical perspective, exploit within-locality variance in the share to identify its effect, as there is none.
- 35. The precise point estimate associated with the share of Area C in the locality is presented in column 3. This number (-1.466) implies that if a hypothetical locality currently entirely inside Area C is reassigned entirely to Areas A or B, its total expenditure would increase by 146.6 per cent. A graphical representation of the relationship is illustrated in figure VIII, where the straight line represents the relationship between the share of Area C in the locality and the logarithm of total expenditure in the locality, while controlling for other covariates.
- 36. In column 4, the effect of the share of Area C in locality is allowed to vary by governorate. The coefficients vary from (-1.066) for Janin to (-2.084) for Jericho,

<sup>22</sup> For more on night-time luminosity and its use in economic research, see A/77/295.

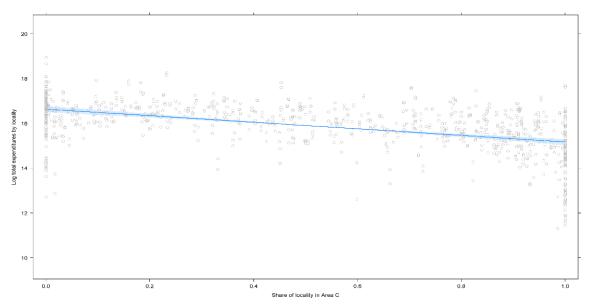
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Abbreviation: R<sup>2</sup>, proportion of the variance for a dependent variable that is explained by an independent variable.

with Ramallah (-1.426) close to the West Bank mean. The estimation results suggest that most of the differences are statistically significant at the usual levels of confidence. The observed heterogeneity in the marginal effect on total expenditure is illustrated in figure VIII, which plots the governorate-specific linear relationships.

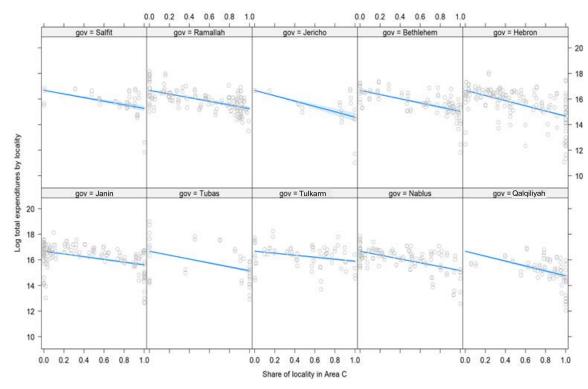
37. The share of Area C in a locality has a negative impact on Palestinians' household welfare through several channels: it restricts them from living, developing, investing, building and accessing land, water and vital services such as health care and education.

Figure VII West Bank: relationship between the share of Area C in a locality and the logarithm of total estimated expenditure in the locality



Source: UNCTAD calculations.

Figure VIII
West Bank: relationship between the share of Area C in a locality and the logarithm of total estimated expenditure in the locality, by governate



#### B. The welfare cost of the occupation

38. To estimate the welfare cost of the additional restrictions imposed in Area C, a counterfactual scenario was developed. It involves the use of the aforementioned estimates to compute the potential gain in total estimated 2017 expenditure that could have accrued in West Bank localities had the total land of Area C been reallocated to Areas A or B. The unrealized potential gains reflect a part, not all, of the cost of the occupation stemming from reduced access (compared to Areas A and B) of Palestinians to their land and economic resources.

39. The logarithmic transformation of the dependent variable in the linear results presented in table 3 and figure VII renders them appropriate for computing the percentage gains that would accrue by assigning all land in a locality to Areas A or B.<sup>23</sup> For example, for the simple linear model presented in column 3 of table 3, the predicted value of the response variable is first computed. The "share of Area C in locality" variable is then set to zero in order to recompute the corresponding predicted response variable.

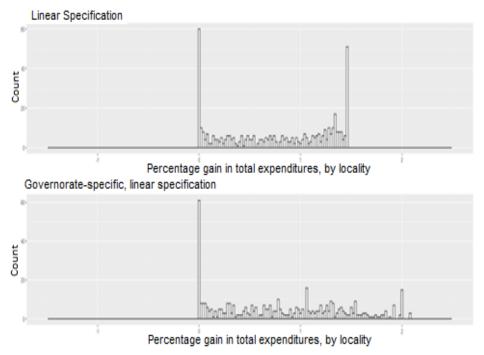
40. As both predictions for each locality are expressed in logarithmic terms, subtracting the first from the second gives the percentage gain in total expenditure for each locality. For columns 3 and 4 in table 3, the gain will necessarily be positive, given that the marginal effects of the share variable are all negative. As expected, the

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Using the logarithm of total expenditure as the response variable implies that the conditional mean being estimated is given by  $E(\log(y)) = Xb$ , where y is total expenditure, X is the matrix of covariates and b represents the corresponding coefficients.

percentage gains are all positive for the two linear specifications. For the linear specification with a constant marginal effect in column 3 of table 3, the annual gains in 2017 vary between 0 and 150 per cent, with a mean gain of 77 per cent. As for the linear specification where the marginal effects are constant within governorates, the gains vary between 0 and slightly above 200 per cent in 2017, with a mean value of 80.9 per cent (see figure IX).

Figure IX
West Bank: histogram of annual estimated percentage expenditure gains, by locality, with different regression specifications



Source: UNCTAD calculations.

- 41. The regression results in table 3 contain an estimate of the percentage of negative impact of the share of Area C in a locality; that is, it measures the expectation of the log (expenditure). In order to estimate the negative impact in dollar terms, the regression specification should estimate log(E(y)) = Xb. Therefore, a generalized linear model with a log link function is estimated, the results of which are presented in table 4.24
- 42. The second specification is appropriate to compute the absolute gains when the counterfactual exercise is in aggregate dollars. For the generalized linear model specification in which the marginal effect of the share variable is constant, the estimated aggregate gain in 2017 from reassigning all Area C land to Areas A or B stands at \$3.78 billion. However, owing to the heterogeneity of the impact of the share across governates, evident from tables 3 and 5, it is more accurate to allow the impact of the share of Area C in localities to vary across governorates, in which case the corresponding annual gain is \$4.4 billion in 2017 (in constant 2015 dollars).

The model  $(\log(E(y)) = Xb)$  in table 4 is not the same as  $(E(\log(y)) = Xb)$  in table 3, because the mean of the log is not necessarily the same as the log of the mean. This will be particularly apparent when the variable is highly skewed, as is the case for total expenditure by locality.

- 43. The unrealized estimated \$4.4 billion potential gain in household expenditure that would have materialized by reallocating Area C land to Areas A and B would have significantly enhanced household welfare by increasing their expenditure by 57 per cent in 2017. As can be seen in figures IV and V, this is especially relevant to the localities in the Jordan Valley and the southern parts of the West Bank, which are dominated by Area C and have the lowest expenditure per adult equivalent and the highest poverty rates.
- 44. The unrealized estimated \$4.4 billion in additional expenditure would be sufficient to reduce poverty in localities where the share of Area C is greater than zero, and the positive spillover to the rest of the West Bank economy through expansion of aggregate demand, forward and backward linkages and fiscal channels would contribute significantly to the reduction of poverty everywhere else.
- 45. The findings of the present report demonstrate that lowering the restrictions imposed in Area C to the levels applied in Areas A and B, as a step towards ending the occupation, could improve the economic situation of the Palestinian people significantly. It follows that the economic gains will be much greater when the occupation is brought to an end, in line with relevant United Nations resolutions, and the conflict is resolved in line with international law, in pursuit of the vision of the two-State solution.

Table 4
Result of generalized linear model (standard errors, clustered at the governorate level)

Consumption Survey	(1)	(2)	(3)	(4)
Intercept	3.051	-1.751 <sup>c</sup>	-1.196 <sup>c</sup>	-1.291 <sup>b</sup>
	(3.386)	(0.819)	(0.581)	(0.568)
2017 dummy	$0.448^{a}$	$0.100^{b}$	$0.095^{a}$	$0.095^{a}$
	(0.037)	(0.031)	(0.027)	(0.026)
Janin	0.097	$0.859^{a}$	$0.520^{a}$	$0.479^{a}$
	(0.073)	(0.037)	(0.031)	(0.041)
Tubas	$-0.942^a$	$0.585^{a}$	$0.597^{a}$	$0.603^{a}$
	(0.194)	(0.088)	(0.078)	(0.065)
Tulkarm	$0.428^{a}$	$0.529^{a}$	$0.362^{a}$	$0.217^{a}$
	(0.097)	(0.007)	(0.006)	(0.013)
Nablus	$0.358^{a}$	$0.639^{a}$	$0.329^{a}$	$0.381^{a}$
	(0.037)	(0.011)	(0.024)	(0.036)
Qalqiliyah	0.112	$-0.083^{b}$	$0.174^{a}$	$0.743^{a}$
	(0.160)	(0.029)	(0.032)	(0.038)
Salfit	$-0.222^a$	$-0.407^a$	$-0.134^{a}$	0.035
	(0.035)	(0.007)	(0.024)	(0.060)
Jericho	$-1.440^a$	$-0.653^a$	$-0.604^{a}$	$0.091^{c}$
	(0.335)	(0.071)	(0.043)	(0.045)
Bethlehem	-0.035	0.042	0.042	0.022
	(0.184)	(0.023)	(0.029)	(0.060)
Hebron	$0.401^{a}$	$0.752^{a}$	$0.542^{a}$	$0.643^{a}$
	(0.048)	(0.029)	(0.027)	(0.030)

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Independent variables from the Palestinian Expenditure and Consumption Survey	(1)	(2)	(3)	(4)
Log locality area	$0.775^{a}$	$0.884^{a}$	$0.900^{a}$	$0.905^{a}$
	(0.197)	(0.045)	(0.032)	(0.029)
Log luminosity outside settlements		$1.177^{a}$	$1.140^{a}$	$1.135^{a}$
		(0.047)	(0.050)	(0.055)
Share of Area C in locality			$-1.272^a$	
			(0.077)	
Share of Area C in locality x Janin				$-1.029^a$
				(0.017)
Share of Area C in locality x Tubas				$-1.253^a$
				(0.075)
Share of Area C in locality x Tulkarm				$-0.843^a$
				(0.035)
Share of Area C in locality x Nablus				-1.361 <sup>a</sup>
				(0.074)
Share of Area C in locality x Qalqiliyah				$-2.031^a$
				(0.055)
Share of Area C in locality x Salfit				$-1.462^a$
				(0.078)
Share of Area C in locality x Ramallah				$-1.216^a$
				(0.018)
Share of Area C in locality x Jericho				$-2.542^a$
				(0.140)
Share of Area C in locality x Bethlehem				-1.159 <sup>a</sup>
				(0.064)
Share of Area C in locality x Hebron				-1.477 <sup>a</sup>
				(0.047)
Observations: 914				

Note: Standard errors are in parentheses.

Abbreviation: R<sup>2</sup>, proportion of the variance for a dependent variable that is explained by an independent variable.

- <sup>a</sup> Where p-value is less than 0.01.
- <sup>b</sup> Where p-value is less than 0.05.
- <sup>c</sup> Where p-value is less than 0.1.

#### V. Conclusions and recommendations

- 46. The multilayered Israeli control on movements has a significant negative impact on Palestinian economic activity, development and household welfare throughout the Occupied Palestinian Territory. In the West Bank, the restrictions on economic activity are more pronounced in Area C but are by no means limited to it.
- 47. In the previous report of UNCTAD to the General Assembly, the economic cost of the additional restrictions on Palestinian economic activity imposed by Israel in 30 per cent of Area C was estimated at 25.3 per cent of West Bank GDP. The present report complements the previous one and contains the conclusion that applying the same economic restrictions imposed in Areas A and B to Area C, i.e. removing the

additional restrictions in all of Area C, could significantly enhance household expenditure and reduce poverty in localities partially or fully in Area C. In the present report, it is demonstrated that if the additional restrictions imposed in Area C are lowered to the levels imposed in Areas A and B, as a step towards ending the occupation, total expenditure in Palestinian localities would increase by a range of up to 200 per cent. Estimation results suggest that, in 2017, total household expenditure would have been \$4.4 billion (constant 2015 dollars) higher than actual expenditure, which is equivalent to a 57 per cent increase in expenditure in the West Bank, excluding Jerusalem Governorate. The unrealized expenditure is not confined to 2017, as it applies to every year, at substantial rates.

- 48. The findings suggest that lowering the restrictions imposed in Area C could improve the economic situation significantly. The United Nations continues to work towards the realization of a just, lasting and comprehensive peace in the Middle East on the basis of relevant Security Council resolutions in order to end the occupation and establish an independent, sovereign, democratic, viable and contiguous State of Palestine, living side by side in peace and security with Israel, on the basis of the pre-1967 borders. In the present report, it is estimated that, absent the additional restrictions in Area C, Palestinian households would have spent 57 per cent more to access life-preserving, welfare-enhancing essential goods and services. The estimated forgone expenditure thus severely impoverishes the Palestinian people and limits their access to the essential goods and services that dominate their expenditure, such as food, education, health, transport, housing and communication.
- 49. The ratio of estimated expenditure to GDP is consistently high in the Occupied Palestinian Territory, and household expenditure represents an essential component of aggregate demand. Previous UNCTAD reports suggested that the Palestinian economy is constrained on both the supply and demand sides. Greater spending by households stimulates economic growth, creates jobs, enhances fiscal revenue and expands the policy space available for the Palestinian Government without important inflationary consequences for an economy that lacks a sovereign, national currency.
- 50. Area C plays a role akin to an "adverse economic zone". The present report estimates the negative impact of restrictions and the administrative fragmentation of the West Bank on the welfare of Palestinian households. When the occupation ends, the positive potential of introducing ordinary special economic zones should be considered in order to unlock the huge potential currently suppressed by the current situation on the ground.
- 51. The Secretary-General recommends that the international community call on Israel to comply with its responsibilities under international law by, among other things:
- (a) Implementing Security Council resolutions, including resolution 2334 (2016), which reaffirms that the establishment of settlements has no legal validity and constitutes a flagrant violation under international law and a major obstacle to the achievement of the two-State solution and a just, lasting and comprehensive peace;
- (b) Lifting all restrictions on Palestinian economic activity in Area C and beyond in order to provide the Palestinian economy with a much-needed economic and natural resource base for demographic expansion, development and realistic pursuit of the Sustainable Development Goals;
- (c) Exerting all efforts necessary to bring an end to the occupation to arrest and reverse its evolving and substantial economic cost for the Palestinian people.

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- 52. In addition, UNCTAD recommends that the international community take steps to:
- (a) Reverse the ongoing trend of declining donor support to the Palestinian people, which is crucial for the mitigation of the adverse socioeconomic conditions imposed by Israel. The cost of the occupation poses a huge challenge in terms of resource mobilization. Until the occupation is ended, in order to avoid a further sharp deterioration in socioeconomic and humanitarian conditions, there is no current substitute for substantial foreign aid;
- (b) Secure additional resources for the fulfilment of General Assembly requests to UNCTAD to assess and report on the economic cost of the occupation for the Palestinian people. This requires the establishment within the United Nations system of a systematic, evidence-based, comprehensive and sustainable framework to assess the economic costs of the occupation and report the results to the Assembly.
- 53. The Palestinian people's right to development, self-determination and statehood cannot be replaced by humanitarian and economic assistance, essential as these may be in the interim. The United Nations continues to work towards the realization of a just, lasting and comprehensive peace in the Middle East on the basis of relevant United Nations Security Council resolutions, including resolutions 242 (1967), 338 (1973), 1397 (2002), 1515 (2003), 1850 (2008), 1860 (2009) and 2334 (2016), to end the occupation and establish an independent, sovereign, democratic, viable and contiguous Palestinian State, living side by side in peace and security with Israel, on the basis of the pre-1967 borders. It is only by realizing the vision of two States living side by side in peace, security and mutual recognition, with Jerusalem as the capital of both Israel and the State of Palestine, and all final status issues resolved permanently through negotiations, that the legitimate aspirations of both peoples will be achieved.

#### Annex

## Weighted regression results: log real monthly expenditure per adult equivalent

Independent variables from the Palestinian Expenditure and Consumption Survey	2017	2011
Intercept	5.495 (0.285)	$4.321 (0.475)^a$
West Bank	0.104 (0.344)	$0.970 \; (0.524)^c$
Rural * Gaza	-0.115 (0.0627) <sup>c</sup>	-0.0393 (0.0358)
Rural * West Bank	$-0.0386 (0.0207)^{c}$	0.0240 (0.0231)
Camp * Gaza	0.0160 (0.0441)	-0.0539 (0.0348)
Camp * West Bank	-0.0561 (0.0385)	-0.0817 (0.0310)a
Characteristics of head of household		
Gender * Gaza	$0.264 (0.0660)^a$	$0.104 (0.0474)^b$
Gender * West Bank	-0.0320 (0.0341)	0.0196 (0.0324)
Marital status * Gaza	-0.230 (0.177)	-0.187 (0.130)
Marital status * West Bank	-0.00938 (0.0614)	-0.0594 (0.0604)
Refugee status* Gaza	0.00314 (0.0422)	-0.00779 (0.0319)
Refugee status * West Bank	-0.0414 (0.0213) <sup>c</sup>	0.00617 (0.0235)
Education level * Gaza	0.0593 (0.0415)	$0.0653 (0.0302)^b$
Education level * West Bank	$0.0617 (0.0208)^a$	$0.0410 \; (0.0224)^c$
Employment status		
Sector of employment (services is base category)		
Agriculture * Gaza	-0.129 (0.0810)	-0.0338 (0.0448)
Agriculture * West Bank	-0.0528 (0.0399)	$-0.106 (0.0340)^a$
Construction * Gaza	-0.117 (0.0931)	-0.104 (0.0714)
Construction * West Bank	-0.0247 (0.0324)	$-0.0905 (0.0319)^a$
Industry * Gaza	-0.0858 (0.0742)	-0.0810 (0.0581)
Industry * West Bank	-0.0227 (0.0287)	-0.0618 (0.0285) <sup>b</sup>
Number of employed household members * Gaza	$0.0561 (0.0260)^b$	$0.0426 \; (0.0163)^a$
Number of employed household members * West Bank	$0.0532 (0.0124)^a$	$0.0521 (0.0105)^a$
Employment in Israel * Gaza	$1.639~(0.494)^a$	0.0540 (0.0392)
Employment in Israel * West Bank	$0.130 (0.0280)^a$	$0.177 (0.0308)^a$
Employment abroad * Gaza	0.371 (0.350)	-0.102 (0.144)
Employment abroad * West Bank	-0.0294 (0.136)	$0.165 (0.0310)^a$
Employment in national government * Gaza	$0.261 (0.0431)^a$	$0.199 (0.0331)^a$
Employment in national government * West Bank	0.0210 (0.0305)	0.0402 (0.0328)
Demographic characteristics of household		
Number of females * Gaza	$-0.112 (0.0147)^a$	-0.0903 (0.0117) <sup>a</sup>
Number of females * West Bank	$-0.120 (0.00882)^a$	$-0.123 (0.00862)^a$
Number of males * Gaza	$-0.0872 (0.0149)^a$	$-0.0877 (0.0122)^a$
Number of males * West Bank	$-0.0955 (0.00935)^a$	-0.108 (0.00886) <sup>a</sup>
Number of children * Gaza	0.00523 (0.0138)	0.00147 (0.0107)
Number of children * West Bank	-0.000200 (0.00858)	0.00205 (0.00820)

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Independent variables from the Palestinian Expenditure and Consumption Survey	2017	2011
Access to basic services		
Access to public water * Gaza	-0.107 (0.0913)	-0.0180 (0.145)
Access to public water * West Bank	$-0.152 (0.0278)^a$	-0.126 (0.0227) <sup>a</sup>
Access to electricity * Gaza		0.544 (0.293)
Access to electricity * West Bank		-0.255 (0.122) <sup>t</sup>
Connection to sewage network * Gaza	$-0.110 (0.0528)^b$	0.121 (0.0350)
Connection to sewage network * West Bank	-0.00923 (0.0228)	0.0915 (0.0237)
Characteristics of household dwelling		
House ownership * Gaza	-0.0111 (0.0448)	0.0233 (0.0533)
House ownership * West Bank	$-0.0774 (0.0259)^a$	-0.0806 (0.0255) <sup>a</sup>
Number of rooms * Gaza	0.0144 (0.0225)	0.0446 (0.0149)
Number of rooms * West Bank	$0.0428 (0.0119)^a$	0.0314 (0.00947) <sup>a</sup>
Number of bedrooms * Gaza	0.0502 (0.0359)	-0.0433 (0.0238)
Number of bedrooms * West Bank	-0.0208 (0.0185)	0.0271 (0.0165)
Kitchen * Gaza	-0.0802 (0.183)	0.169 (0.257)
Kitchen * West Bank	0.174 (0.144)	0.162 (0.146)
Bathroom and toilet * Gaza	0.0378 (0.0591)	0.0603 (0.248)
Bathroom and toilet * West Bank	0.0549 (0.0385)	0.158 (0.163)
Main source of cooking energy is gas * Gaza	-0.00506 (0.0963)	0.288 (0.0687)
Main source of cooking energy is gas * West Bank	-0.0689 (0.103)	0.0632 (0.0663)
Main source of heating is gas * Gaza	0.138 (0.122)	0.101 (0.136)
Main source of heating is gas * West Bank	-0.0171 (0.0208)	0.0237 (0.0205)
Household assets		
Car * Gaza	$0.458 (0.0703)^a$	0.280 (0.0528)
Car * West Bank	$0.372 (0.0207)^a$	0.301 (0.0224)
Refrigerator * Gaza	0.0442 (0.0737)	$0.113 (0.0557)^{t}$
Refrigerator * West Bank	0.0936 (0.0745)	0.181 (0.0598)
Boiler * Gaza	$0.0619 (0.0371)^{c}$	-0.000375 (0.0286)
Boiler * West Bank	$0.112 (0.0199)^a$	0.0358 (0.0213)
Central heating * Gaza	$0.864~(0.493)^c$	_
Central heating * West Bank	0.0589 (0.0793)	0.155 (0.0586)
Vacuum * Gaza	0.0763 (0.0604)	0.160 (0.0460)
Vacuum * West Bank	$0.0798 (0.0212)^a$	0.153 (0.0231)
Cooking stove * Gaza	-0.0471 (0.0647)	0.102 (0.118)
Cooking stove * West Bank	0.0323 (0.0346)	0.0962 (0.0942)
Washing machine * Gaza	-0.0421 (0.0367)	0.0919 (0.0552)
Washing machine * West Bank	$-0.0549 (0.0197)^a$	$0.0902 (0.0452)^{l}$
Home library * Gaza	$0.188 (0.0588)^a$	0.136 (0.0404)
Home library * West Bank	$0.0602 (0.0292)^b$	0.0922 (0.0247)
Television * Gaza	$0.131 (0.0437)^a$	-0.00629 (0.0747)
Television * West Bank	$0.184 (0.0211)^a$	0.0908 (0.0655)
Telephone line * Gaza	$0.189 (0.0448)^a$	0.108 (0.0322)
Telephone line * West Bank	$0.0469^{b}$	0.123 (0.0209)

Number of observations	3 734	4 317
$\mathbb{R}^2$	0.5511	0.5004
Mobile telephone * West Bank		
Mobile telephone * Gaza	$0.200 \; (0.0432)^a$	-0.0140 (0.0802)
Computer * West Bank	$0.0576 (0.0211)^a$	$0.0838 (0.0209)^a$
Computer * Gaza	$0.0876 \; (0.0441)^b$	$0.162 (0.0315)^a$
Independent variables from the Palestinian Expenditure and Consumption Survey	2017	2011

Note: Standard errors are in parentheses.

Abbreviations: R<sup>2</sup>, proportion of the variance for a dependent variable that is explained by an independent variable; \* Gaza, multiplied by Gaza dummy variable; \* West Bank, multiplied by West Bank dummy variable.

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<sup>&</sup>lt;sup>a</sup> Where p-value is less than 0.01.

<sup>&</sup>lt;sup>b</sup> Where p-value is less than 0.05.

<sup>&</sup>lt;sup>c</sup> Where p-value is less than 0.1.