Palestine refugees: Information for policy

Preface

This collection presents information on Palestine refugees living in the four main host countries in the Middle East, i.e. Jordan, the West Bank and Gaza, Syria and Lebanon. The information is distilled from the series of living conditions surveys that Fafo has undertaken in the region with financial support from Norway.

The collection consists of two main parts: First, we present statistical information on the refugees in the form of fact sheets where each fact sheet presents data on one topic. Second, we include five short papers addressing topics of interest for future policy for the Palestinian Authority. These papers have been drafted by various Fafo researchers using available statistical information. These papers are exploratory in nature and do not draw clear conclusions or recommendations. The authors are only responsible for the analyses and views presented.

A team of Fafo researchers has contributed to this collection. Fact sheets have been prepared by deputy managing director Jon Pedersen and researchers Geir Øvensen, Laurie Blome Jacobsen and Kari Riisøen. The papers are written by researcher Geir Øvensen and deputy managing director Jon Pedersen.

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Part One

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Essential statistical information on the Palestine refugees

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- Palestinian Refugees with Close Relatives Abroad in Only one Country (percent of *persons*)

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Definitions and Population Dynamics

The Number of Palestinian Refugees

Basic Indicators

Projected Population 2002 - 2020 (1000's)

Year	West Bank	Gaza Strip	Jordan	Lebanon only camps	Lebanon including non-camp	Syria only camps	Syria including non-camp	Total with estimated non-camp
2002	585	772	1,484	106	198	159	296	3,335
2005	628	854	1,563	110	206	166	309	3,561
2010	692	996	1,681	117	218	177	330	3,918
2015	749	1,143	1,790	123	229	188	350	4,261
2020	801	1,293	1,895	129	240	198	368	4,598

Projected Population of First Generation Refugees 2002-2020 (1000's)

Year	West Bank	Gaza Strip	Jordan	Lebanon only camps	Lebanon including non-camp	Syria camps	Syria including non-camp	Total with estimated non camp
2002	44	48	134	11	21	14	27	274
2005	39	43	120	9	19	13	24	245
2010	31	33	97	7	15	10	19	195
2015	22	24	72	5	11	8	14	144
2020	15	16	49	4	7	5	10	97

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan the data was matched to the Jordanian population size as established by the Department of Statistics. In Lebanon and Syria the survey coverage was not complete. Therefore in Syria the size of the population was adjusted using school enrolment rates, and in Lebanon other survey data were used. Mortality and fertility were estimated from the survey. The projection was carried out using cohort-component methods.

The Distribution of the Palestinian Refugees

Basic Indicators

Refugee Population 2002

	Jordan	West Bank	Gaza Strip	Lebanon only camps	Lebanon including non-camp	Syria only camps	Syria including non-camp	Total with estimated non-camp
Population (1000)								
UNRWA	1680	627	879	217	387	116	401	3973
Fafo	1484	585	772	106	198	83*	296	3335
Fafo as % of UNRWA	88	93	88	49	51	72	74	84
Share of all refugees %								
UNRWA	42	16	22	5	10	3	10	100
Fafo	44	18	23	3	6	5	9	100

*Not including Yarmouk camp

Data Sources

Fafo data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics. UNRWA data compiled from URNWA Home Page, http://www.un.org/unrwa/

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan the data was matched to the Jordanian population size as established by the Department of Statistics. In Lebanon and Syria the survey coverage was not complete. Therefore in Syria the size of the population was adjusted using school enrolment rates, and in Lebanon other survey data were used. Mortality and fertility were estimated from the survey. The projection was carried out using cohort-component methods.

UNRWA Figures are based on UNRWA records, which are regularly updated; however, registration with the Agency is voluntary and these figures do not represent an accurate population record.

Fafo Fact Sheet

Close Relatives Abroad Among Palestinian Refugee Households

Basic Indicators

Estimated Number of *Households* Where *any* Member has "Close Relatives" Abroad, by Field & Type of Location

Type of locality*	Jordan		Lebanon		Syria	
	C	NC	C	GC	C	GC
Total Households	**24800**	**153700**	**17400**	**7000**	**26800**	**5000**
West Bank / Gaza	5100	25000	600	300	1000	200
Israel			800	300	700	200
Jordan	-	-	1600	600	5000	800
Lebanon	0	3100	-	-	3200	500
Syria	2300	7400	3300	1100	-	-
Egypt	500	3200	100	100	200	0
Gulf countries	6200	43200	5400	1800	5800	900
Iraq	200	2900	200	100	400	100
USA/ Canada	1000	23300	2200	1000	1300	300
Europe	1800	13800	8400	3800	4300	600
Other countries	800	9800	2800	1300	3100	400
No close relatives abroad	11300	65500	3700	1300	11800	2700

"Close relative" = Relatives one generation up, down

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed.

Fafo Fact Sheet

Close Relatives Abroad Among Palestinian Refugee Households

Basic Indicators

Estimated Percentages of *Households* Where *any* Member has "Close Relatives" Abroad, by Field & Type of Location

Type of locality*	Jordan		Lebanon		Syria	
	C	NC	C	GC	C	GC
Total Households	**24800**	**153700**	**17400**	**7000**	**26800**	**5000**
West Bank / Gaza	21	16	4	4	4	4
Israel			5	5	3	3
Jordan	-	-	9	8	18	16
Lebanon	0	2	-	-	12	10
Syria	9	5	19	15	-	-
Egypt	2	2	1	2	1	1
Gulf countries	25	28	31	25	22	18
Iraq	1	2	1	1	2	1
USA/ Canada	4	15	13	14	5	5
Europe	7	9	48	53	16	12
Other countries	3	6	16	19	12	9
No close relatives abroad	46	43	21	19	44	54

"Close relative" = Relatives one generation up, down

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (2000), Lebanon (1998) and Syria (2001) and official statistics.

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Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed.

Fafo Fact Sheet

Palestinian Refugee Households with Close Relatives Abroad in Only one Country

Basic Indicators

Estimated Number of *Households* Where Members have "Close Relatives" *Only* in one Country, by Field & Type of Location

Type of locality*	Jordan		Lebanon		Syria	
	C	NC	C	GC	C	GC
Total Households	**24800**	**153700**	**17400**	**7000**	**26800**	**5000**
West Bank / Gaza			100	0	100	0
Israel	1500	4000	0	0	200	0
Jordan	-	-	100	0	1100	100
Lebanon	0	800	-	-	700	100
Syria	300	500	300	100	-	-
Egypt	0	0	0	0	0	0
Gulf countries	2200	12000	700	200	1300	100
Iraq	0	100	0	0	0	0
USA/ Canada	100	6500	100	100	200	0
Europe	500	2600	1200	700	800	100
Other countries	300	2900	400	200	700	100
No close relatives abroad	11300	65500	8700	1300	11800	2700

"Close relative" = Relatives one generation up, down

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed.

Fafo Fact Sheet

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Basic Indicators

Estimated Percentages of *Households* Where Members have "Close Relatives" *Only* in one Country, by Field & Type of Location

Type of locality*	Jordan		Lebanon		Syria	
	C	NC	C	GC	C	GC
Total Households	**24800**	**153700**	**17400**	**7000**	**26800**	**5000**
West Bank / Gaza	6	3	1	0	0	0
Israel			0	0	1	1
Jordan	-	-	1	0	4	2
Lebanon	0	1	-	-	3	2
Syria	1	0	2	1	-	-
Egypt	0	0	0	0	0	0
Gulf countries	9	8	4	3	5	3
Iraq	0	0	0	0	0	0
USA/ Canada	1	4	1	1	1	1
Europe	2	2	7	10	3	3
Other countries	1	2	2	3	3	2
No close relatives abroad	46	43	21	19	44	54

"Close relative" = Relatives one generation up, down

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (2000), Lebanon (1998) and Syria (2001) and official statistics.

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Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed.

Fafo Fact Sheet

Close Relatives Abroad Among Palestinian Refugees

Basic Indicators

Estimated Number of *Persons* in Households Where *any* Member has "Close Relatives" Abroad, by Field & Type of Location

Type of locality*	Jordan		Lebanon		Syria	
	C	NC	C	GC	C	GC
Total Persons (1000)	**166**	**918**	**93**	**39**	**146**	**28**
West Bank / Gaza	29	157	4	2	6	1
Israel			4	1	4	1
Jordan	-	-	9	3	27	5
Lebanon	0	23	-	-	18	3
Syria	15	46	19	7	-	-
Egypt	3	20	1	1	1	0
Gulf countries	40	259	30	9	31	5
Iraq	1	20	1	1	2	0
USA/ Canada	7	119	12	6	7	1
Europe	12	81	45	21	22	3
Other countries	8	60	15	8	17	2
No close relatives abroad	81	393	17	7	65	15

"Close relative" = Relatives one generation up, down

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (2000), Lebanon (1998) and Syria (2001) and official statistics.

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Close Relatives Abroad Among Palestinian Refugees

Basic Indicators

Estimated Percentages of *Persons* (1000's) in Households Where *any* Member has "Close Relatives" Abroad, by Field & Type of Location

Type of locality*	Jordan		Lebanon		Syria	
	C	NC	C	GC	C	GC
Total Persons (1000)	**166**	**918**	**93**	**39**	**146**	**28**
West Bank / Gaza	17	17	4	5	4	3
Israel			5	4	3	3
Jordan	-	-	10	9	19	16
Lebanon	0	3	-	-	13	11
Syria	9	5	21	17	-	-
Egypt	2	2	1	2	1	1
Gulf countries	24	28	33	24	21	17
Iraq	0	2	1	2	1	1
USA/ Canada	4	13	13	14	5	4
Europe	7	9	49	53	15	11
Other countries	5	7	16	21	12	9
No close relatives abroad	49	43	18	18	44	55

"Close relative" = Relatives one generation up, down

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (2000), Lebanon (1998) and Syria (2001) and official statistics.

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Palestinian Refugees with Close Relatives Abroad in Only one Country

Basic Indicators

Estimated Number of *Persons* (1000's) in Households Where Members have "Close Relatives" *Only* in one Country, by Field & Type of Location

Type of locality*	Jordan		Lebanon		Syria	
	C	NC	C	GC	C	GC
Total Persons (1000)	**166**	**918**	**93**	**39**	**146**	**28**
West Bank / Gaza			1	0	1	0
Israel	7	28	0	0	1	0
Jordan	-	-	1	0	6	1
Lebanon	0	4	-	-	4	1
Syria	3	4	2	1	-	-
Egypt	0	0	0	0	0	0
Gulf countries	15	71	4	1	7	1
Iraq	0	1	0	0	0	0
USA/ Canada	1	28	1	1	1	0
Europe	4	14	6	3	4	1
Other countries	2	22	2	1	4	1
No close relatives abroad	81	393	17	7	65	15

"Close relative" = Relatives one generation up, down

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (2000), Lebanon (1998) and Syria (2001) and official statistics.

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Palestinian Refugees with Close Relatives Abroad in Only one Country

Basic Indicators

Estimated Percentages of *Persons* in Households Where Members have "Close Relatives" *Only* in one Country, by Field & Type of Location

Type of locality*	Jordan		Lebanon		Syria	
	C	NC	C	GC	C	GC
Total Persons (1000)	**166**	**918**	**93**	**39**	**146**	**28**
West Bank / Gaza	4	3	1	0	0	0
Israel			0	0	1	1
Jordan	-	-	1	0	4	2
Lebanon	0	0	-	-	3	3
Syria	2	1	2	2	-	-
Egypt	0	0	0	0	0	0
Gulf countries	9	8	4	4	5	3
Iraq	0	0	0	0	0	0
USA/ Canada	1	3	1	2	1	1
Europe	2	2	7	8	3	3
Other countries	1	2	2	4	3	2
No close relatives abroad	49	43	18	18	44	55

"Close relative" = Relatives one generation up, down

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

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Housing and Housing Conditions

Household Size Among Palestinian Refugees

Basic Indicators

Estimated Number of Persons (1000's) & Percentages by Field & Type of Location										
	Gaza		West Bank		Jordan		Lebanon		Syria	
Type of locality*	C	NC	C	NC	C	NC	C	GC	C	GC
Total Persons (1000)	**289**	**349**	**96**	**299**	**164**	**905**	**93**	**39**	**146**	**28**
1	1	1	1	2	1	6	1	0	1	0
2-4	30	37	15	45	21	150	21	7	29	5
5-9	152	181	57	183	83	556	58	26	99	17
10 or more	106	129	23	68	60	193	13	5	18	5
Total Percent	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
1	0	0	1	1	1	1	1	0	1	0
2-4	10	11	15	15	13	17	23	19	20	19
5-9	52	52	60	61	50	62	62	67	68	62
10 or more	37	37	24	23	37	21	14	13	12	18

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics (PCBS Census 1997).

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Gatherings & Clusters") were surveyed.

Household Type Among Palestinian Refugees

Basic Indicators

Estimated Number of Persons (1000's) **by Field & Type of Location**

Type of locality*	Gaza		West Bank		Jordan		Lebanon		Syria	
	C	NC	C	NC	C	NC	C	GC	C	GC
Total Persons (1000)	**289**	**349**	**96**	**299**	**164**	**905**	**93**	**39**	**146**	**28**
Person living without family	1	6	1	13	1	6	1	0	1	0
Couple without children	3	4	2	6	3	19	2	1	3	1
Couple, youngest child 14 +	5	7	5	15	9	62	9	3	14	2
Couple, youngest child 14 -	101	148	56	161	94	597	55	23	91	19
Single, youngest child 14 +	2	4	2	8	2	21	4	2	6	1
Single, youngest child 14 -	5	22	8	44	4	23	5	2	5	1
Extended family	58	91	23	78	52	175	16	8	26	4

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics (PCBS Census 1997).

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed.

Fafo Fact Sheet

Household Type Among Palestinian Refugees

Basic Indicators

Estimated Percentages, by Field & Type of Location

Type of locality*	Gaza		West Bank		Jordan		Lebanon		Syria	
	C	NC	C	NC	C	NC	C	GC	C	GC
Total Persons (1000)	**289**	**349**	**96**	**299**	**164**	**905**	**93**	**39**	**146**	**28**
Total Percent	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Person living without family	1	2	1	4	1	1	1	0	1	0
Couple without children	2	2	2	2	2	2	2	2	2	2
Couple, youngest child 14 +	3	3	5	5	6	7	10	9	10	7
Couple, youngest child 14 -	57	52	58	50	57	66	60	59	63	68
Single, youngest child 14 +	1	1	2	2	1	2	5	4	4	4
Single, youngest child 14 -	3	8	8	14	2	3	5	4	3	4
Extended family	33	32	23	24	32	19	17	21	18	16

C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics (PCBS Census 1997).

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed.

Fafo Fact Sheet

Ownership of Dwelling and Crowdedness Among Palestinian Refugees

Basic Indicators

Estimated Number of Persons (1000's) **& Percentages by Field & Type of Location**

	Gaza		West Bank		Jordan		Lebanon		Syria	
Type of locality*	C	NC	C	NC	C	NC	C	GC	C	GC
Total Persons (1000)	**289**	**349**	**96**	**299**	**164**	**905**	**93**	**39**	**146**	**28**
Own dwelling	161	229	83	228	128	562	76	27	137	24
Dwelling crowded**	71	92	34	90	95	278	39	15	39	9
Percent										
Own dwelling	92	81	85	70	78	62	82	69	94	88
Dwelling crowded**	40	32	35	28	58	31	42	37	27	34

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"
**Defined as 3 or more persons per room.

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics (Palestinian Census 1997).

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Gatherings & Clusters") were surveyed.

Housing Standard Among Palestinian Refugees

Basic Indicators

Estimated Number of Persons (1000's) **& Percentages by Field & Type of Location**

	Gaza		West Bank		Jordan		Lebanon		Syria	
Type of locality*	C	NC	C	NC	C	NC	C	GC	C	GC
Total Persons (1000)	**289**	**349**	**96**	**299**	**164**	**905**	**93**	**39**	**146**	**28**
Sub-standard Housing***	0	3	0	8	1	13	0	0	4	1
Percent										
Sub-standard Housing**	0	1	0	2	1	1	0	1	3	4

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

**Defined as dwelling mainly built with temporary/ hazardous building materials (hut, tent, barrack or built with asbestos, tin etc. as main construction material). For West Bank and Gaza Sub-standard dwelling is defined as not living in apartment or villa/ house.

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics (Palestinian Census 1997).

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Gatherings & Clusters") were surveyed.

Fafo Fact Sheet

Sanitary Infrastructure Among Palestinian Refugees

Basic Indicators

Estimated Number of Persons (1000's) **& Percentages by Field & Type of Location**

Type of locality*	Gaza		West Bank		Jordan		Lebanon		Syria	
	C	NC	C	NC	C	NC	C	GC	C	GC
Total Persons (1000)	**289**	**349**	**96**	**299**	**164**	**905**	**93**	**39**	**146**	**28**
No toilet inside living quarter**	8	22	6	49	30	89	6	2	0	1
Not connected to sewage network or septic tank	3	4	1	12	11	42	25	9	2	3
No bath/ shower***	3	7	3	25	86	269	37	14	16	5
No independent kitchen	2	6	2	14	6	42	4	2	9	2
Percent										
No toilet inside living quarter**	5	8	6	15	18	10	6	6	0	0
Not connected to sewage network or septic tank	1	2	1	4	7	5	27	3	1	10
No bath/ shower***	2	3	3	8	52	30	40	35	11	17
No independent kitchen	1	2	2	4	3	5	4	5	6	8

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

**Palestinian Census 1997: no toilet + toilet without piped water (inside or outside)

*** Private or shared

Data Sources

Data are derived from Palestinian Census 1997, surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Gatherings & Clusters") were surveyed.

Water Supply Among Palestinian Refugees

Basic Indicators

Estimated Number of Persons (1000's) **& Percentages by Field & Type of Location**

Type of locality*	Gaza		West Bank		Jordan		Lebanon		Syria	
	C	NC	C	NC	C	NC	C	GC	C	GC
Total Persons (1000)	**289**	**349**	**96**	**299**	**164**	**905**	**93**	**39**	**146**	**28**
Drinking water not piped into residence	1	8	0	14	15	137	44	22	24	7
Water supply cut-offs at least weekly	-	-	-	-	31	152	33	6	23	9
Percent										
Drinking water not piped into residence	0	2	0	5	9	15	47	57	16	26
Water supply cut-offs at least weekly	-	-	-	-	19	17	36	16	19	32

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Gatherings & Clusters") were surveyed.

Electricity Supply Among Palestinian Refugees

Basic Indicators

Estimated Number of Persons (1000's) **& Percentages by Field & Type of Location**

	Gaza		West Bank		Jordan		Lebanon		Syria	
Type of locality*	C	NC	C	NC	C	NC	C	GC	C	GC
Total Persons (1000)	**289**	**349**	**96**	**299**	**164**	**905**	**93**	**39**	**146**	**28**
Not connected to electricity	3	23	1	19	2	29	3	1	1	0
Electricity supply cut-offs at least weekly	-	-	-	-	3	42	39	10	N.A.	N.A.
Percent										
Not connected to electricity	1	7	1	6	1	3	2	1	0	0
Electricity supply cut-offs at least weekly	-	-	-	-	2	5	42	26	N.A.	N.A.

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"
N.A: Data not available

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Gatherings & Clusters") were surveyed.

Road Access and Garbage Collection Among Palestinian Refugees

Basic Indicators

Estimated Number of Persons (1000's) & Percentages by Field & Type of Location						
	Jordan		Lebanon		Syria	
Type of locality*	C	NC	C	GC	C	GC
Total Persons (1000)	**164**	**905**	**93**	**39**	**146**	**28**
No paved road to dwelling	17	146	65	25	46	13
Garbage not collected	7	284	16	24	20	8
Percent						
No paved road to dwelling	11	16	70	65	31	47
Garbage not collected	4	31	17	63	14	27

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Gatherings & Clusters") were surveyed.

Dwelling Indoor Environment Among Palestinian Refugees

Basic Indicators

Estimated Number of Persons (1000's) **by Field & Type of Location**

Type of locality*	Jordan		Lebanon		Syria	
	C	NC	C	GC	C	GC
Total Persons (1000)	**164**	**905**	**93**	**39**	**146**	**28**
Dwelling humid	123	562	63	26	68	14
Dwelling cold in winter	113	465	66	26	79	17
Dwelling hot in summer	93	397	60	23	82	16
Poor ventilation	66	216	40	11	33	4
Smoke inside regularly	123	610	66	29	102	20
Exposed to noise inside	89	304	64	25	105	17
Noise from inside	20	93	26	13	29	6
Noise from outside	85	263	59	22	103	16

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed.

Fafo Fact Sheet

Dwelling Indoor Environment Among Palestinian Refugees

Basic Indicators

Estimated Percentages, by Field & Type of Location

Type of locality*	Jordan		Lebanon		Syria	
	C	NC	C	GC	C	GC
Total Persons (1000)	**164**	**905**	**93**	**39**	**146**	**28**
Percent						
Dwelling humid	75	62	68	65	47	49
Dwelling cold in winter	69	51	71	67	54	62
Dwelling hot in summer	57	44	65	60	56	58
Poor ventilation	40	24	43	29	23	15
Smoke inside regularly	75	68	71	73	70	71
Exposed to noise inside	54	34	69	63	72	62
Noise from inside	12	10	28	33	20	21
Noise from outside	52	29	63	56	71	57

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed.

Exposure to Pollution Among Palestinian Refugees

Basic Indicators

Estimated Number of Persons (1000's) **by Field & Type of Location**

Type of locality*	Jordan		Lebanon		Syria	
	C	NC	C	GC	C	GC
Total Persons (1000)	**164**	**905**	**93**	**39**	**146**	**28**
Cars	55	194	25	19	70	13
Industry	3	58	4	5	13	2
Animals	31	154	13	8	8	6
General dust	100	488	71	31	131	26
Garbage smell	27	148	30	14	25	9
Wastewater treatment	0	25	46	18	36	9
Other dust and smell	23	102	6	3	9	5

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Clusters and Gatherings"

Data Sources

Data are derived from surveys carried out by Fafo with partners in Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed.

Fafo Fact Sheet

Exposure to Pollution Among Palestinian Refugees

Basic Indicators

Estimated Percentages, by Field & Type of Location

Type of locality*	Jordan		Lebanon		Syria	
	C	NC	C	GC	C	GC
Total Persons (1000)	**164**	**905**	**93**	**39**	**146**	**28**
Percent						
Cars	33	21	27	48	48	47
Industry	2	6	5	13	9	7
Animals	19	17	14	21	6	20
General dust	61	54	77	78	90	93
Garbage smell	16	16	33	37	17	33
Wastewater treatment	0	3	49	46	25	31
Other dust and smell	14	11	7	8	6	17

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed.

Health

Palestinian Refugee Adult Health

Basic Indicators

Percent of Persons (15 + years) by Field & Type of Location

	West Bank and Gaza		Jordan		Lebanon		Syria	
Type of locality*	C	NC	C	NC	C	GC	C	GC
Total Persons (1000)	**385**	**648**	**164**	**905**	**93**	**39**	**146**	**28**
Percent								
Chronic illness or disability	2	2	19	12	26	26	17	14
Poor self-reported health								
Men	-	-	6	4	17	16	9	7
Women	-	-	7	5	16	16	9	6
Smoke regularly								
Men	40	39	52	46	46	37	48	50
Women	2	3	4	5	15	18	8	6
Mean Psychological distress symptoms (of 7)								
Men	-	-	2.5	1.9	3.0	3.1	2.4	2.7
Women	-	-	3.2	2.3	3.0	3.6	2.8	2.8

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official national statistics..

Methods

In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Gatherings & Clusters") were surveyed. Poor self-reported health is the percent who report their own health as "bad" or "very bad". Regarding smoking, for the West Bank, Gaza data is from PCBS, 2000 and is the percent who "practice the smoking habit" aged 12 yrs and older. For the other fields it is the percent of those 15 years or older who report smoking daily. Psychological distress is measured by an index, including items make up an abbreviated version of the short form HSCL-25 (Hopkins Symptoms Check-List). The individual was given a score of '1' if he or she reported experiencing the symptom 'very much' or 'quite a bit', and was given a score of '0' for any other answer.

Infant and Maternal Mortality Rates Among Palestinian Camp Refugees

Basic Indicators

Estimated Mortality Rates, by Field & Type of Location

	Gaza	West Bank	Jordan	Lebanon	Syria
Total Persons (1000)	**175**	**97**	**164**	**93**	**146**
Infant male mortality rate	33*	30*	27	40	25
Infant female mortality rate	23*	22*	23	23	22
Maternal mortality rate	112	81	n.a.	239	75

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed. Prenatal care coverage is percent of pregnancies last 5 years for Jordan camps, Lebanon and Syria, percent last year Jordan non-camp and West Bank and Gaza. Delivery assistance is percent of births last 5 years for Jordan camps, Lebanon and Syria, and latest birth for Jordan non-camp and birth last year for West Bank and Gaza.

Infant and child mortality are measured with direct methods, based on dated vital events from retrospective birth histories. For West Bank and Gaza Strip Infant Mortality is for all refugees, not just those in camps. Maternal mortality estimates are uncertain for the West Bank camp number. Corresponding maternal mortality rates for Gaza and West Bank refugees are 82 and 66. The sisterhood method was used for maternal mortality in Lebanon and Syria.

Mother and Child Health Among Palestinian Refugees

Basic Indicators

Estimated Percentages, by Field & Type of Location

	Gaza		West Bank		Jordan		Lebanon		Syria	
Type of locality*	C	NC	C	NC	C	NC	C	GC	C	GC
Total Persons (1000)	**289**	**349**	**96**	**299**	**164**	**905**	**93**	**39**	**146**	**28**
Percent										
Prenatal care (percent pregnancies)	99	99	90	95	95	86	95	95	96	92
Delivery assisted (percent births)	98	99	98	97	87	95	83	82	84	80
Low birth weight (percent births)	-	-	-	-	6	8	7	8	8	10
12-23 months fully vaccinated**	82	73	82	73	82	83	47	57	73	77
Severe malnourished (MUAC) under 5 years.	-	-	-	-	0	1	5	1	5	2

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"
** For both West Bank and Gaza.

Data

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed. Prenatal care coverage is percent of pregnancies last 5 years for Jordan camps, Lebanon and Syria, percent last year Jordan non-camp and West Bank and Gaza. Delivery assistance is percent of births last 5 years for Jordan camps, Lebanon and Syria, and latest birth for Jordan non-camp and birth last year for West Bank and Gaza. MUAC measure of malnutrition is the mid-upper-arm circumference, if less than 2.5 cm considered acute malnutrition.

Chronic Illness and Injury of Children 5-14 Years Among Palestinian Refugees

Basic Indicators

Estimated Percentages, by Field & Type of Location

Type of locality*	Gaza		West Bank		Jordan		Lebanon		Syria	
	C	NC	C	NC	C	NC	C	GC	C	GC
Total Children 5-14 Years (1000)	86	105	26	83	44	236	24	10	35	7
Percent										
Boys	2	2	2	1	5	3	8	11	4	3
Girls	1	1	1	1	4	3	7	8	3	3

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Gatherings & Clusters") were surveyed.

Education

Illiteracy Among Palestinian Refugees

Basic Indicators

Estimated Percentages by Field & Type of Location

Type of locality*	Gaza		West Bank		Jordan		Lebanon		Syria	
	C	NC	C	NC	C	NC	C	GC	C	GC
Total Persons (1000)	**289**	**349**	**96**	**299**	**164**	**905**	**93**	**39**	**146**	**28**
Percent										
Male illiteracy	4	4	5	4	12	25	51	54	18	20
Female illiteracy	10	10	12	11	26	32	54	50	25	27

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed. Age group enrolment ratio is the percent enrolled at ages appropriate to the cycle in that field. Primary school is the elementary cycle (6-11 years) plus preparatory (12-15 years in all fields except Lebanon, where it is 12-14 years). Ages were adjusted from survey date to September of the school year to adjust for entry-age requirements and ages appropriate for each cycle.

Fafo Fact Sheet

School Enrolment Among Palestinian Refugee Children and Youth

Basic Indicators

Estimated Percent of Children and Youth by Field & Type of Location

	Gaza		West Bank		Jordan		Lebanon		Syria	
Type of locality*	C	NC	C	NC	C	NC	C	GC	C	GC
Total Persons (1000)	**289**	**349**	**96**	**299**	**164**	**905**	**93**	**39**	**146**	**28**
Percent										
Male primary age group enrolment ratio	93	91	93	92	92	95	92	90	91	90
Female primary age group enrolment ratio	92	92	93	93	93	95	94	94	91	94
Male secondary age group enrolment ratio	69	61	54	53	59	71	39	50	47	43
Female secondary age group enrolment ratio	53	49	52	51	63	77	48	61	51	58

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed. Age group enrolment ratio is the percent enrolled at ages appropriate to the cycle in that field. Primary school is the elementary cycle (6-11 years) plus preparatory (12-15 years in all fields except Lebanon, where it is 12-14 years). Ages were adjusted from survey date to September of the school year to adjust for entry-age requirements and ages appropriate for each cycle.

Grade Retention and Delayed School Start Among Palestinian Refugee Children and Youth

Basic Indicators

Estimated Percent of Children and Youth by Field & Type of Location										
	Gaza		West Bank		Jordan		Lebanon		Syria	
Type of locality*	C	NC	C	NC	C	NC	C	GC	C	GC
Total Persons (1000)	**289**	**349**	**96**	**299**	**164**	**905**	**93**	**39**	**146**	**28**
Percent										
Enrolled, at least 1 year behind in primary school	-	-	-	-	7	14	35	39	16	16
6-7 year olds not enrolled in school	9	9	4	4	5	9	1	5	1	4

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed. Age group enrolment ratio is the percent enrolled at ages appropriate to the cycle in that field. Primary school is the elementary cycle (6-11 years) plus preparatory (12-15 years in all fields except Lebanon, where it is 12-14 years). Ages were adjusted from survey date to September of the school year to adjust for entry-age requirements and ages appropriate for each cycle.

Fafo Fact Sheet

Palestinian Refugee Adult Education and Human Capital

Basic Indicators

Estimated Percentages, by Field & Type of Location

Type of locality*	Gaza		West Bank		Jordan		Lebanon		Syria	
	C	NC	C	NC	C	NC	C	GC	C	GC
Total Persons (1000)	**289**	**349**	**96**	**299**	**164**	**905**	**93**	**39**	**146**	**28**
Percent										
Young adults without basic education (18-30 yrs)	24	34	30	33	36	20	61	52	46	41
Working-aged with secondary or higher education (20-65 yrs)	43	39	31	34	28	42	12	14	29	30
Male illiterates (15 yrs and older)	8	9	9	8	12	8	17	12	7	7
Female illiterates (15 yrs and older)	23	20	23	23	26	29	30	26	16	8
Enrolled, completed vocational training (males)	-	-	-	-	24	29	12	13	20	24
Enrolled, completed vocational training (females)	-	-	-	-	19	23	7	9	16	18

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed. Young adults without basic education include all those who failed to complete the basic level (including those never enrolled). Those with secondary or more education includes all levels at secondary or higher (including professional training and academic university). Illiteracy includes those who cannot read and write at all (excluding those who can, but with difficulty).

Employment, Income and Poverty

Fafo Fact Sheet

Main Source of Income Among Palestinian Refugees

Basic Indicators

Estimated Number of Households & Percentages by Field & Type of Location

Type of locality*	Jordan		Lebanon		Syria	
	C	NC	C	GC	C	GC
Total Households (1000)	**25**	**154**	**17**	**7**	**27**	**5**
Wage	19	125	9	4	17	3
Self-employment	0	5	4	1	6	1
Transfers	5	22	3	1	4	1
Other	0	2	0	0	1	0
No answer/ refusal	-	0	17	7	27	5
Total Percent	**100**	**100**	**100**	**100**	**100**	**100**
Wage	78	81	52	61	62	67
Self-employment	1	3	20	14	21	19
Transfers	20	14	18	15	13	11
Other	0	1	2	2	4	3
No answer/ refusal	-	0	8	8	-	-

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Gatherings & Clusters") were surveyed.

Income Sources Among Palestinian Refugees

Basic Indicators

Estimated Number of Households & Percentages by Field & Type of Location

Type of locality*	Jordan		Lebanon		Syria	
	C	NC	C	GC	C	GC
Total Households (1000)	**25**	**154**	**17**	**7**	**27**	**5**
Labor income (Wage & Self-employment)	23	142	14	1	24	1
Transfers	24	137	9	0	12	0
Property	1	18	0	0	2	0
Other income	1	5	1	0	3	0
Percent						
Labor income (Wage & Self-employment)	92	92	81	83	90	92
Transfers	95	89	53	53	45	50
Property	3	12	2	3	6	5
Other income	3	3	4	5	13	14

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Gatherings & Clusters") were surveyed.

Labour Force Members and Full-Time Employed Among Palestinian Refugees

Basic Indicators

Estimated Number of Persons (1000's) & Percentages by Field & Type of Location

Type of locality*	Gaza		West Bank		Jordan		Lebanon		Syria	
	C	NC	C	NC	C	NC	C	GC	C	GC
Total Persons (1000)	**289**	**349**	**96**	**299**	**164**	**905**	**93**	**39**	**146**	**28**
Labour force	55	123	26	356	38	228	23	11	45	9
Full-time workers**		484***			20	140	13	6	29	6
Percent										
Labour force share of total population 0-99 years	18	18	25	25	23	25	25	28	31	32
Full-time workers share of total population 0-99 years	-	-	-	-	12	15	14	15	20	21

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

** "Full-time" = 35 hours or more per week. In Gaza and the West Bank 15 hours or more

*** Refugees and non-refugees; both regions

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics (Palestinian Census 1997).

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Gatherings & Clusters") were surveyed.

Fafo Fact Sheet

Male Labour Force Participation by Age Among Palestinian Refugees

Basic Indicators

Estimated Number of Males in Labour Force (1000's) by Field & Type of Location										
	Gaza		West Bank		Jordan		Lebanon		Syria	
Type of locality*	C	NC	C	NC	C	NC	C	GC	C	GC
Total males 15 years or older (1000)	**73**	**88**	**27**	**88**	**47**	**261**	**28**	**12**	**46**	**9**
15-19 years	2	4	2	6	3	17	2	1	4	1
20-29 years	16	19	8	22	16	75	6	3	11	2
30-39 years	16	18	6	19	7	47	6	2	9	2
40-49 years	7	10	2	10	-	24	2	1	6	1
50-59 years	3	4	1	5	-	21	2	1	3	1
60 years or more	2	3	1	4	2	7	2	1	1	0

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

- Group too small to make reliable estimate

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics (Palestinian Census 1997).

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed.

Fafo Fact Sheet

Female Labour Force Participation by Age Among Palestinian Refugees

Basic Indicators

Estimated Number of Females in Labour Force (1000's) by Field & Type of Location

Type of locality*	Gaza		West Bank		Jordan		Lebanon		Syria	
	C	NC	C	NC	C	NC	C	GC	C	GC
Total females 15 years or older (1000)	**73**	**87**	**26**	**78**	**48**	**264**	**30**	**13**	**47**	**8**
15-19 years	0	0	0	0	0	2	0	0	1	0
20-29 years	2	2	1	4	3	20	2	1	3	1
30-39 years	2	2	1	3	2	9	1	1	3	1
40-49 years	1	1	0	1	-	4	1	0	2	0
50-59 years	0	0	0	1	0	2	0	0	0	0
60 years or more	0	0	0	0	0	1	0	0	0	0

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

- Group too small to make reliable estimate

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics (Palestinian Census 1997).

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed.

Fafo Fact Sheet

Male Labour Force Participation by Age Among Palestinian Refugees

Basic Indicators

Estimated Percentages of Males in LF by Field & Type of Location

Type of locality*	Gaza		West Bank		Jordan		Lebanon		Syria	
	C	NC	C	NC	C	NC	C	GC	C	GC
Total males 15 years or older (1000)	**73**	**88**	**27**	**88**	**47**	**261**	**28**	**12**	**46**	**9**
Percent										
15-19 years	15	21	40	34	30	31	41	39	48	50
20-29 years	68	69	87	82	92	89	76	76	83	85
30-39 years	92	93	96	96	96	98	90	90	94	97
40-49 years	92	94	94	95	-	93	88	86	92	96
50-59 years	82	85	84	87	-	79	76	73	82	79
60 years or more	36	41	41	49	25	30	26	32	32	28

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

- Group too small to make reliable estimate

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics (Palestinian Census 1997).

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed.

Fafo Fact Sheet

Female Labour Force Participation by Age Among Palestinian Refugees

Basic Indicators

Estimated Percentages of Females in LF by Field & Type of Location

Type of locality*	Gaza		West Bank		Jordan		Lebanon		Syria	
	C	NC	C	NC	C	NC	C	GC	C	GC
Total females 15 years or older (1000)	**73**	**87**	**26**	**78**	**48**	**264**	**30**	**13**	**47**	**8**
Percent										
15-19 years	0	1	3	2	0	4	5	12	9	13
20-29 years	7	6	18	16	16	22	18	26	26	31
30-39 years	10	9	20	19	20	19	19	24	31	36
40-49 years	10	9	19	16	-	13	23	27	27	29
50-59 years	4	7	10	12	3	8	12	13	11	17
60 years or more	1	2	4	4	3	3	5	7	3	2

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

- Group too small to make reliable estimate

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics (Palestinian Census 1997).

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed.

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Male Unemployment by Age Among Palestinian Refugees

Basic Indicators

Estimated Unemployed Males (1000's) by Field & Type of Location

Type of locality*	Gaza		West Bank		Jordan		Lebanon		Syria	
	C	NC	C	NC	C	NC	C	GC	C	GC
Males 15 years + in LF	**46**	**58**	**21**	**66**	**33**	**191**	**19**	**8**	**35**	**7**
Unemployed males	**7**	**9**	**2**	**7**	**8**	**29**	**3**	**1**	**3**	**0**
15-19 years	0	0	0	1	-	5	0	0	1	0
20-29 years	2	2	1	2	5	16	1	0	1	0
30-39 years	2	2	0	1	1	4	1	0	0	0
40-49 years	1	2	0	1	-	2	0	0	0	0
50-59 years	1	1	0	1	-	2	0	0	0	0
60 years or more	1	1	0	1	-	0	0	0	0	0

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

\- Group too small to make reliable estimate

0 Less than 500 persons in the cell

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics (Palestinian Census 1997).

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed.

Fafo Fact Sheet

Female Unemployment by Age Among Palestinian Refugees

Basic Indicators

Estimated Unemployed Females (1000's) by Field & Type of Location

Type of locality*	Gaza		West Bank		Jordan		Lebanon		Syria	
	C	NC	C	NC	C	NC	C	GC	C	GC
Females 15 years + in LF	**4**	**5**	**3**	**9**	**5**	**37**	**4**	**3**	**10**	**2**
Unemployed females	**0**	**0**	**0**	**1**	**1**	**11**	**1**	**0**	**2**	**0**
15-19 years	0	0	0	0	-	-	0	0	0	-
20-29 years	0	0	0	0	-	7	0	0	0	0
30-39 years	0	0	0	0	-	2	0	0	0	0
40-49 years	0	0	0	0	-	-	0	0	0	0
50-59 years	0	0	0	0	-	-	0	-	0	-
60 years or more	0	0	0	0	-	-	-	-	-	-

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

- Group too small to make reliable estimate

0 Less than 500 persons in the cell

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics (Palestinian Census 1997).

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed.

Male Unemployment by Age Among Palestinian Refugees

Basic Indicators

Estimated Male Unemployment Rates by Field & Type of Location										
	Gaza		West Bank		Jordan		Lebanon		Syria	
Type of locality*	C	NC	C	NC	C	NC	C	GC	C	GC
Males 15 years + in LF	**46**	**58**	**21**	**66**	**33**	**191**	**19**	**8**	**35**	**7**
Percent										
15-19 years	10	11	17	10	-	30	22	33	14	9
20-29 years	12	12	9	8	29	21	19	18	10	5
30-39 years	13	13	7	6	13	10	10	12	5	2
40-49 years	16	15	10	10	-	8	9	20	5	6
50-59 years	25	24	21	18	-	7	10	10	2	1
60 years or more	47	45	40	35	-	6	15	5	10	6

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

-   Group too small to make reliable estimate

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics (Palestinian Census 1997).

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed.

Female Unemployment by Age Among Palestinian Refugees

Basic Indicators

Estimated Female Unemployment Rates by Field & Type of Location

Type of locality*	Gaza		West Bank		Jordan		Lebanon		Syria	
	C	NC	C	NC	C	NC	C	GC	C	GC
Females 15 years + in LF	**4**	**5**	**3**	**9**	**5**	**37**	**4**	**3**	**10**	**2**
Percent										
15-19 years	8	0	4	9	-	-	56	44	31	-
20-29 years	3	5	7	6	-	38	21	17	24	20
30-39 years	6	4	7	8	-	18	10	11	12	9
40-49 years	5	12	13	6	-	-	11	20	6	7
50-59 years	13	22	9	12	-	-	5	-	9	-
60 years or more	18	42	28	24	-	-	-	-	-	-

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

- Group too small to make reliable estimate

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics (Palestinian Census 1997).

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed.

Fafo Fact Sheet

Palestinian Refugees' Durables Ownership

Basic Indicators

Estimated Percentages, by Field & Type of Location

Type of locality*	Gaza		West Bank		Jordan		Lebanon	Syria
	C	NC	C	NC	C	NC	C, GC	C, GC
Total Persons (1000)	**289**	**349**	**96**	**299**	**164**	**905**	**132**	**174**
Percent of Households								
Washing machine	75	74	75	72	87	89	80	91
Refrigerator	82	83	90	88	81	89	85	94
Cookstove	55	59	62	69	51	51	77	91
Television	83	83	91	91	90	93	87	91
Video	12	16	18	18	10	29	20	13
Satellite dish	na	na	na	na	9	na	4	39
Telephone	9	24	10	23	32	37	11	31
Mobile telephone	na	na	na	na	1	na	11	3
Personal computer	3	3	3	6	1	5	2	
Automobile	17	25	20	29	12	28	24	7

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"
na=No information available

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics (Palestinian Census 1997).

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Clusters & Gatherings") were surveyed.

Fafo Fact Sheet

Travel Documents

Fafo Fact Sheet

Citizenship Among Palestinian Refugees

Basic Indicators

Estimated Number of Persons (1000's) & Percentages by Field & Type of Location

Type of locality*	Jordan		Lebanon		Syria	
	C	NC	C	GC	C	GC
Total Persons (1000)	**164**	**905**	**93**	**39**	**146**	**28**
Host country	161	884	2	4	4	1
Israeli ID	3	16	0	0	0	0
Host country TD for Pal. Ref.	0	0	29	12	16	2
Other passport or TD	0	5	1	0	2	1
No passport/ TD	0	0	61	25	124	24
Total Percent	**100**	**100**	**100**	**100**	**100**	**100**
Host country	98	98	3	2	2	3
Israeli ID	2	2	0	0	0	0
Host country TD for Pal. Ref.	0	0	11	31	12	8
Other passport or TD	0	0	1	1	0	0
No passport/ TD	0	0	85	66	25	89

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In Jordan, all 1948 refugees were included (self-defined). In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Gatherings & Clusters") were surveyed.

UNRWA Services

The Distribution of UNRWA Resources Across Fields

Basic Indicators

Distribution of population (2002) and UNRWA Resources (2001)

Indicator	Jordan	West Bank	Gaza Strip	Lebanon	Syria	Total
Refugee population (1000)						
UNRWA	1680	627	879	387	401	3973
Fafo	1484	585	772	198	296	3335
UNRWA resources						
Employees (1000)	6,3	3,8	7,1	2,8	3,1	23,0
Regular budget, Cash and in-kind (US$ Million)						
Total	72	49	88	44	22	310
Education	51	26	53	23	12	167
Health	11	12	16	9	5	54
Relief and Social	6	5	11	6	3	31
Operational	2	3	5	3	1	15
Common	2	3	3	3	1	43

* 2% in UNRWA Headquarters

Data Sources

Fafo data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics. UNRWA data compiled from URNWA Home Page, http://www.un.org/unrwa/

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan the data was matched to the Jordanian population size as established by the Department of Statistics. In Lebanon and Syria the survey coverage was not complete. Therefore in Syria the size of the population was adjusted using school enrolment rates, and in Lebanon other survey data were used. Mortality and fertility were estimated from the survey. The projection was carried out using cohort-component methods.

UNRWA Figures are based on UNRWA records, which are regularly updated; however, registration with the Agency is voluntary and these figures do not represent an accurate population record.

The Relative Distribution of UNRWA Resources Across Fields

Basic Indicators

Distribution of population and UNRWA Resources 2001

Indicator	Jordan	West Bank	Gaza Strip	Lebanon	Syria	Total
Shares of refugee population						
UNRWA	42	16	22	10	10	100
Fafo	44	18	23	6	9	100
Share of UNRWA resources						
Employees	27	16	30	12	13	98*
Share of regular budget						
Total	23	16	28	14	7	100
Education	31	16	32	14	7	100
Health	20	22	30	17	9	100
Relief and Social	19	16	35	19	10	100
Operational	13	20	33	20	7	100
Common	5	7	7	7	2	100

* 2% in UNRWA Headquarters

Data Sources

Fafo data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics. UNRWA data compiled from URNWA Home Page, http://www.un.org/unrwa/

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan the data was matched to the Jordanian population size as established by the Department of Statistics. In Lebanon and Syria the survey coverage was not complete. Therefore in Syria the size of the population was adjusted using school enrolment rates, and in Lebanon other survey data were used. Mortality and fertility were estimated from the survey. The projection was carried out using cohort-component methods.

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Fafo Fact Sheet

The Relative Field Distribution of UNRWA Resources by Registered Refugees

Basic Indicators

Relative Resources Used per Refugee in 2001 (UNRWA Estimate)

Indicator	Jordan	West Bank	Gaza Strip	Lebanon	Syria	Total
Shares of refugee population						
UNRWA	42	16	22	10	10	100
Fafo	44	18	23	6	9	100
Employees per refugee in percent of UNRWA average (=100)	64	100	136	120	130	98*
Regular budget per refugee in percent of UNRWA average (=100)						
Total field budget	55	99	129	142	71	100
Education	74	97	144	138	72	100
Health	48	139	135	167	93	100
Relief and Social	45	101	161	194	97	100
Operational	31	125	152	200	67	100
Common	55	99	129	142	71	100

* 2% in UNRWA Headquarters

Data Sources

Fafo data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics. UNRWA data compiled from URNWA Home Page, http://www.un.org/unrwa/

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan the data was matched to the Jordanian population size as established by the Department of Statistics. In Lebanon and Syria the survey coverage was not complete. Therefore in Syria the size of the population was adjusted using school enrolment rates, and in Lebanon other survey data were used. Mortality and fertility were estimated from the survey. The projection was carried out using cohort-component methods.

UNRWA Figures are based on UNRWA records, which are regularly updated; however, registration with the Agency is voluntary and these figures do not represent an accurate population record.

The Relative Field Distribution of UNRWA Resources by Fafo Refugee estimates

Basic Indicators

Relative Resources Used per Refugee in 2001 (Fafo Pop. Estimate)

Indicator	Jordan	West Bank	Gaza Strip	Lebanon	Syria	Total
Shares of refugee population						
UNRWA	42	16	22	10	10	100
Fafo	44	18	23	6	9	100
Employees per refugee in percent of UNRWA average (=100)	61	89	130	200	144	98*
Regular budget per refugee in percent of UNRWA average (=100)						
Total field budget	52	88	123	237	79	100
Education	70	86	138	230	80	100
Health	45	123	129	278	103	100
Relief and Social	43	90	154	323	108	100
Operational	30	111	145	333	74	100
Common	61	89	130	200	144	100

* 2% in UNRWA Headquarters

Data Sources

Fafo data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics. UNRWA data compiled from URNWA Home Page, http://www.un.org/unrwa/

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan the data was matched to the Jordanian population size as established by the Department of Statistics. In Lebanon and Syria the survey coverage was not complete. Therefore in Syria the size of the population was adjusted using school enrolment rates, and in Lebanon other survey data were used. Mortality and fertility were estimated from the survey. The projection was carried out using cohort-component methods.

UNRWA Figures are based on UNRWA records, which are regularly updated; however, registration with the Agency is voluntary and these figures do not represent an accurate population record.

The Relative Distribution of UNRWA Resources Within Fields

Basic Indicators

Relative distribution UNRWA Resources 2001, by field

Indicator	Jordan	West Bank	Gaza Strip	Lebanon	Syria	Total
Regular budget, Cash and in-kind (US$ Million)	72	49	88	44	22	310
Within-field budget shares						
Total	100	100	100	100	100	100
Education	71	53	60	52	55	54
Health	15	24	18	20	23	17
Relief and Social	8	10	13	14	14	10
Operational	3	6	6	7	5	5
Common	3	6	3	7	5	14

Data Sources

Fafo data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics. UNRWA data compiled from URNWA Home Page, http://www.un.org/unrwa/

Methods

Population size at time of the initial data collection was established by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan the data was matched to the Jordanian population size as established by the Department of Statistics. In Lebanon and Syria the survey coverage was not complete. Therefore in Syria the size of the population was adjusted using school enrolment rates, and in Lebanon other survey data were used. Mortality and fertility were estimated from the survey. The projection was carried out using cohort-component methods.

UNRWA Figures are based on UNRWA records, which are regularly updated; however, registration with the Agency is voluntary and these figures do not represent an accurate population record.

UNRWA Elementary and Secondary Schools

Basic Indicators

UNRWA Elementary Schools 1998 - 1999

Indicator	Jordan	West Bank	Gaza Strip	Lebanon	Syria	Total
No. of Pupils per Teacher	36	36	44	35	41	39
No. of Pupils per Class Section	41	39	50	41	44	44
Dropout rate (%)	0.8	0.5	0.5	1.2	0.6	0.7
Repetition rate (%)*	1.6	2.8	3.7	8.9	4.9	3.6
Number of pupils enrolled (1000)						
UNRWA School	87	38	121	31	43	320
Government School	38	20	13	2	11	85
Private School	3	5	1	4	3	16
Total	128	63	136	37	57	421

UNRWA Preparatory Schools 1998 - 1999

Indicator	Jordan	West Bank	Gaza Strip	Lebanon	Syria	Total
No. of Pupils per Teacher	30	23	29	25	32	29
No. of Pupils per Class Section	41	36	49	37	45	43
Dropout rate (%)	2.9	4.3	3.1	3.6	4.3	3.4
Repetition rate (%)*	3.2	3.2	5.5	9.7	9.9	5.4
Number of pupils enrolled (1000)						
UNRWA School	54	14	38	9	21	137
Government School	26	16	17	2	3	63
Private School	1	1	0	5	0	8
Total	82	31	56	15	25	208

*The repetition rate is determined by the host government's Ministry of Education at each Field

Data Sources

Data are collected from the UNRWA home page:
http://www.un.org/unrwa/pr/pdf/education.pdf

Methods

Data are based on UNRWA register data. Enrollment figures of refugee pupils in government and private schools are believed to be incomplete, since refugee pupils lack incentives to report their status if and when requested.

Relative UNRWA Education Services

Basic Indicators

Selected education indicators in Percent of UNRWA average (1999)*

Indicator	Jordan	West Bank	Gaza Strip	Lebanon	Syria	Total
Elementary Schools 1998-1999 in Percent of UNRWA average (=100)						
No. of Pupils per Teacher	92	92	113	90	105	100
No. of Pupils per Class Section	93	89	114	93	100	100
Dropout rate (%)	114	71	71	171	86	100
Repetition rate (%)**	44	78	103	247	136	100
Preparatory Schools 1998-1999 in Percent of UNRWA average (=100)						
No. of Pupils per Teacher	103	79	100	86	110	100
No. of Pupils per Class Section	95	84	114	86	105	100
Dropout rate (%)	85	126	91	106	126	100
Repetition rate (%)**	59	59	102	180	183	100
Average of all education indicators above in Percent of UNRWA average (=100)	86	85	101	132	119	100

* Education indicator status is better the *lower* the indicator percentage
** The repetition rate is determined by the host government's Ministry of Education at each Field

Data Sources

Data are collected from the UNRWA home page:
http://www.un.org/unrwa/pr/pdf/education.pdf

Methods

Data are based on UNRWA register data.

UNRWA In- and Outpatient Services

Basic Indicators

Outpatient Services 1999 (1000)

Indicator	Jordan	West Bank	Gaza Strip	Lebanon	Syria	Total
Registered Refugees	**1541**	**576**	**808**	**373**	**378**	**3676**
Medical Consultations	1561	853	1625	686	848	5573
Injections	51	41	475	38	47	652
Dressings	118	78	169	41	24	429
Dental Consultations	175	61	133	74	66	509
Services per refugee						
Medical Consultations	1,0	1,5	2,0	1,8	2,2	1,5
Injections (per 1000)	33	71	588	102	124	177
Dressings (per 1000)	77	135	209	110	63	117
Dental Consultations (per 1000)	114	106	165	198	175	138

Inpatient (Hospital) Services 1999 (1000)

Indicator	Jordan	West Bank	Gaza Strip	Lebanon	Syria	Total
Patients admitted	6	14	6	12	4	42
Hospital days	22	54	18	37	10	133
Services per refugee						
Average stay in days	3.8	3.3	2.8	3.0	2.3	3.1
Patients admitted (per 1000)	4	24	7	32	11	11
Hospital days (per 1000)	14	94	22	99	26	36

Data Sources

Data are collected from the UNRWA home page:
http://www.un.org/unrwa/pr/pdf/health.pdf

Methods

Data are based on UNRWA register data.

Relative UNRWA Health Service Use

Basic Indicators

Health service use per refugee in Percent of UNRWA average (1999)

Indicator	Jordan	West Bank	Gaza Strip	Lebanon	Syria	Total
Population estimates (1000)						
UNRWA Reg. Refugees (1999)	1541	576	808	373	378	3676
UNRWA Reg. Refugees (2002)	1680	627	879	387	401	3973
Fafo estimated refugees (2002)	1484	585	772	198	296	3335
Out-patient Services in Percent of UNRWA average (=100)						
Medical Consultations	66	98	133	121	148	100
Injections (per 1000)	19	40	331	57	70	100
Dressings (per 1000)	66	116	179	94	54	100
Dental Consultations (per 1000)	82	76	119	143	126	100
Inpatient (Hospital) Services in Percent of UNRWA average (=100)						
Average stay in days	123	106	90	97	74	100
Patients admitted (per 1000)	35	213	65	282	93	100
Hospital days (per 1000)	39	259	62	274	73	100
Per refugee health services above in percent of UNRWA average						
Based on UNRWA registered refugee population	61	130	140	153	91	100
Based on Fafo refugee population estimate	59	118	133	251	104	100

Data Sources

Fafo data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics. UNRWA Data are collected from the UNRWA home page: http://www.un.org/unrwa/pr/pdf/health.pdf

Methods

The health data are based on UNRWA register data. UNRWA population figures are based on UNRWA records, which are regularly updated; however, registration with the Agency is voluntary and these figures do not represent an accurate population record. Fafo established the population size at time of the initial data collection by expanding the sample using weights derived from inclusion probabilities. In the case of the West Bank and the Gaza Strip the Palestinian Census of 1997 was used. In Jordan the data was matched to the Jordanian population size as established by the Department of Statistics. In Lebanon and Syria the survey coverage was not complete. Therefore in Syria the size of the population was adjusted using school enrolment rates, and in Lebanon other survey data were used. Mortality and fertility were estimated from the survey. The projection was carried out using cohort-component methods.

UNRWA Family Planning and Infant and Child Health Care

Basic Indicators

Family planning and infant and child health care indicators (1999)

Indicator	Jordan	West Bank	Gaza Strip	Lebanon	Syria	Total
UNRWA registered refugees (1000)	1541	576	808	373	378	3676
Family planning (1000)						
Women of reproductive age	377	237	170	96	95	875
New family planning acceptors	6	3	6	2	4	21
Total family planning acceptors	14	10	25	7	10	70
Infant and child health care						
Registered Refugees (1000)						
Infants below 1 year	26	11	24	4	8	73
Children 1-2 years	25	11	24	5	8	73
Children 2-3 years	24	10	22	4	7	68
Regular attendance (%)						
Infants below 1 year	83	92	99	94	86	93
Children 1-2 years	80	81	69	89	85	78
Children 2-3 years	40	64	43	79	69	50

Data Sources

Data are collected from the UNRWA home page:
http://www.un.org/unrwa/pr/pdf/health.pdf

Methods

Data are based on UNRWA register data..

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Family Planning and Infant and Child Health Care Relative to UNRWA Average

Basic Indicators

Family planning and infant and child health care indicators (1999)

Indicator	Jordan	West Bank	Gaza Strip	Lebanon	Syria	Total
Family Planning per Refugee in Percent of UNRWA average (=100)						
Women of reproductive age	103	173	88	108	106	100
New family planning acceptors	68	91	130	94	185	100
Total family planning acceptors	48	91	162	99	139	100
Registered Children per Refugee in Percent of UNRWA average (=100)						
Infants below 1 year	85	96	150	54	107	100
Children 1-2 years	82	96	150	68	107	100
Children 2-3 years	84	94	147	58	100	100

Data Sources

Data are collected from the UNRWA home page: http://www.un.org/unrwa/

Methods

Data are based on UNRWA register data..

Fafo Fact Sheet

Allocation of UNRWA Resources

Basic Indicators

UNRWA 2002 Regular Fund Budget by Field, Programme (USD)

	Jordan	Lebanon	Syria	West Bank	Gaza Strip	Headqtrs (Amman)	Total
Health	11,026,000	11,463,000	6,633,000	12,410,000	16,764,000	615,000	58,911,000
Education	49,487,000	24,378,000	12,422,000	26,963,000	57,077,000	1,928,000	172,255,000
Relief & social	6,195,000	6,403,000	3,604,000	4,982,000	11,784,000	698,000	33,666,000

Number of Palestinian Refugees

	Jordan	Lebanon	Syria	West Bank	Gaza Strip	Total
UNRWA registered[b]	1,679,623	387,043	401,185	626,532	878,977	3,973,360
Fafo population estimates[c]	1,484,000	198,000	296,000	585,000	772,000	3,335,000

UNRWA Regular Fund Per Capita by Field and Programme (USD)

	Jordan	Lebanon	Syria	West Bank	Gaza Strip	Total
According to UNRWA-registered population						
Health	7	30	17	20	19	15
Education	29	63	31	43	65	43
Relief & social	4	17	9	8	13	8
According to Fafo population estimates						
Health	7	58	22	21	22	18
Education	33	123	42	46	74	52
Relief & social	4	32	12	9	15	10

Data Sources

Fafo population data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

UNRWA budgetary amounts were obtained from, UNRWA 2002, *UNRWA in Figures, as of 30 June 2002*. UNRWA registration statistics for each field come from the same publication. Fafo population estimates from 2002 come from, Pedersen, J. 2002. *Population Forcasts of Palestinian Refugees*. Per capita budget allocations are the budget amounts divided by UNRWA-registered refugees and Fafo population estimates.

Palestinian Refugees' Use of UNRWA Services

Basic Indicators

Percent refugees reporting use of UNRWA services by location and service type.

Type of locality*	Gaza		West Bank		Jordan		Lebanon		Syria	
	C	NC	C	NC	C	NC	C	GC	C	GC
Total Persons (1000)	**289**	**349**	**96**	**299**	**164**	**905**	**93**	**39**	**146**	**28**
Percent										
Primary Health Care					25	2	35	28	18	23
Prenatal Health Care (Women)					67	10	84	77	63	66
Basic Education	84	59	89	18	93	19	96	89	96	84
Vocational Education (15-24 years)					0		3	3	2	3
Special Hardship Case Relief					26		37	44	11	10

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

Data Sources

Data are derived from surveys carried out by Fafo with partners in West Bank and Gaza Strip (1995), Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

In Lebanon and Syria the survey coverage was not complete. Only refugees in Palestinian neighbourhoods ("Gatherings & Clusters") were surveyed. Primary health care use indicator is the percent of individuals seeking care at an UNRWA clinic in the event of an unexpected illness or injury for all age groups. Prenatal health care use indicator is the percent of pregnancies during the 5 years prior to the survey overseen by medical professionals at an UNRWA facility (Jordan, Lebanon and Syria camps) or pregnancies during the year prior to the survey for the Jordan non-camp location. Use of UNRWA facilities for pregnancies includes all of those pregnancies overseen either exclusively by UNRWA or in combination with another provider. Basic education indicator is the percent of enrolled youth at elementary or preparatory ages attending UNRWA schools. Vocational training indicator is the percent of individuals currently enrolled in any UNRWA vocational short-term course or vocational program at the time of the survey. Relief assistance is the percent of individuals who are in households that report to be registered as Special Hardship Case by UNRWA.

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Determinants of UNRWA Primary Health Care Utilisation Among Camp Refugees

Basic Indicators

Percent probability of using UNRWA facility, acute illness or injury last 2 weeks.

	Jordan	Lebanon**	Syria**
All	26	42	20
Women	34	45	26
Men	17	39	13
High education	9	13	4
Low education	28	44	30
High income	19	37	15
Low income	35	30	30
Specialist care	4	11	7
No specialist care	41	65	35
UNRWA-registered	27	42	20
Not UNRWA-registered	13	30	0
Have other health insurance	12	31	10
No other health insurance	31	42	21

*C=UNRWA Camps; NC=All refugees outside camps; GC= Refugees in "Gatherings and Clusters"

**Probability entire camp and gathering population.

Data Sources

Data are derived from surveys carried out by Fafo with partners in Jordan (1996, 2000), Lebanon (1998) and Syria (2001) and official statistics.

Methods

Data is analysed for individuals 15 years or older using both binomial and multinomial logistic regression analysis in order to generate the odds of using UNRWA or another health care provider given a certain characteristic and holding constant all other characteristics. Age, gender, income, education, and urban or rural location are among the these control variables.

Labour Force Participation in Gaza and the West Bank:

Do Refugee Status or Camp Residence Matter?

By Geir Øvensen
October 2003

In this paper we use the 1997 PCBS Census in the West Bank and the Gaza Strip to investigate the possible effects of refugee status and refugee camp residence on labour force participation and unemployment. More information about the data can be found on the home page of the Palestinian Central Bureau of Statistics (PCBS): http://www.pcbs.org/inside/selcts.htm.

Table of contents

1) Summary of findings

The events in 1948 severely affected Palestinian refugees in general, and those living in refugee camps in particular. We would thus expect that they would lag *behind* other types of localities with respect to employment and labour force participation. The main aim of this paper is to discuss whether this is the situation in Gaza and the West Bank.

Although we have not investigated wages and income, and although labour force participation is but one indicator of economic welfare, we still consider labour force participation and employment to be key indicators for the Palestinian households' ability to be economically self-reliant. We know from other surveys, that income from employment is the most important source of income, both in terms of magnitude and prevalence. Moreover, income from labour activity is the income type that is most "democratically" distributed in this society.

Our investigation shows that refugee status and refugee camp residence have little effect on labour force participation, employment and unemployment, both for males and females in the Gaza Strip as well as in the West Bank.

A possible explanation to this somewhat non-intuitive result is that the relatively long time span from 1948 to 1997 has caused the employment situation for refugees and non-refugees to converge, at least *within* the West Bank and Gaza. Urbanization implies that possession of agricultural land plays much less importance for employment. Refugees now tend to live alongside non-refugees, at least in urban areas. Refugee camps have been integrated into the local urban economies. They have not been transformed into poor neighbourhoods that *generally* attract refugees and non-refugees with labour market problems. The *economic* disadvantage of the camps' dense physical structure and crowded dwellings matter less in an economy largely based on waged labour.

The clear geographical difference we *did* find with respect to labour force participation, employment and unemployment is that Gaza as a *region* is worse off than the West Bank in all respects. That we do not observe refugee status and refugee camp residence to have much effect on labour force participation, employment and unemployment *today*, does not rule out that the "Gaza effect" is fundamentally caused by an generalization of the negative effects of the 1948 refugee crisis among the whole population of Gaza.

Our main data source is the 1997 PCBS Census, which, in addition to basic demographic, health and education data, also contains key indicators for labour activity. Although the 1997 Census data on labour activity at first sight are "outdated" by the current extreme economic and political situation during the Second Intifada, we still think they can produce valuable indicators of more the fundamental features of the labour activity in the area. There are reasons to believe that when (or if) conditions in the area are "normalized", a similar pattern of labour activity as depicted by the Census may once again occur.

2) Introduction

In this paper we will investigate the possible effects of refugee status and refugee camp residence on labour force participation, employment and unemployment among the Palestinian population in the Gaza Strip and the West Bank. Can the labour market behaviour of Palestinian 1948 refugees be distinguished from that of non-refugees? Does refugee camp residence have any independent effect on these indicators, compared to residence in other types of localities?

One may conceive of several factors that may cause camp refugees to lag *behind* other types of localities with respect to employment and labour force participation: *First*, the 1948 refugees lost most of, or all their productive means when they fled, such as land, livestock and workshops. *Second*, many camps were "artificially" created societies, without a natural economic base or infrastructure. *Third*, the dense current physical structure of the camps, and the crowded dwellings leave little room to establish new neighbourhood or home based economic activities, such as garden plots, workshops etc. *Fourth*, one may expect households with both observable and unobservable labour market disadvantages to cluster in the refugee camps. The reason is that movements between camps and other localities may have been caused by economic selection mechanisms, such that poor refugees move into, and well-off refugees move out of the camps. *Fifth*, there may be an Israeli perceived security threat from camp residents that have a reputation of support for radical Palestinian movements, (although we would expect that those issuing Israeli work permits are more concerned with Palestinian workers' security records than their refugee status)[1].

Our main data source is the 1997 PCBS Census, which, in addition to basic demographic, health and education data, also contains key indicators for labour activity. The Census visited all households in Gaza and the West Bank, and our current data represent a sample of 10 percent of these cases. This enormous sample allows us to make a very detailed geographical break-down of the indicators for labour force participation, employment and unemployment according to respondents' refugee status, region and locality of residence, while controlling for other relevant variables.

We are fully aware that it may be improper to apply the concept of "normality" to any time period in a society under prolonged occupation. However, the situation in 1997 was one of relative peace, (in itself a pre-condition to undertake a Census). Moreover, some years had then passed since the 1993 conclusion of the "Oslo accords". These accords led to the establishment of the Palestinian Administration (PA), and the development of a Palestinian public sector. The establishment of this sector brought along substantial new employment opportunities for the Palestinian population.

The 1997 Census data on labour activity are at first sight "outdated" by the current extreme economic and political situation during the Second Intifada. Still, we think they can produce valuable indicators of the more fundamental features of the labour activity in Gaza and the West Bank. There are reasons to believe that when (or if) conditions in the area are "normalized", a similar pattern of labour activity as depicted by the Census may once again occur. Only if work life and education are interrupted over an even longer time period, the accumulation of physical and human capital may be so (differently) affected that our findings above will be truly outdated. Hence, we have deliberately chosen to use data from this relatively calm and stable period, rather than to try to capture the most recent developments in the area's current volatile political and economic situation.

3) Refugee status and locality of residence

Before we proceed with our analysis of the labour activity of Palestinians it is useful to present a picture of the relation between their refugee status and their place of residence. The 1997 PCBS Census defines three types of localities, "urban", "rural" and "refugee camp". The distribution of the Palestinian population over these types of localities differs quite strongly between the West Bank and

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[1] However, some refugees and camp residents may also have benefited from *positive* discrimination among some important employers, such as PA and the UNRWA. For example, among UNRWA employees, 99 per cent are locally recruited Palestinians, almost all of them refugees (http://www.un.org/unrwa/org/staff.html).

the Gaza Strip. In the West Bank only 6 percent of the population live in refugee camps, while respectively 46 and 47 percent of the population live in urban and rural areas. In the Gaza Strip the corresponding figures are 31, 5 and 64 percent. Hence, the West Bank still contains a substantial rural population, while few live in refugee camps. The Gaza Strip, to the contrary, is much more urbanized – only one of twenty persons lives in "rural" localities. These rural localities are also usually situated close to urban areas.

Although the "refugee camps" have a common history, similar populations, and are formally owned by the UNRWA, they differ along the urban-rural dimension. In the West Bank refugee camps are situated both in urban and rural areas, although most of them are integrated parts of urban areas. In Gaza almost all refugee camps are integrated parts of urban localities.

For the Palestinian areas as a whole, 1948 refugees represent approximately 40 percent of the total population. As could be expected, the refugee share is close to 100 percent in the refugee camps, and much smaller in the urban and rural localities, (Figure 1).

Figure 1 Gaza and West Bank Refugee Status by type of Locality
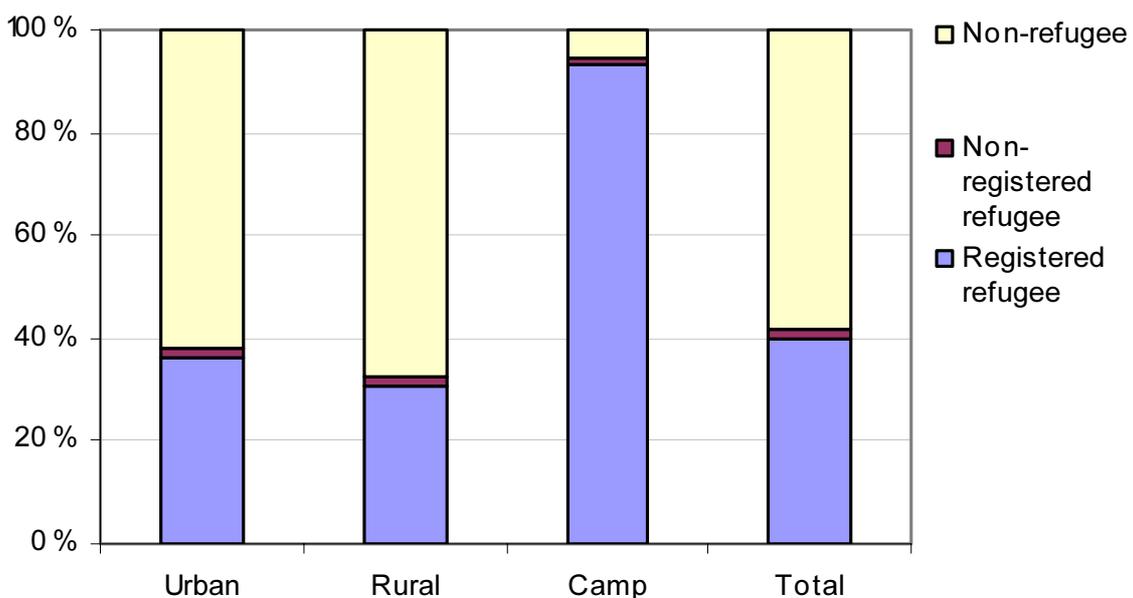
However, as can be seen from Figure 2, these aggregate numbers mask important differences between the West Bank and Gaza. While refugee camps in both areas contain almost exclusively 1948 refugees and their descendants, the refugee shares both in the rural and urban areas of the West Bank are much lower than in Gaza. In Gaza all types of localities are heavily influenced by refugees, while in the urban and rural areas of the West Bank, only one in five persons is a 1948 refugee.

Figure 2 Refugee status by main region and type of locality

West Bank   **Gaza**
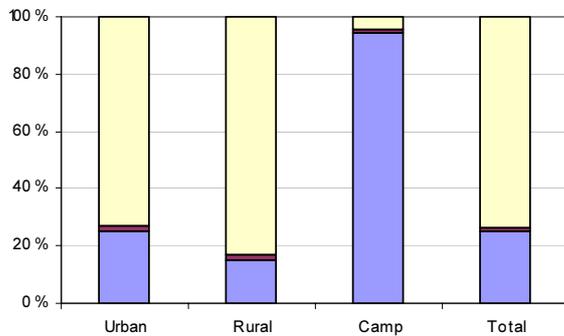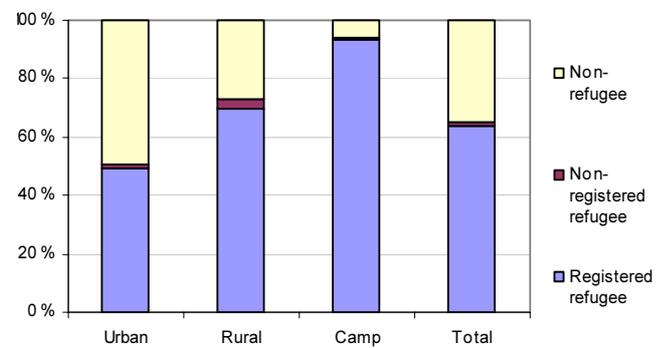
The distribution of the 1948 refugees by type of locality is given in Figure 3. Both in the West Bank and Gaza roughly half of the registered refugees live in urban areas. The major difference between the two regions is that in Gaza, half of the registered refugees live in the camps, while in the West Bank only one in four lives in the camps. The combined effect of the West Bank having relatively few refugees, and that a small share of these refugees live in the camps, is that 75 percent of the Gaza and West Bank camp refugees live in Gaza.

Figure 3 1948 Refugees' locality of residence by main region and registration status
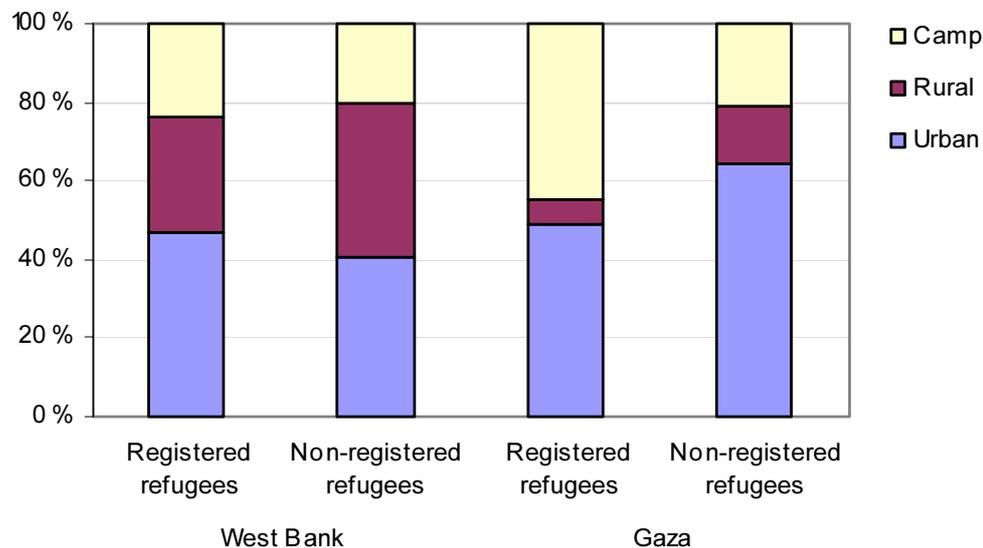
Non-registered refugees represented respectively 7 and 2 percent of all self-defined 1948 refugees in the West Bank and Gaza. In contrast to the *registered* refugees two thirds live in the West Bank. As shown by Figure 3, few live in camps, while a substantial share lives in rural localities in the West Bank. We will not deal with this group in the remainder of the paper. First, the group of non-registered refugees is relatively small. Second, empirical work on Palestinian refugees usually focus on *UNRWA* registered refugees,

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Table 1 the distribution of refugees in Gaza and the West Bank by governorate

	Registered		Non-registered	
Governorate	**#**	**%**	**#**	**%**
Jenin	52 102	5	4 256	11
Tubas	5 284	1	151	0
Tulkarm	39 544	4	2 071	5
Nablus	59 969	6	3 712	9
Qalqilia	26 361	3	1 323	3
Salfit	3 307	0	275	1
Ram/ Al-Bireh	55 513	5	3 205	8
Jericho	14 775	1	819	2
Jerusalem	42 466	4	3 787	10
Bethlehem	36 565	4	1 461	4
Herbron	59 121	6	7 251	18
North Gaza	124 931	12	2 038	5
Gaza	183 047	18	3 906	10
Deir Al-Balah	122 117	12	1 620	4
Khan Yunis	108 906	11	2 340	6
Rafah	98 961	10	1 251	3
GSWB Total	1 032 969	100	39 464	100

Figure 4 urban refugee statuses by governorate
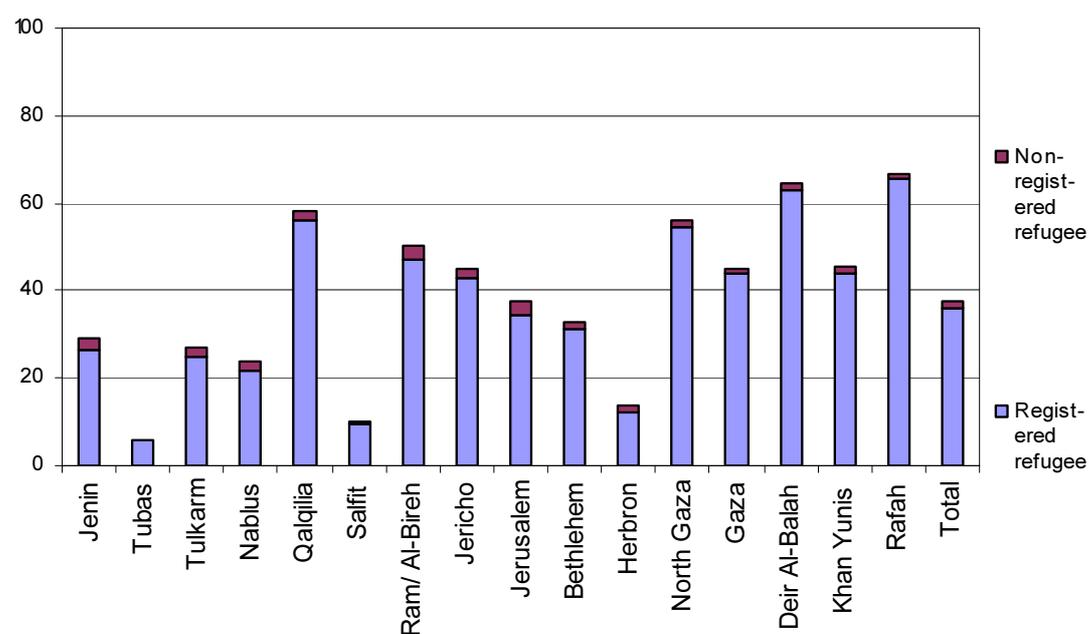
The enormous sample from the Census reduces sampling variance, and hence allows a more detailed geographical breakdown of the results than is usually possible in representative household surveys. In Figure 5, the refugee status of the urban population has been broken down on governorate level.

Refugee shares are highest in Gaza, and in the Greater Jerusalem area, than in the Northern and Southern West Bank governorates (except for Qalqilia).

Figure 5 rural refugee statuses by governorate
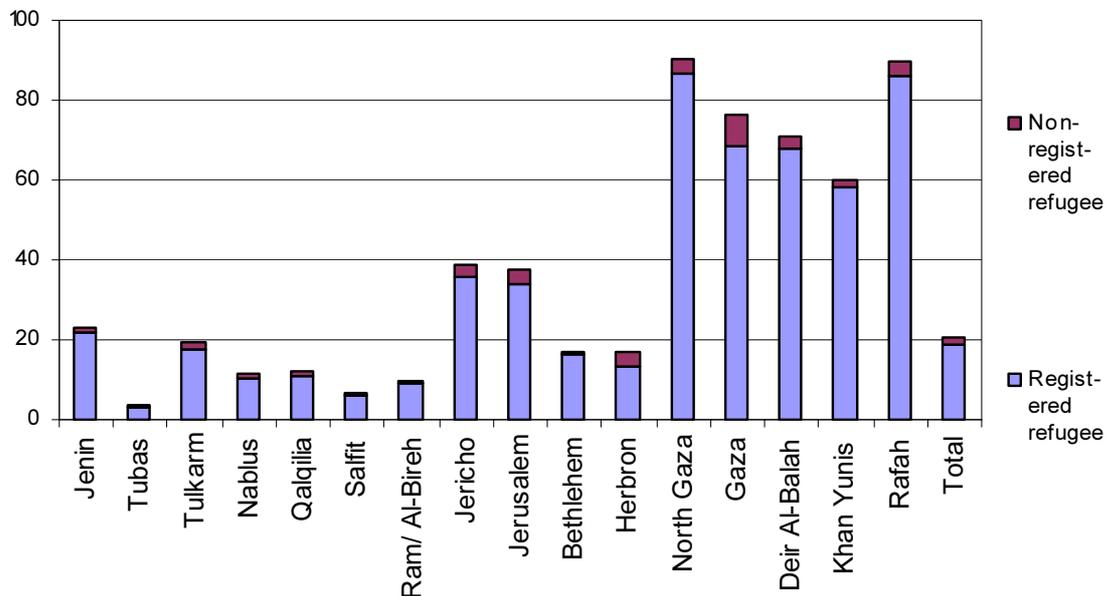
The same goes for the refugee status of the *rural* population. Refugee shares are low in the West Bank (except Jericho and Jerusalem), while they are high in Gaza (Figure 5). (One should remember, however, that there are few people living in "rural " areas in Gaza altogether).

Figure 6 camp refugee statuses by governorate[2]
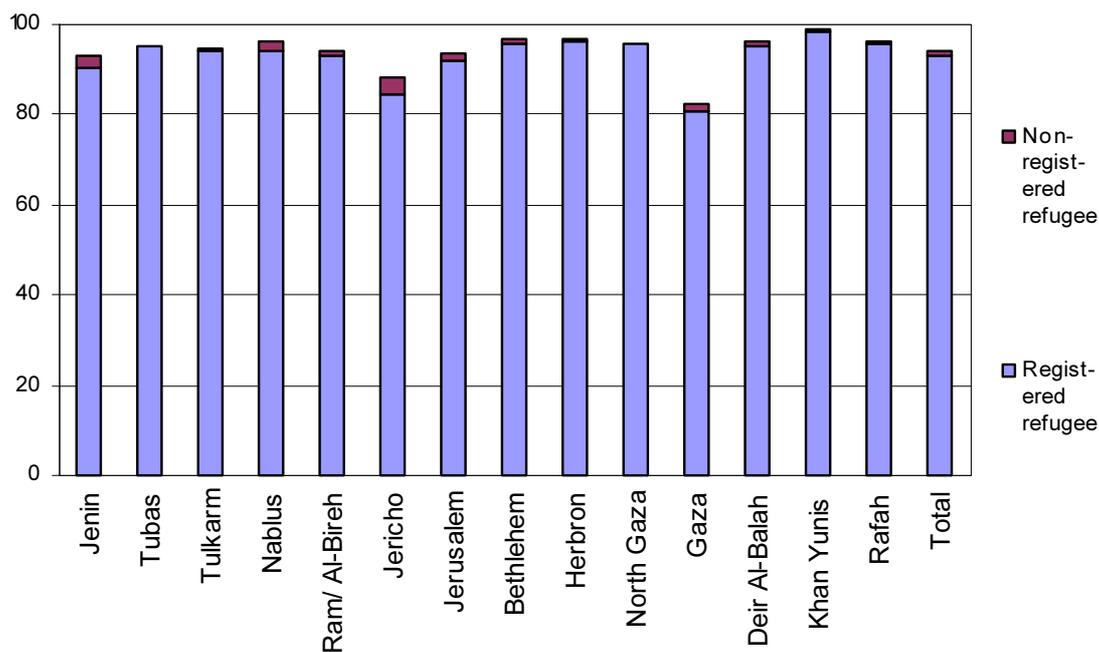
Have refugee camps have been transformed into poor neighbourhoods that attract *both* refugees and non-refugees with labour market problems? Here, we have not investigated whether there is a systematic "negative" selection of *registered* refugees into the camps over time. However, Figure 6 shows that such selection does not take place among *non*-refugees. We notice that almost exclusively (registered) refugees live in the refugee camps with two exceptions, namely in Jericho and Gaza City. At these two locations the relatively high number of non-refugees *may* be an indication that also non-refugees sometimes choose to live in camps due to poverty[3].

4) The Gaza and the West Bank labour markets

Workers from Gaza and the West Bank are mainly employed locally in their regions. Here they work in the private or in the public sectors (including the PA and the UNRWA). In Israel they work almost exclusively in the private sector, mainly in agriculture and construction.

Even though the travel time between Gaza and the southern parts of the West Bank in theory is as little as less than one hour, Israeli travel restrictions have turned the Gaza Strip and the West Bank into largely physically separated labour markets. The main factors linking the regional labour markets together have been the joint allocation of employment for the Palestinian Administration (PA) and the UNRWA, and the joint competition for Israeli work permits among workers from the two regions.

Like in most Middle Eastern countries the Gaza and West Bank labour markets are strongly gender segregated. Female labour force participation is very low, at only at 15 percent in the West Bank and down to 10 percent in the Gaza Strip. The latter figure is less than half of most MENA countries. Hence, the Gaza and West Bank labour force participation is low, both in a World and a regional perspective.

The low engagement in remunerated employment among Palestinian women is partially a product of low *supply* of female labour. Many occupations and employment locations are by most Palestinians considered as "inappropriate" for women. For example, hardly any women from Gaza and the West Bank work in Israel, although one would expect an Israeli demand for Palestinian domestic labour, as one can observe in other regions with large wage differentials. On the other hand, the high Palestinian fertility rates, especially in Gaza, make most women in the prime working age pre-occupied with unpaid domestic work anyhow.

Due to the geographical and gender segmentation of the Gaza and West Bank labour markets we will continue our discussion in two steps. First, we will deal with possible effects of refugee status and refugee camp residence on *male* labour activity, separately for Gaza and the West Bank (section 5). Second, we will deal with the corresponding effects on *female* labour market behaviour (section 6). Finally, we will draw our conclusions, as well as indicate some possible policy implications of our findings (section 7).

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[2] The Qalqilia and Salfit governorates have no refugee camps.
[3] Non-refugees may also live in camp households together with registered refugees. It is, however, difficult to see why the prevalence of such households should be different than the camp average in the two camps mentioned above. A possible explanation is that it may sometimes be difficult to trace the physical borders of the camps in the densely populated Gaza City.

5) Male labour activity in Gaza and the West Bank

Male labour force participation is usually strongly correlated with age. Some young males are still studying, while many old men are sick or disabled, or have voluntarily decided to become "inactive". As in most countries, adult males in Gaza and the West Bank are expected to care for their families economically, rather to engage in domestic tasks. Hence, childbirth and childcare, as well as care for the old and disabled do not strongly affect the male labour force participation pattern.

Male labour force participation in Gaza and the West Bank is systematically correlated with age in an "inverse U" pattern, which is found in most countries, (Figure 7 and Figure 8). Labour force participation starts at around 20 percent in the 15-19 age group, reaches a peak of 90 percent in the age groups between 25 and 55, before it starts falling for older persons. It is striking that there is *no difference* in participation by refugee status or locality type, neither in the West Bank, nor in Gaza.

Figure 7 West Bank male labour force participation by refugee status, locality type and age
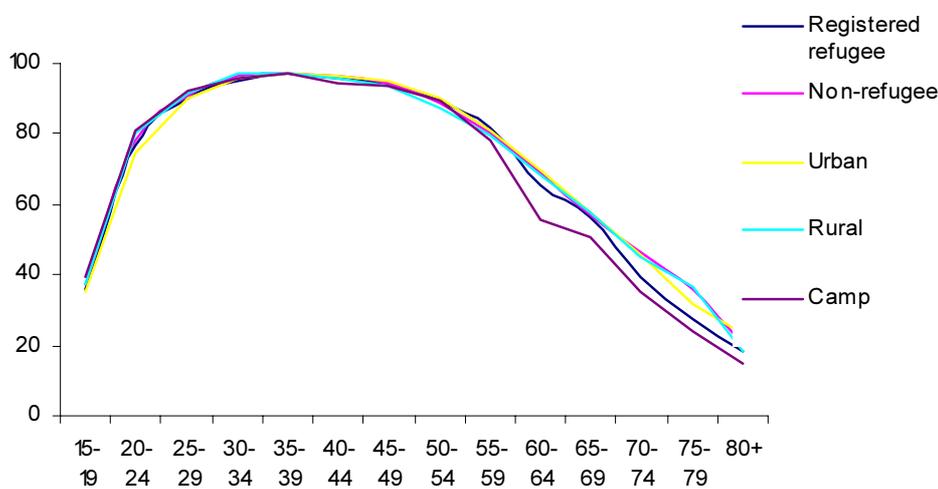
Figure 8 Gaza male labour force participation by refugee status, locality type and age
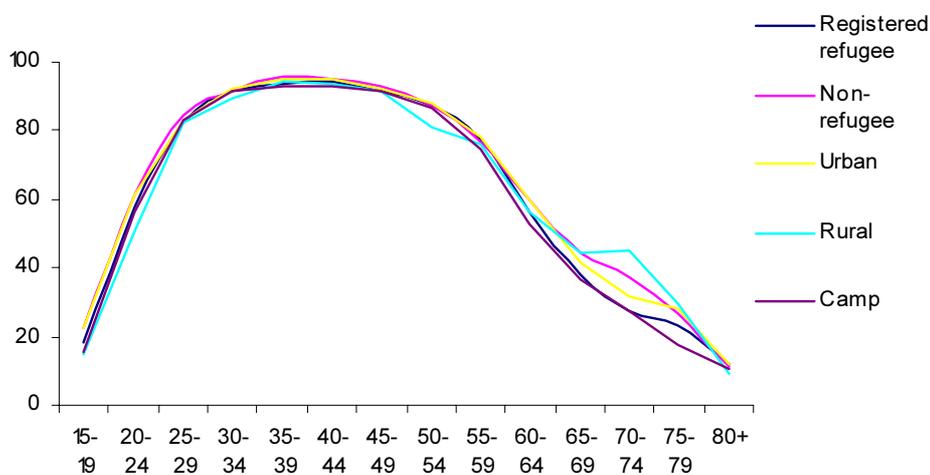
At the *governorate* level there is once more no apparent difference in participation between registered 1948 refugees and non-refugees, or between urban, rural, and camp residents, neither in the West Bank, nor in the Gaza governorates (Figure 9 and Figure 10). The *region* Gaza is, however, systematically lagging behind the *region* the West Bank in participation, regardless of refugee status and locality type. (In Figure 9 and Figure 10 this appears as compressed upper right parts of what would else have been almost "perfect" circles).

Figure 9 Male labour force participation by refugee status and governorate
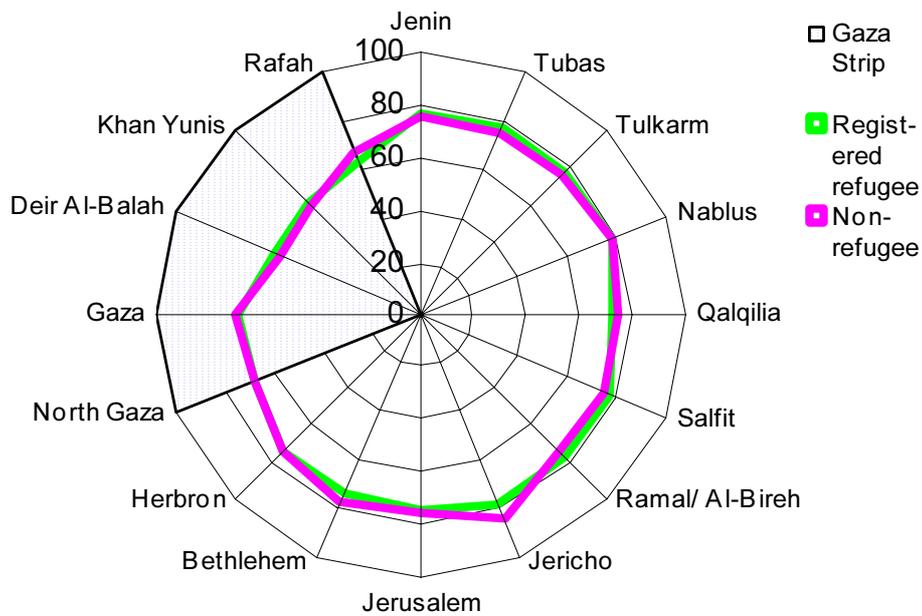
Figure 10 Male labour force participation by locality type and governorate

11
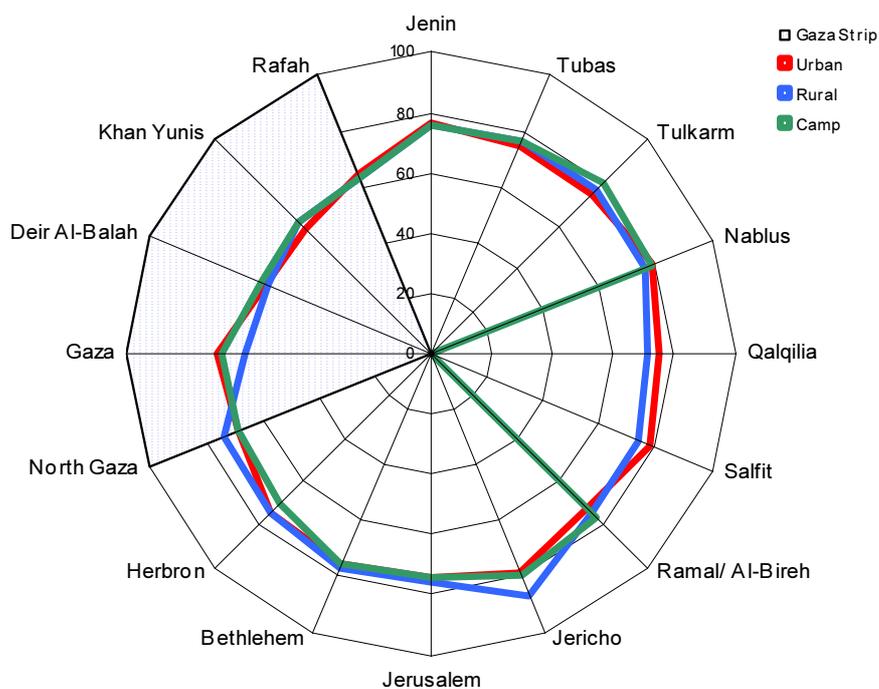
Let us now turn to male *unemployment* in Gaza and the West Bank. One should first note that the United Nations Organization for employment, the International Labour Organization, (ILO), defines unemployment in very strict terms. The "unemployed" are those did not work even for *one* hour in the survey reference week, and at the same were available for work, and *actively* sought work. This unemployment concept is thus to be considered an absolute minimum measure for measured unemployment. It does *not* indicate that those who are formally defined as *employed* have sufficient labour earnings to care for themselves, let alone for their families. One should also note that the ILO unemployment rates are calculated in percent of the *labour force*, not in percent of the working age, or the total population.

The governorate specific male unemployment rates in Gaza and the West Bank show little systematic variation by refugee status and locality type (Figure 11). The main finding is that unemployment rates are higher in Gaza than in the West Bank, regardless refugee status and locality type[4].

Figure 11 Male unemployment rates by refugee status, locality type and governorate
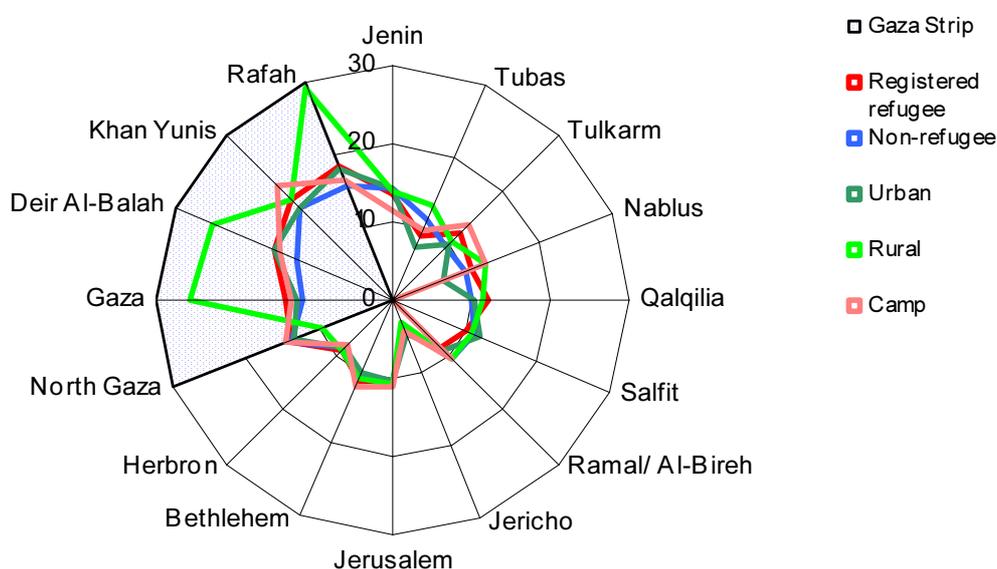
The employed and the unemployed together make up the labour force. Since we neither found any systematic variation in labour force participation, nor in the unemployment rates according to refugee status and locality type, it follows by definition that there is neither any systematic variation of this kind with respect to *employment*.

Above, we have only presented simple bi- and trivariate relations between respectively refugee status, locality and governorate of residence, and labour force participation and unemployment (employment). In order to rule out any undiscovered relations between refugee status, locality and governorate of residence, and labour activity, we have also used the multivariate statistical method *logistic regression* to investigate these phenomena. (More information about this method, as well as listings and interpretation of the estimated parameters can be found in Appendix 2).

The results from the logistic regression confirm that refugee status and locality type are of little importance in determining male labour force participation and unemployment in Gaza and the West Bank. There is hardly any independent effect of being a registered 1948 refugee, relative to being a non-refugee. Living in a refugee camp gives males a slightly *higher* chance of being in the labour

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[4] Unemployment rates are highest in rural Gaza, but, as was mentioned in section 3, the rural sector in Gaza is very small

force, than living in an (non-camp) urban area, while controlling for a range of other variables. The major separate geographical factor influencing male labour force participation is that living in the West Bank substantially increases the likelihood of a being a labour force member.

6) Female labour activity in Gaza and the West Bank

Most women in Gaza and the West Bank do not engage in the labour force at *any* stage in their lives. Also for women labour force participation is correlated with age, but in a more complex pattern than is the case for men. As for men, many young women are studying, while many old women are sick or disabled, or have voluntarily decided to become "inactive". However, in contrast to men, women in Gaza and the West Bank are primarily expected to care for their families, rather than to engage in economic activity outside their homes. Hence, in addition to education and health, factors as childbirth, childcare and need to care for old and disabled family members strongly influence female labour force participation. Moreover, many families in the West Bank and (in particular) in Gaza consider it is as "inappropriate" for women to work outside the home. This is in particular so for young and unmarried women.

Figure 12 West Bank Female labour force participation by refugee status, type of locality and age
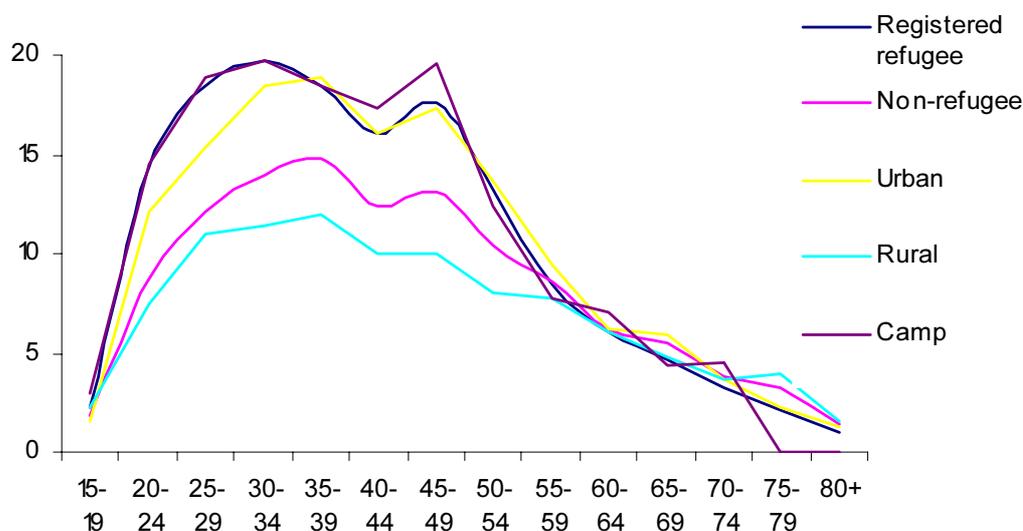
The combined effect of all these factors cause the relation between female labour force participation in Gaza and the West Bank to be less systematically correlated with age than one finds for males. As can be seen from Figure 12 and Figure 13, the typical male "inverse U-pattern is still present, but at a much lower level. Moreover, it now appears in a *two*-peaked version, where participation is at the highest around 25 and 45 years. The drop in participation for women in their thirties is most probably due to child care obligations, while the increase around 45 years indicates that many women of this age have more time to engage in economic activities outside the house[5].

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[5] See also the unpublished Fafo-AIS working paper "The Future Size of the Palestinian Population of the West Bank and Gaza Strip" by Jon Pedersen and Kristin Dalen (2003).

Figure 13 Gaza Female labour force participation by refugee status, type of locality and age

The average fertility rate is high, in particular in Gaza, and the age for giving birth to the first child is
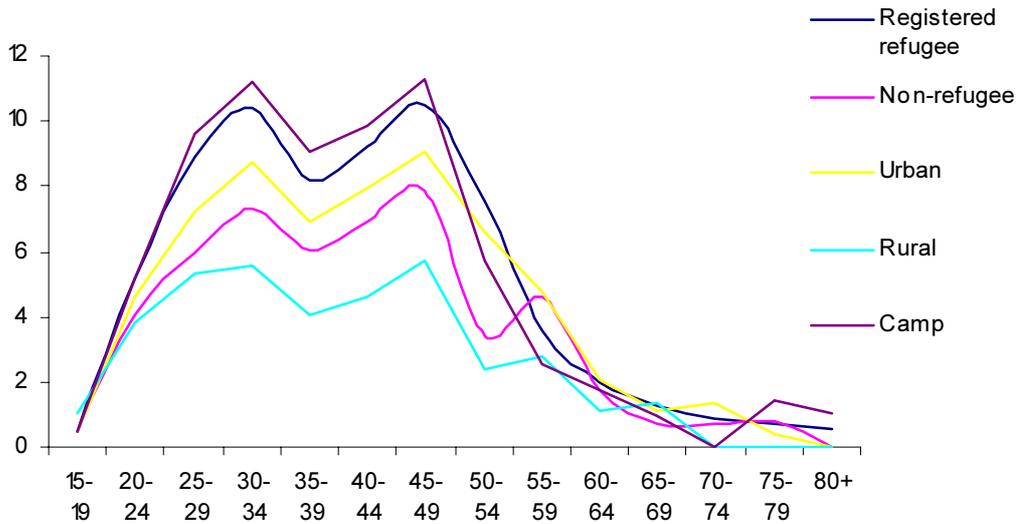

relatively low. One may thus question why the first peak in female participation is as late as in the range 25-29 years. Our multivariate analysis shows that a major exception is the highly educated women. Many women in *this* group first complete their university education, then work for some years, and only thereafter give birth.

The female labour force participation rate is higher among refugees than among non-refugees, a pattern that is found in nearly all governorates (Figure 15 and Figure 16). This is due to the systematic relation between refugee status locality types. Female labour force participation is lowest in the *rural* localities - the locality type where the refugee share is lowest. The *region* Gaza lags behind the West Bank regardless of refugee status and locality type. (The upper right parts of the circles are both closer to the hub of the figure, i.e. closer to zero).

Figure 14 Female labour force participation by refugee status and governorate
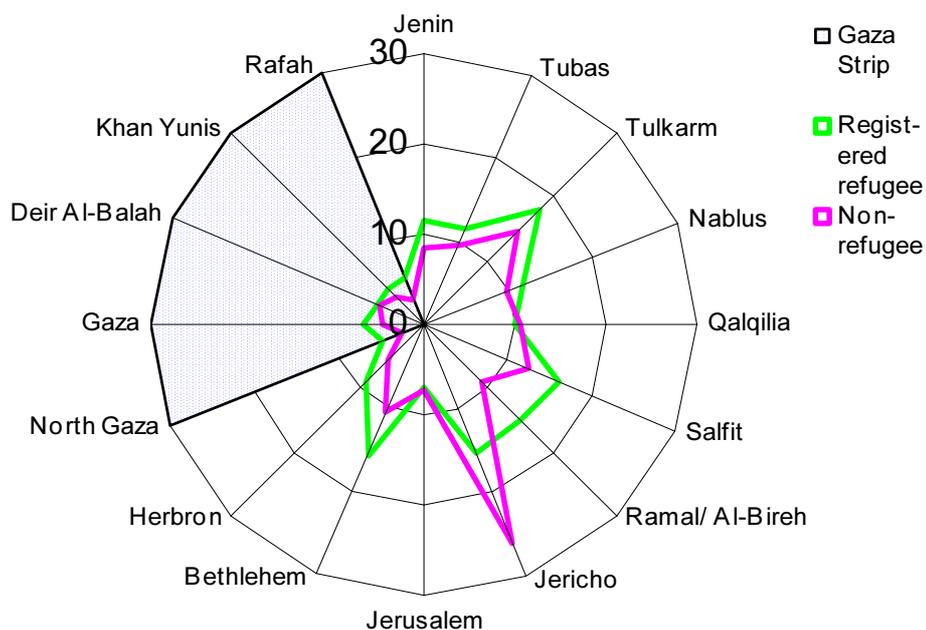
Figure 15 Female labour force participation by type of locality and governorate
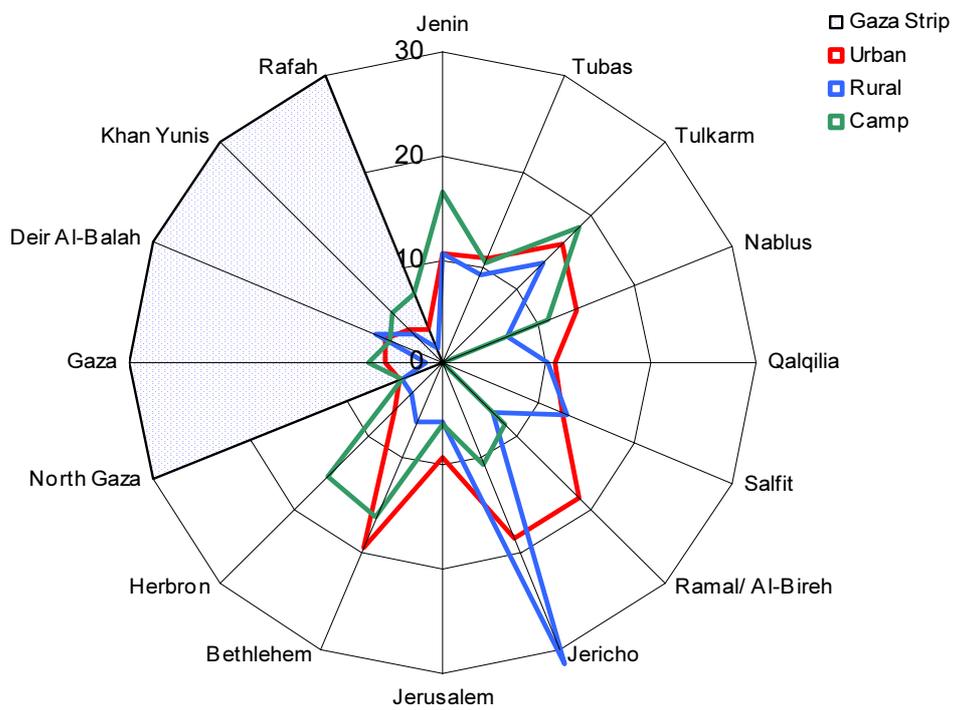
Figure 16 Female unemployment rates by refugee status, type of locality and governorate
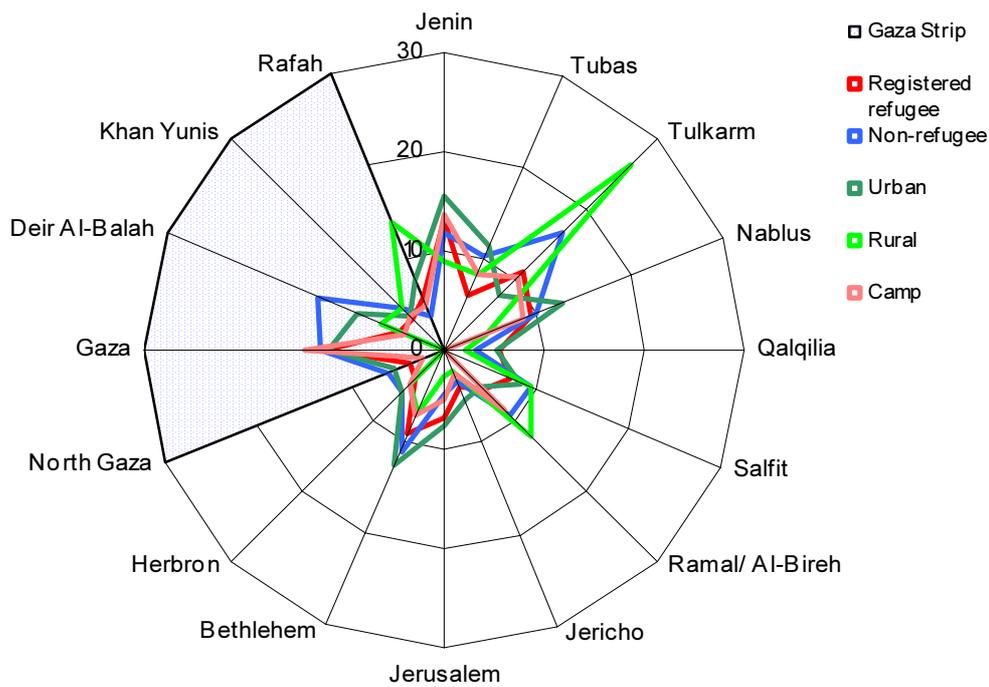
As for the males, we have also made logistic regression equations for the female labour force participation and unemployment. While controlling for a range of other variables, we observe a slightly higher likelihood of being in the labour force for registered 1948 refugee women, relative to non-refugee women. Overall in Gaza and the West Bank, living in a refugee camp also gives women a slightly *higher* chance of being in the labour force, relative to living in an (non-camp) urban area. Once more the major geographical factor influencing labour force participation is the main region. Living in the West Bank substantially increases the likelihood for a woman of a being a labour force member, relative to living in Gaza.

The *unemployed* women are a particular group because of the low female labour force participation rates. The regional effect is still strong, but with a *higher* likelihood of female unemployment in the West Bank than in Gaza. Refugee status and camp residence are once again found to be of little importance.

7) Conclusion

Above we have shown that refugee status and refugee camp residence have little effect on labour force participation, employment and unemployment. This finding is applies to both males and females, in the Gaza Strip as well as in the West Bank. We have not investigated wages and income, and labour force participation is but one indicator of economic welfare. Still, we consider labour force participation and employment to be key indicators for the Palestinian households' ability to be economically self-reliant.

As mentioned in the introduction, we conceived of several factors that we expected would cause refugees and camp residents to lag behind non-refugees and non-camp residents with respect to labour activity. Apparently, the relatively long time span from 1948 to 1997 has caused the employment situation for refugees and non-refugees to converge, at least *within* the regions Gaza and the West Bank.

Both regions, and in particular Gaza, have faced an urbanization process. Possession of agricultural land plays much less importance for employment than before. Refugees now tend to live together with non-refugees, at least in urban areas. Even most of the strongly refugee dominated UNRWA camps have been integrated into the local urban economies where they are situated. The camps have not been transformed into poor neighbourhoods that also attract non-refugees with labour market problems. To the contrary, the camps continue to harbour refugees with human capital close to the national average. The *economic* disadvantage of their dense physical structure and crowded dwellings apparently matter less in an economy largely based on waged labour.

The geographical difference we *did* find with respect to labour force participation, employment and unemployment is that Gaza is worse off than the West Bank. The fundamental reasons for this phenomenon may well be the events in 1948-49. The West Bank was more able to absorb the refugees than the Gaza Strip, which almost tripled its population in short time. That refugee status and refugee camp residence do not have much statistical effect on labour activity *today* do not rule out that the "Gaza effect" is fundamentally caused by a generalization of the negative effects of the 1948 refugee crisis to the whole population in Gaza.

The same argument may be used with respect to targeting of economic support to the population in Gaza and the West Bank. Even though refugees and camp residents do not have greater need for employment creation than other groups, employment schemes giving priority to refugees will mainly benefit the *region* Gaza, the area where the economy seems to be weakest.

Appendix 1: Tables

Table 1 Refugee status by main region and type of locality (Percentages and count)

(Reference: Figure 1, Figure 2)

Type of locality	Registered #	Registered %	Non-regist. #	Non-regist. %	Non-refugee #	Non-refugee %	Not stated #	Not stated %	Total #	Total %
Gaza and West Bank										
Urban	495 086	36	20 725	2	850 480	62	7 849	1	1 376 189	100
Rural	152 550	36	14 818	2	635 442	79	5 722	1	809 337	100
Camp	385 333	93	3 922	1	22 869	6	1 837	0	414 325	100
Total	1 032 969	40	39 464	2	1 508 791	58	15 408	1	2 599 851	100
West Bank										
Urban	183 394	25	13 651	2	535 996	72	5 503	1	739 990	100
Rural	115 325	15	13 116	2	621 046	82	5 424	1	755 670	100
Camp	96 288	94	1 543	1	4 523	4	535	1	102 981	100
Total	395 007	25	28 310	2	1 161 565	73	11 462	1	1 598 641	100
Gaza										
Urban	311 692	49	7 074	1	314 484	49	2 345	0	636 199	100
Rural	37 225	69	1 702	3	14 396	27	299	1	53 667	100
Camp	289 045	93	2 379	1	18 346	6	1 302	0	311 344	100
Gaza Total	637 962	64	11 154	1	347 225	35	3 946	0	1 001 209	100

Table 2 Refugees' locality of residence by main region and type of locality (Percentages and count)

(Reference: Figure 3)

Type of locality	Registered #	Registered %	Non-registered #	Non-registered %
West Bank				
Urban	183 394	47	13 651	48
Rural	115 325	29	13 116	46
Camp	96 288	24	1 543	24
West Bank Total	395 007	100	28 310	100
Gaza				
Urban	311 692	49	7 074	64
Rural	37 225	6	1 702	15
Camp	289 045	45	2 379	21
Gaza Total	637 962	100	11 154	100

Table 3 Shares of refugees in population by type of locality and governorate (Percentages and count)

(Reference: Figure, Figure 5 and Figure 6)

	Registered refugees								Non-registered refugees							
	Urban		Rural		Camp		Total		Urban		Rural		Camp		Total	
Governorate	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Jenin	20 197	26	23 660	22	8 245	90	52 102	27	2 211	3	1 790	2	255	3	4 256	2
Tubas	685	6	599	3	4 000	95	5 284	15	5	0	140	1	5	0	151	0
Tulkarm	14 961	25	9 529	18	15 053	94	39 544	31	1 060	2	905	2	105	1	2 071	2
Nablus	22 832	22	12 196	10	24 940	94	59 969	24	1 817	2	1 353	1	541	2	3 712	1
Qalqilia	23 456	56	2 906	11	0	0	26 361	38	967	2	357	1	0	0	1 323	2
Salfit	1 237	9	2 070	6	0	0	3 307	7	110	1	165	0	0	0	275	1
Ram/ Al-Bireh	32 412	47	10 819	9	12 281	93	55 513	27	2 005	3	1 081	1	118	1	3 205	2
Jericho	5 933	43	3 829	36	5 013	85	14 775	49	306	2	309	3	205	3	819	3
Jerusalem	15 412	34	20 863	34	6 191	92	42 466	38	1 419	3	2 276	4	91	1	3 787	3
Bethlehem	13 916	31	12 545	17	10 103	96	36 565	28	754	2	561	1	147	1	1 461	1
Herbron	32 351	12	16 310	13	10 460	96	59 121	15	2 997	1	4 178	3	75	1	7 251	2
North Gaza	61 645	55	5 654	86	57 632	95	124 931	70	1 572	1	249	4	216	0	2 038	1
Gaza	128 520	44	4 314	68	50 214	81	183 047	51	2 617	1	500	8	789	1	3 906	1
Deir Al-Balah	28 591	63	3 060	68	90 465	95	122 117	84	580	1	129	3	912	1	1 620	1
Khan Yunis	60 329	44	14 647	58	33 929	98	108 906	55	1 709	1	428	2	202	1	2 340	1
Rafah	32 607	65	9 549	86	56 806	96	98 961	82	596	1	395	4	260	0	1 251	1
Total	495 086	36	152 550	19	385 333	93	1 032 969	40	20 725	2	14 818	2	3 922	1	39 464	2

Table 4 West Bank male labour force participation by age, refugee status and locality (Percentages and count)

(Reference: Figure 7)

	Registered		Non-refugee		Urban		Rural		Camp		Total	
Age	#	%	#	%	#	%	#	%	#	%	#	%
15-19	6 070	18	4 436	23	7 805	22	358	15	2 343	15	10 506	20
20-24	16 573	58	9 730	62	17 501	61	1 160	51	7 643	56	26 304	59
25-29	18 100	83	9 251	84	17 002	83	1 535	82	8 815	83	27 351	83
30-34	19 753	92	9 312	92	17 400	92	1 370	90	10 296	91	29 065	92
35-39	13 803	94	7 267	96	13 444	95	926	94	6 699	93	21 069	94
40-44	9 571	94	5 881	95	10 058	95	845	93	4 549	93	15 452	94
45-49	7 774	92	4 546	93	8 250	92	625	92	3 444	91	12 320	92
50-54	4 929	87	2 871	87	5 284	88	332	81	2 185	87	7 801	87
55-59	2 617	77	1 501	77	2 722	78	258	76	1 138	74	4 118	77
60-64	2 503	56	1 346	60	2 470	60	200	56	1 179	53	3 849	57
65-69	1 284	38	719	44	1 230	41	107	45	666	37	2 002	40
70-74	655	28	430	37	665	32	76	45	343	27	1 084	31
75-79	281	23	185	27	320	28	32	29	115	18	466	25
80+	145	12	85	11	145	12	16	9	70	11	230	11
Total	104 084	65	57 570	66	104 325	66	7 840	63	49 489	64	161 653	65

Table 5 Gaza male labour force participation by age, refugee status and locality (Percentages and count)

(Reference: Figure)

Age	Registered #	%	Non-refugee #	%	Urban #	%	Rural #	%	Camp #	%	Total #	%
15-19	7 560	36	24 147	37	14 179	36	15 540	38	1 988	40	31 707	37
20-24	15 099	77	43 992	78	25 461	75	29 507	80	4 123	81	59 091	78
25-29	15 396	90	41 932	91	25 933	90	27 156	92	4 239	92	57 327	91
30-34	14 234	95	36 735	96	24 429	96	22 851	97	3 689	96	50 969	96
35-39	10 304	97	28 739	97	19 669	97	16 983	97	2 391	97	39 043	97
40-44	7 171	96	19 363	96	13 081	96	11 945	96	1 508	95	26 534	96
45-49	5 549	94	14 315	94	10 227	95	8 619	93	1 018	94	19 864	94
50-54	4 341	89	10 661	89	8 047	90	6 123	87	832	89	15 002	89
55-59	2 534	81	6 818	80	4 814	81	3 934	80	604	78	9 352	80
60-64	2 047	65	6 239	69	4 238	70	3 653	68	394	56	8 285	68
65-69	1 242	56	4 183	57	2 432	57	2 694	58	300	51	5 425	57
70-74	671	39	2 447	47	1 404	46	1 555	45	160	35	3 119	45
75-79	343	28	1 200	36	630	32	842	37	70	24	1 543	34
80+	269	18	854	21	516	23	557	18	50	15	1 123	20
Total	86 820	76	241 770	76	155 150	75	152 059	75	21 380	77	328 590	76

Table 6 Male labour force participation by refugee status and governorate (Percentages and count)

(Reference: Figure 9, Figure 10)

Governorate	Registered Refugee #	%	Non-refugee #	%	Urban #	%	Rural #	%	Camp #	%	Total #	%
Jenin	11 801	77	29 152	76	16 066	76	22 961	76	1 926	76	40 953	76
Tubas	1 128	77	6 415	76	2 647	75	4 048	77	849	77	7 543	76
Tulkarm	9 045	77	18 692	76	12 808	75	11 498	77	3 431	79	27 737	76
Nablus	14 125	77	41 198	77	24 809	79	24 744	76	5 771	78	55 323	77
Qalqilia	5 556	73	8 463	74	8 519	75	5 501	71	0	0	14 020	74
Salfit	789	78	8 946	75	2 820	77	6 916	74	0	0	9 735	75
Ramal/ Al-Bireh	12 377	76	28 880	73	14 279	73	24 262	75	2 716	77	41 257	74
Jericho	3 148	78	3 520	84	3 117	78	2 400	86	1 151	79	6 668	81
Jerusalem	9 103	75	14 377	75	9 657	74	12 516	76	1 306	74	23 480	75
Bethlehem	8 134	75	20 529	77	10 270	76	16 138	77	2 255	75	28 664	77
Herbron	11 612	73	61 598	75	50 158	75	21 076	74	1 976	70	73 210	74
North Gaza	20 466	68	8 450	68	18 197	68	1 038	73	9 681	68	28 916	68
Gaza	32 822	69	29 929	71	51 144	71	879	61	10 729	69	62 751	70
Deir Al-Balah	18 875	60	3 060	57	6 897	59	646	58	14 392	60	21 935	60
Khan Yunis	16 491	61	12 891	58	20 305	59	3 706	62	5 372	62	29 383	60
Rafah	15 429	62	3 240	67	7 782	64	1 571	62	9 315	63	18 669	63
WB Total	86 820	76	241 770	76	155 150	66	152 059	63	21 380	64	21 507	76
Gaza Total	104 084	65	57 570	66	104 325	75	7 840	75	49 489	77	161 653	65

Table 7 Male unemployment by refugee status and governorate (Percentages and count)

(Reference: Figure 11)

Governorate	Registered #	%	Non-refugee #	%	Urban #	%	Rural #	%	Camp #	%	Total #	%
Jenin	1 604	14	4 133	14	2 300	14	3 217	14	220	11	5 737	14
Tubas	101	9	710	11	200	8	530	13	81	10	811	11
Tulkarm	1 100	12	1 822	10	1 287	10	1 173	10	461	13	2 921	11
Nablus	1 522	11	4 116	10	1 713	7	3 180	13	745	13	5 638	10
Qalqilia	669	12	853	10	896	11	626	11	0	0	1 522	11
Salfit	79	10	998	11	341	12	736	11	0	0	1 077	11
Ramal/ Al-Bireh	1 063	9	3 036	11	1 254	9	2 566	11	279	10	4 099	10
Jericho	135	4	135	4	143	5	79	3	48	4	270	4
Jerusalem	952	10	1 505	10	986	10	1 324	11	147	11	2 457	10
Bethlehem	894	11	2 145	10	1 034	10	1 734	11	271	12	3 039	11
Herbron	1 077	9	5 326	9	4 298	9	1 942	9	164	8	6 404	9
North Gaza	2 842	14	1 166	14	2 479	14	100	10	1 428	15	4 008	14
Gaza	4 428	13	3 396	11	6 213	12	226	26	1 386	13	7 825	12
Deir Al-Balah	3 105	16	409	13	1 131	16	160	25	2 222	15	3 514	16
Khan Yunis	2 978	18	2 133	17	3 311	16	681	18	1 119	21	5 111	17
Rafah	2 881	19	504	16	1 406	18	462	29	1 518	16	3 386	18
WB Total	9 197	11	24 779	10	14 453	9	17 107	11	2 415	11	33 976	10
Gaza Total	16 234	16	7 608	13	14 539	14	1 629	21	7 674	16	23 843	15

Table 8 West Bank female labour force participation by age, refugee status and locality (Percentages and count)

(Reference: Figure)

Age	Registered #	%	Non-refugee #	%	Urban #	%	Rural #	%	Camp #	%	Total #	%
15-19	453	2	1 110	2	561	2	852	2	151	3	1 564	2
20-24	2 424	14	4 632	9	3 917	12	2 425	8	714	15	7 055	10
25-29	2 532	18	5 214	12	4 104	15	2 841	11	801	19	7 746	14
30-34	2 347	20	5 173	14	4 360	18	2 487	11	673	20	7 520	15
35-39	1 731	18	4 140	15	3 386	19	2 023	12	461	18	5 871	16
40-44	1 057	16	2 620	12	2 080	16	1 299	10	298	17	3 677	13
45-49	884	18	1 912	13	1 719	17	860	10	216	20	2 796	14
50-54	648	13	1 371	10	1 227	14	625	8	166	12	2 019	11
55-59	336	8	955	9	632	9	574	8	85	8	1 291	9
60-64	209	6	699	6	426	6	422	6	60	7	908	6
65-69	146	5	513	5	336	6	293	5	30	4	659	5
70-74	75	3	242	4	136	4	151	4	30	5	317	4
75-79	32	2	130	3	50	2	111	4	0	0	162	3
80+	15	1	55	1	30	1	41	2	0	0	71	1
Total	12 893	12	28 798	9	22 975	12	15 027	8	3 690	13	41 692	10

Table 9 Gaza female labour force participation by age, refugee status and locality (Percentages and count)

(Reference: Figure 13)

Age	Registered #	%	Non-refugee #	%	Urban #	%	Rural #	%	Camp #	%	Total #	%
15-19	165	1	90	0	159	0	26	1	70	0	255	1
20-24	1 402	5	594	4	1 234	5	86	4	675	5	1 996	5
25-29	1 859	9	629	6	1 375	7	102	5	1 011	10	2 488	8
30-34	2 006	10	665	7	1 515	9	88	6	1 067	11	2 671	9
35-39	1 066	8	421	6	870	7	40	4	576	9	1 486	7
40-44	947	9	410	7	836	8	40	5	481	10	1 357	8
45-49	899	10	350	8	746	9	40	6	463	11	1 249	10
50-54	479	8	120	3	406	7	15	2	179	6	600	6
55-59	210	4	120	5	240	5	16	3	75	3	331	4
60-64	110	2	45	2	100	2	5	1	50	2	155	2
65-69	60	1	15	1	45	1	5	1	25	1	75	1
70-74	25	1	10	1	35	1	0	0	0	0	35	1
75-79	10	1	5	1	5	0	0	0	10	1	15	1
80+	10	1	0	0	0	0	0	0	10	1	10	0
Total	9 248	6	3 473	4	7 567	5	462	3	4 692	6	12 721	5

Table 10 Female labour force participation by refugee status and governorate (Percentages and count)

(Reference: Figure 14, Figure 15)

Governorate	Registered #	%	Non-refugee #	%	Urban #	%	Rural #	%	Camp #	%	Total #	%
Jenin	1 554	11	3 340	9	2 179	10	2 280	11	435	17	4 895	9
Tubas	166	12	774	10	355	11	463	9	121	11	940	10
Tulkarm	1 805	18	3 708	14	2 683	16	1 975	14	855	19	5 513	15
Nablus	1 880	12	5 248	10	4 200	14	2 139	7	788	11	7 128	10
Qalqilia	708	10	1 154	11	1 160	11	702	10	0	0	1 863	10
Salfit	140	16	1 450	13	419	12	1 171	13	0	0	1 590	13
Ramal/ Al-Bireh	2 305	15	3 706	9	3 542	18	2 181	7	289	9	6 011	11
Jericho	619	15	1 198	26	750	18	891	31	176	11	1 817	21
Jerusalem	810	7	1 324	7	1 106	9	926	6	101	6	2 134	7
Bethlehem	1 618	16	2 631	10	2 589	19	1 161	6	499	16	4 249	12
Herbron	1 288	9	4 265	5	3 991	6	1 137	4	425	15	5 553	6
North Gaza	1 461	5	322	3	1 106	4	64	4	614	4	1 784	4
Gaza	3 139	7	1 853	5	3 852	5	25	2	1 115	7	4 993	6
Deir Al-Balah	1 816	6	257	5	690	6	82	7	1 301	5	2 073	6
Khan Yunis	1 472	5	899	4	1 511	5	253	4	606	7	2 371	5
Rafah	1 359	5	142	3	407	3	38	1	1 056	7	1 501	5
WB Total	12 893	12	28 798	9	22 975	12	15 027	8	3 690	13	41 692	10
Gaza Total	9 248	6	3 473	4	7 567	5	462	3	4 692	6	12 721	5

Table 11 Female unemployment by refugee status and governorate (Percentages and count)

(Reference: Figure)

Governorate	Registered #	%	Non-refugee #	%	Urban #	%	Rural #	%	Camp #	%	Total #	%
Jenin	204	13	399	12	338	15	206	9	60	14	604	12
Tubas	10	6	80	10	40	11	39	9	10	8	90	10
Tulkarm	203	11	626	17	214	8	525	27	90	11	829	15
Nablus	176	9	520	10	534	13	97	5	66	8	696	10
Qalqilia	40	6	36	3	60	5	16	2	0	0	76	4
Salfit	10	7	136	9	35	8	111	9	0	0	146	9
Ramal/ Al-Bireh	126	5	346	9	185	5	262	12	25	9	473	8
Jericho	25	4	40	3	41	5	20	2	5	3	66	4
Jerusalem	56	7	60	5	86	8	26	3	5	5	116	5
Bethlehem	150	9	289	11	326	13	79	7	35	7	440	10
Herbron	51	4	263	6	238	6	55	5	21	5	314	6
North Gaza	55	4	20	6	60	5	0	0	15	2	75	4
Gaza	372	12	231	12	447	12	0	0	156	14	603	12
Deir Al-Balah	90	5	35	14	65	9	5	7	54	4	125	6
Khan Yunis	64	4	54	6	74	5	15	6	30	5	118	5
Rafah	80	6	5	4	31	8	5	14	50	5	86	6
WB Total	1 052	8	2 796	10	2 096	9	1 435	10	317	9	3 848	9
Gaza Total	661	7	345	10	677	9	25	5	305	6	1 006	8

Appendix 2: Logistic Regression; Interpretation of Results

1) Introduction

Logistic regression is a multivariate statistical technique that enables us to single out the effects of *each* of several independent variables on one dependent variable at the time. The independent variables used in the models are both on the individual and household levels. The dependent variables, respectively labour force participation and unemployment are at the *individual* levels.

Altogether we present four models, for labour force participation and employment, separately for men and women. In the first model the *dependent* variable is male labour force participation, in the second, male unemployment. Correspondingly the third and fourth models deal with female labour force participation and unemployment. We use the same *independent* variables in all equations with some exceptions. The relation to the Household Head is for example different for men and for women. Hardly any man is the spouse of the Household Head, or lives with his in-law family.

Here, we present our model estimates in terms of *odds ratios*. By *odds*, we mean the probability of e.g. being a labour force member, divided by the probability of being outside the labour force, *for an individual who belongs to some particular category*, e.g. who lives in a certain locality type. At the same time we control for other factors.

By *odds ratio* we mean the *ratio* of such odds between two categories. For example between the categories "living in a rural community", and "living in a camp", (assuming that the latter has been chosen as the "reference" type of locality). An odds ratio of 1 implies equal labour force participation propensities in the two categories (locality types). An odds ratio above 1 implies a higher labour force participation propensity in rural communities, than in camps (i.e. the "reference" locality type). The interpretation goes vice versa for an odds ratio below 1.

2) Equations for male labour activity

Above we argued that refugee status and locality type are of little importance in determining male labour force participation and unemployment in Gaza and the West Bank. This finding is supported by the logistic regression equations. In the equation for labour participation among all males in Gaza and the West Bank there is hardly any independent effect of being a registered 1948 refugee, relative to being a non-refugee. Living in a refugee camp gives males a slightly *higher* chance of being in the labour force than living in an (non-camp) urban area, while controlling for a range of other variables. The major geographical factor is region. Living in the West Bank substantially increases the likelihood of a being a labour force member, relative to living in Gaza.

Separate equations for the West Bank and Gaza males firstly show a slightly lower chance of being a labour force member for registered 1948 refugee, relative to being a non-refugee. Secondly, there is a slightly lower chance of being a labour force member when living in a refugee camp, relative to living in an urban area. In Gaza these effects are of the same magnitude, but both effects have the *opposite* direction.

The equations for *unemployment* do neither display any strong independent effects of refugee status and locality of residence. A man living in Gaza has a *lower* probability of being unemployed than a man living in the West Bank. This somewhat contra-intuitive finding may indicate that the threshold

for taking *any* type of employment (only one hour per week is required to exit the unemployed category) may be lower in Gaza than in the West Bank[6].

3) Equations for female labour activity

The logistic regression equations for female labour force participation showed a slightly higher likelihood of being in the labour force for registered 1948 refugees relative to non-refugees. Overall in Gaza and the West Bank, living in a refugee camp gives women a slightly *higher* chance of being in the labour force, relative to living in an (non-camp) urban area[7]. Once again, the major geographical factor influencing labour force participation is the *region*. Living in the West Bank substantially increases the likelihood for a woman of a being a labour force member, relative to living in Gaza.

We would also like to comment on other factors influencing female labour force participation. Education has an immense effect. In Gaza the odds ratio is as high as 140 for being a bachelor, relative to being illiterate. Else, female labour force participation is clearly determined by the household context. The likelihood of participation is very low for spouses and daughters in-law. If any male in the household is employed the likelihood of female labour force participation drops dramatically. However, somewhat surprising, the odds ratio of being a labour force member is higher for women who live in households with children below 15 years[8].

The female *unemployed* is a particular group, because of the low female labour force participation. The regional effect is still strong, but with a *higher* likelihood of female unemployment in the West Bank than in Gaza. Refugee status and camp residence are of little importance, while high education increases the likelihood of unemployment. The latter effect is probably more an expression of the highly educated women's aspirations to work, rather than an indication that the Gaza and West Bank labour markets are less open to educated women. Interestingly, there is a higher chance of being unemployed for women with employed males, than for other women. The explanation is probably that their husbands' employment allows them to stay away from less attractive types of work.

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[6] Separate equations for Gaza and the West Bank show *slightly* lower unemployment likelihood for male refugees and *slightly* higher unemployment likelihood for camp residents in the West Bank, and exactly the opposite pattern in Gaza, while, in both equations, controlling for a range of other variables.
[7] Separate equations for the West Bank and Gaza shows that this effect is mainly present in the former area, and almost zero in Gaza.
[8] A possible explanation is that these children in many cases are brothers and sisters of the woman, rather than her sons and daughters.

Appendix 3: Tables of Parameter Estimates

Table 12 Estimated equation parameters for male labour force participation

Reference category	Characteristic	B	S.E.	Wald	df	Sig.	Exp(B)
West Bank	**Region**						
	Gaza	-0,41	0,024	286,6	1	0,000	0,662
Jenin	Governorate			754,1	14	0,000	
	Tubas	-0,171	0,036	23,0	1	0,000	0,843
	Tulkarm	-0,123	0,023	28,9	1	0,000	0,885
	Nablus	-0,131	0,019	47,1	1	0,000	0,877
	Qalqilia	-0,208	0,028	56,3	1	0,000	0,813
	Salfit	-0,174	0,032	28,9	1	0,000	0,841
	Ramallah and Al-Bireh	-0,129	0,020	40,6	1	0,000	0,879
	Jericho	-0,160	0,042	14,6	1	0,000	0,852
	Jerusalem	-0,139	0,024	34,8	1	0,000	0,870
	Bethlehem	-0,131	0,023	34,0	1	0,000	0,877
	Herbron	-0,190	0,018	112,3	1	0,000	0,827
	North Gaza	0,143	0,024	37,2	1	0,000	1,154
	Gaza	0,165	0,021	60,0	1	0,000	1,180
	Deir Al-Balah	-0,207	0,024	75,4	1	0,000	0,813
Rafah	Khan Yunis	-0,159	0,023	48,0	1	0,000	0,853
Urban	**Locality type**			58,6	2	0,000	
	Rural	0,077	0,010	57,4	1	0,000	1,080
	Camp	0,028	0,013	4,7	1	0,031	1,029
Head	**Relationship to the head**			9508,2	5	0,000	
	Son/daughter	-1,903	0,022	7405,0	1	0,000	0,149
	Father/mother	-0,754	0,060	158,9	1	0,000	0,470
	Brother/sister	-1,736	0,025	4811,6	1	0,000	0,176
	Grand-child	-2,591	0,056	2172,8	1	0,000	0,075
	Other relatives	-1,934	0,040	2357,0	1	0,000	0,145
	Age	2,063	0,010	42630,0	1	0,000	7,870
Registered refugee	Non-Refugee	-0,002	0,010	0,0	1	0,837	0,998
illiterate	**Educational attainment**			9754,1	6	0,000	
	Can read and write	0,861	0,021	1622,3	1	0,000	2,366
	Elementary	1,138	0,020	3246,1	1	0,000	3,121
	Preparatory	0,600	0,020	908,5	1	0,000	1,822
	Secondary	0,064	0,021	9,2	1	0,002	1,066
	Associate diploma	1,393	0,031	2001,0	1	0,000	4,025
	Bachelor	0,927	0,028	1100,0	1	0,000	2,528
	Age Squared	-0,119	0,001	53639,3	1	0,000	0,888
	Household size	0,021	0,003	46,2	1	0,000	1,021
Female Head	Male head	0,432	0,033	166,8	1	0,000	1,540
	Demographic dep. Ratio	2,507	0,040	3953,2	1	0,000	12,270
Not single parent	Single parent	-0,139	0,031	20,6	1	0,000	0,870
Not only married couple	Only married couple	0,889	0,031	836,8	1	0,000	2,432
Nuclear	**Household type**			653,8	3	0,000	
	Loner	0,602	0,071	71,2	1	0,000	1,826
	Extended	0,256	0,011	551,6	1	0,000	1,291
	Complex	-0,090	0,062	2,1	1	0,144	0,914
No children	**Children below 15, and 5 in hh**			348,3	2	0,000	
	Youngest child 5 to 14 years	0,198	0,015	184,7	1	0,000	1,219
	Youngest child below 5 years	0,324	0,017	346,7	1	0,000	1,382
Not same refugee status	Same refugee status	-0,008	0,013	0,4	1	0,517	0,992
	Number of adults	-0,022	0,005	18,6	1	0,000	0,978
All in hh. illiterate	**Illiteracy of hh memb.**			105,4	2	0,000	
	At least one in hh. illiterate	0,286	0,055	27,6	1	0,000	1,331
	No illiterates in hh	0,098	0,010	94,2	1	0,000	1,103
All chron. ill/ injured	**Chronic illness/ injury in hh**			994,7	2	0,000	
	At least one chron. ill/ injured	-2,198	0,149	218,6	1	0,000	0,111
	No chron. ill/ injured in hh	-0,317	0,011	786,0	1	0,000	0,728
Not employed female in hh	Employed female in hh	-1,344	0,013	10083,1	1	0,000	0,261
	Dependency ratio	9,763	0,037	69912,9	1	0,000	17377,133
	Squared age of head	0,002	0,000	166,7	1	0,000	1,002
Illiterate	**Completed education of Head**			1762,0	8	0,000	
	Can read and write	-0,238	0,015	253,0	1	0,000	0,788
	Elementary	-0,306	0,016	382,1	1	0,000	0,736
	Preparatory	-0,220	0,017	164,0	1	0,000	0,803
	Secondary	-0,152	0,018	67,7	1	0,000	0,859
	Associate diploma	-0,651	0,024	717,8	1	0,000	0,522
	Bachelor	-0,667	0,025	736,2	1	0,000	0,513
	Higher diploma and above	-1,694	0,066	653,6	1	0,000	0,184
	Not stated	0,135	0,066	4,2	1	0,042	1,144
	Constant	-8,788	0,057	23935,510	1,000	0,000	0,000

Table 13 Estimated equation parameters for male unemployment

Reference category	Characteristic	B	S.E.	Wald	df	Sig.	Exp(B)
West Bank	**Region**						
	Gaza	-0,365	0,028	175,3	1	0,000	0,694
Jenin	Governorate			980,3	14	0,000	
	Tubas	-0,129	0,044	8,5	1	0,004	0,879
	Tulkarm	-0,117	0,027	19,0	1	0,000	0,890
	Nablus	-0,195	0,022	76,6	1	0,000	0,823
	Qalqilia	-0,337	0,034	97,9	1	0,000	0,714
	Salfit	-0,121	0,039	9,8	1	0,002	0,886
	Ramallah and Al-Bireh	-0,358	0,024	220,0	1	0,000	0,699
	Jericho	-0,957	0,069	192,2	1	0,000	0,384
	Jerusalem	-0,337	0,028	140,2	1	0,000	0,714
	Bethlehem	-0,159	0,026	36,2	1	0,000	0,853
	Herbron	-0,489	0,022	510,6	1	0,000	0,613
	North Gaza	0,015	0,027	0,3	1	0,590	1,015
	Gaza	-0,019	0,025	0,6	1	0,442	0,981
	Deir Al-Balah	-0,287	0,028	103,5	1	0,000	0,750
Rafah	Khan Yunis	-0,172	0,027	42,1	1	0,000	0,842
Urban	**Locality type**			55,5	2	0,000	
	Rural	0,092	0,012	54,9	1	0,000	1,097
	Camp	0,031	0,016	3,9	1	0,049	1,031
Head	**Relationship to the head**			158,6	5	0,000	
	Son/daughter	-0,244	0,032	57,8	1	0,000	0,784
	Father/mother	-0,167	0,068	6,0	1	0,014	0,846
	Brother/sister	-0,078	0,035	5,0	1	0,025	0,925
	Grand-child	-0,842	0,100	70,3	1,0	0,0	0,431
	Other relatives	0,215	0,054	15,7	1	0,000	1,240
	Age	0,694	0,012	3571,8	1	0,000	2,001
Registered refugee	Non-Refugee	-0,042	0,012	12,1	1	0,001	0,959
illiterate	**Educational attainment**			1971,3	6	0,000	
	Can read and write	0,412	0,029	202,7	1	0,000	1,510
	Elementary	0,635	0,028	498,5	1	0,000	1,886
	Preparatory	0,245	0,030	68,2	1	0,000	1,277
	Secondary	-0,292	0,032	84,7	1	0,000	0,747
	Associate diploma	0,193	0,042	20,6	1	0,000	1,212
	Bachelor	-0,196	0,042	21,7	1	0,000	0,822
	Age Squared	-0,032	0,001	2984,4	1	0,000	0,969
	Household size	-0,100	0,004	670,2	1	0,000	0,905
Female Head	Male head	-0,511	0,044	132,4	1	0,000	0,600
	Demographic dep. Ratio	-1,468	0,045	1040,9	1	0,000	0,230
Not single parent	Single parent	0,245	0,039	39,9	1	0,000	1,278
Not only married couple	Only married couple	-0,083	0,031	7,2	1	0,007	0,920
Nuclear	**Household type**			669,0	3	0,000	
	Loner	-0,253	0,067	14,1	1	0,000	0,777
	Extended	0,338	0,014	585,6	1	0,000	1,403
	Complex	-0,772	0,096	64,8	1	0,000	0,462
No children	**Children below 15, and 5 in hh**			111,7	2	0,000	
	Youngest child 5 to 14 years	-0,081	0,020	16,8	1	0,000	0,923
	Youngest child below 5 years	0,066	0,023	8,6	1	0,003	1,068
Not same refugee status	Same refugee status	-0,055	0,015	12,8	1	0,000	0,946
	Number of adults	0,136	0,007	428,1	1	0,000	1,145
All in hh. illiterate	**Illiteracy of hh memb.**			219,5	2	0,000	
	At least one in hh. illiterate	-0,830	0,056	218,3	1	0,000	0,436
	No illiterates in hh	-0,059	0,013	21,3	1	0,000	0,942
All chron. ill/ injured	**Chronic illness/ injury in hh**			426,5	2	0,000	
	At least one chron. ill/ injured in hh	-1,994	0,177	127,3	1	0,000	0,136
	No chron. ill/ injured in hh	-0,259	0,015	302,7	1	0,000	0,772
Not employed female in hh	Employed female in hh	1,599	0,018	7959,2	1	0,000	4,949
	Dependency ratio	-11,401	0,055	43509,4	1	0,000	0,000
	Squared age of head	-0,001	0,000	40,7	1	0,000	0,999
Illiterate	**Completed education of Head**			727,9	8	0,000	
	Can read and write	-0,125	0,024	26,9	1	0,000	0,882
	Elementary	-0,430	0,025	285,2	1	0,000	0,650
	Preparatory	-0,300	0,027	119,2	1	0,000	0,741
	Secondary	-0,078	0,029	7,0	1	0,008	0,925
	Associate diploma	-0,626	0,040	239,4	1	0,000	0,535
	Bachelor	-0,573	0,040	200,1	1	0,000	0,564
	Higher diploma and above	-2,463	0,263	87,4	1	0,000	0,085
	Not stated	0,244	0,093	6,9	1	0,009	1,276
	Constant	-2,468	0,065	1430,3	1	0,000	0,085

Table 14 Estimated equation parameters for female labour force participation

Reference category	Characteristic	B	S.E.	Wald	df	Sig.	Exp(B)
West Bank	**Region**						
	Gaza	-0,720	0,045	259,5	1	0,000	0,487
Jenin	Governorate			1620,8	14	0,000	
	Tubas	0,033	0,054	0,4	1	0,549	1,033
	Tulkarm	0,279	0,031	83,1	1	0,000	1,321
	Nablus	-0,436	0,029	227,7	1	0,000	0,647
	Qalqilia	0,246	0,041	36,3	1	0,000	1,279
	Salfit	0,272	0,045	37,2	1	0,000	1,312
	Ramallah and Al-Bireh	-0,284	0,031	85,9	1	0,000	0,753
	Jericho	0,571	0,046	155,4	1	0,000	1,770
	Jerusalem	-0,635	0,040	252,2	1	0,000	0,530
	Bethlehem	-0,104	0,034	9,7	1	0,002	0,901
	Herbron	-0,352	0,030	140,0	1	0,000	0,703
	North Gaza	0,133	0,049	7,2	1	0,007	1,142
	Gaza	0,106	0,043	6,1	1	0,013	1,112
	Deir Al-Balah	-0,122	0,048	6,4	1	0,011	0,885
Rafah	Khan Yunis	0,046	0,047	0,9	1	0,330	1,047
Urban	**Locality type**			108,1	2	0,000	
	Rural	0,155	0,017	88,0	1	0,000	1,168
	Camp	0,132	0,022	35,5	1	0,000	1,141
	Relationship to the head			10880,3	7	0,000	
	Spouse	-1,362	0,042	1030,1	1	0,000	0,256
	Son/daughter	1,098	0,049	499,0	1	0,000	2,999
	Father/mother	-0,668	0,065	105,7	1	0,000	0,513
	Brother/sister	0,594	0,051	138,2	1	0,000	1,812
	Grand-child	0,934	0,132	49,8	1	0,000	2,546
	Son/daughter in law	-1,097	0,061	326,2	1	0,000	0,334
	Other relatives	-0,930	0,067	194,7	1	0,000	0,395
	Age	1,717	0,018	9554,3	1	0,000	5,566
Registered refugee	Non-Refugee	-0,061	0,016	13,9	1	0,000	0,941
illiterate	**Educational attainment**			32483,4	6	0,000	
	Can read and write	0,284	0,035	66,6	1	0,000	1,329
	Elementary	0,573	0,031	330,5	1	0,000	1,773
	Preparatory	0,751	0,032	537,5	1	0,000	2,118
	Secondary	1,481	0,034	1931,5	1	0,000	4,399
	Associate diploma	3,810	0,034	12687,1	1	0,000	45,138
	Bachelor	4,128	0,038	12016,3	1	0,000	62,035
	Age Squared	-0,088	0,001	7951,3	1	0,000	0,916
	Household size	0,115	0,005	464,1	1	0,000	1,122
Female Head	Male head	0,077	0,048	2,6	1	0,109	1,080
	Demographic dep. Ratio	2,491	0,064	1492,6	1	0,000	12,079
Not single parent	Single parent	-0,490	0,044	125,6	1	0,000	0,612
Not only married couple	Only married couple	-0,864	0,051	292,4	1	0,000	0,422
Nuclear	**Household type**			358,1	3	0,000	
	Loner	1,915	0,104	338,8	1	0,000	6,786
	Extended	-0,032	0,020	2,5	1	0,117	0,969
	Complex	-0,426	0,111	14,9	1	0,000	0,653
No children	**Children below 15, and 5 in hh**			1422,4	2	0,000	
	Youngest child 5 to 14 years	0,934	0,025	1418,4	1	0,000	2,544
	Youngest child below 5 years	0,826	0,030	762,3	1	0,000	2,284
Not same refugee status	Same refugee status	-0,133	0,021	41,6	1	0,000	0,875
	Number of adults	-0,103	0,009	130,5	1	0,000	0,903
All in hh. illiterate	**Illiteracy of hh memb.**			137,0	2	0,000	
	At least one in hh. illiterate	0,437	0,092	22,8	1	0,000	1,547
	No illiterates in hh	0,231	0,020	134,3	1	0,000	1,259
All chron. ill/ injured	**Chronic illness/ injury in hh**			123,7	2	0,000	
	At least one chron. ill/ injured in hh	-0,772	0,283	7,4	1	0,006	0,462
	No chron. ill/ injured in hh	0,225	0,021	116,1	1	0,000	1,253
Not employed female in hh	Employed female in hh	-2,626	0,023	12510,4	1	0,000	0,072
	Dependency ratio	12,413	0,060	42904,9	1	0,000	245901,832
	Squared age of head	-0,003	0,000	189,4	1	0,000	0,997
Illiterate	**Completed education of Head**			136,1	8	0,000	
	Can read and write	-0,133	0,026	26,4	1	0,000	0,876
	Elementary	-0,115	0,028	17,6	1	0,000	0,891
	Preparatory	-0,042	0,031	1,9	1	0,170	0,959
	Secondary	-0,020	0,032	0,4	1	0,522	0,980
	Associate diploma	0,140	0,034	16,7	1	0,000	1,150
	Bachelor	0,088	0,034	6,8	1	0,009	1,092
	Higher diploma and above	0,042	0,052	0,6	1	0,421	1,043
	Not stated	-0,060	0,103	0,3	1	0,560	0,942
	Constant	-13,266	0,104	16166,8	1	0,000	0,000

Table 15 Estimated equation parameters for female unemployment

Reference category	Characteristic	B	S.E.	Wald	df	Sig.	Exp(B)
West Bank	**Region**						
	Gaza	-1,517398	0,121089	157,0	1	0,000	0,219
Jenin	Governorate			960,5	14	0,000	
	Tubas	-0,065705	0,116083	0,3	1	0,571	0,936
	Tulkarm	0,508143	0,056555	80,7	1	0,000	1,662
	Nablus	-0,40522	0,058724	47,6	1	0,000	0,667
	Qalqilia	-0,924581	0,12395	55,6	1	0,000	0,397
	Salfit	0,115405	0,095313	1,5	1	0,226	1,122
	Ramallah and Al-Bireh	-0,503651	0,06454	60,9	1	0,000	0,604
	Jericho	-0,309744	0,133332	5,4	1	0,020	0,734
	Jerusalem	-1,147801	0,104963	119,6	1	0,000	0,317
	Bethlehem	-0,086079	0,066542	1,7	1	0,196	0,918
	Herbron	-0,994932	0,072194	189,9	1	0,000	0,370
	North Gaza	-0,229216	0,159688	2,1	1	0,151	0,795
	Gaza	0,740097	0,118652	38,9	1	0,000	2,096
	Deir Al-Balah	-0,004378	0,141456	0,0	1	0,975	0,996
Rafah	Khan Yunis	-0,171935	0,143951	1,4	1	0,232	0,842
Urban	**Locality type**			1,6	2	0,444	
	Rural	-0,023411	0,036897	0,4	1	0,526	0,977
	Camp	0,052011	0,052738	1,0	1	0,324	1,053
	Relationship to the head			412,8	7	0,000	
	Spouse	-1,041072	0,083132	156,8	1	0,000	0,353
	Son/daughter	0,043052	0,099798	0,2	1	0,666	1,044
	Father/mother	-0,873476	0,126661	47,6	1	0,000	0,417
	Brother/sister	-0,229388	0,096909	5,6	1	0,018	0,795
	Grand-child	-0,007138	0,300084	0,0	1	0,981	0,993
	Son/daughter in law	-0,704954	0,134905	27,3	1	0,000	0,494
	Other relatives	-0,708168	0,135761	27,2	1	0,000	0,493
	Age	0,927863	0,033552	764,8	1	0,000	2,529
Registered refugee	Non-Refugee	0,065408	0,036428	3,2	1	0,073	1,068
illiterate	**Educational attainment**			3099,0	6	0,000	
	Can read and write	0,563873	0,082606	46,6	1	0,000	1,757
	Elementary	0,795099	0,075678	110,4	1	0,000	2,215
	Preparatory	1,06614	0,078335	185,2	1	0,000	2,904
	Secondary	1,426356	0,080829	311,4	1	0,000	4,163
	Associate diploma	3,000916	0,076142	1553,3	1	0,000	20,104
	Bachelor	3,030505	0,085333	1261,2	1	0,000	20,708
	Age Squared	-0,036205	0,00172	443,3	1	0,000	0,964
	Household size	-0,142498	0,013239	115,9	1	0,000	0,867
Female Head	Male head	0,174242	0,090189	3,7	1	0,053	1,190
	Demographic dep. Ratio	-0,316686	0,105059	9,1	1	0,003	0,729
Not single parent	Single parent	-0,148988	0,0804	3,4	1	0,064	0,862
Not only married couple	Only married couple	0,35266	0,081548	18,7	1	0,000	1,423
Nuclear	**Household type**			14,5	3	0,002	
	Loner	0,235151	0,120722	3,8	1	0,051	1,265
	Extended	0,147727	0,045831	10,4	1	0,001	1,159
	Complex	0,351113	0,199442	3,1	1	0,078	1,421
No children	**Children below 15, and 5 in hh**			11,5	2	0,003	
	Youngest child 5 to 14 years	-0,163691	0,054718	8,9	1	0,003	0,849
	Youngest child below 5 years	-0,065259	0,065495	1,0	1	0,319	0,937
Not same refugee status	Same refugee status	-0,273496	0,042702	41,0	1	0,000	0,761
	Number of adults	0,098197	0,019652	25,0	1	0,000	1,103
All in hh. illiterate	**Illiteracy of hh memb.**			11,7	2	0,003	
	At least one in hh. illiterate	-0,20532	0,125861	2,7	1	0,103	0,814
	No illiterates in hh	0,093429	0,047611	3,9	1	0,050	1,098
All chron. ill/ injured	**Chronic illness/ injury in hh**			6,2	2	0,045	
	At least one chron. ill/ injured in hh	-0,679944	0,273284	6,2	1	0,013	0,507
	No chron. ill/ injured in hh	0,000906	0,048253	0,0	1	0,985	1,001
Not employed female in hh	Employed female in hh	0,701193	0,052644	177,4	1	0,000	2,016
	Dependency ratio	-3,190054	0,11845	725,3	1	0,000	0,041
	Squared age of head	-0,000125	0,000516	0,1	1	0,808	1,000
Illiterate	**Completed education of Head**			82,5	8	0,000	
	Can read and write	-0,233292	0,063729	13,4	1	0,000	0,792
	Elementary	0,00532	0,065326	0,0	1	0,935	1,005
	Preparatory	0,091091	0,072608	1,6	1	0,210	1,095
	Secondary	0,012785	0,075027	0,0	1	0,865	1,013
	Associate diploma	-0,106196	0,080287	1,7	1	0,186	0,899
	Bachelor	0,119214	0,078652	2,3	1	0,130	1,127
	Higher diploma and above	0,087236	0,113089	0,6	1	0,440	1,091
	Not stated	0,897133	0,148441	36,5	1	0,000	2,453
	Constant	-8,773696	0,207815	1782,4	1	0,000	0,000

Developments in the West Bank and Gaza Labour Markets 1995-2001

By Geir Øvensen
April 2004

In this paper we use the quarterly PCBS labour force surveys in the West Bank and the Gaza Strip to highlight developments in some key labour market indicators before, and during the initial phase of the Second, "Temple Mount Intifada". The data have been downloaded from the home page of the Palestinian Central Bureau of Statistics (PCBS): http://www.pcbs.org/inside/selcts.htm.

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1) Summary of findings

This paper deals with the development in the size of the labour force, labour force participation rates, underemployment - including unemployment, and the main sectors of employment for workers from the West Bank and Gaza before, and during the Second Intifada.

Before the new Intifada, the West Bank and Gaza were two separate labour markets, linked together by the joint spending of the PA and the UNRWA, and competition for Israeli work permits. During 1995-2001 the labour force participation rates were constant, or slightly increasing, both for men and women, except for 2001. Together with the annual increase in the number of persons becoming of working age, caused by high fertility levels in the mid 1980-ies, this lead a relatively marked increase in the *absolute* size of the Gaza and West Bank labour force, up to 10 percent annually.

According to the PCBS data it seems that the labour markets in Gaza and the West Bank increased their ability to absorb the available manpower in the years after the Oslo accords. Labour force participation rates remained constant, or increased slightly. The composition of the labour force changed. Unemployment rates fell, and employment rates increased. Moreover, the share of underemployed (among the employed) dropped. These developments took place in spite of a strong increase in the working age population during the period, which in itself would put most labour markets under strain. From 1999-2000 and until the outbreak of the Second Intifada the positive trends were broken, and unemployment started rising again.

The Second Intifada has led to severe Israeli restrictions on Palestinian workers' mobility in particular, and economic activity in Gaza and the West Bank in general, which have largely transformed the West Bank labour market into local labour markets at the *city* level. The most apparent measured effect is the dramatic decrease in Palestinian employment in Israel or Israeli settlements. In Gaza employment in Israel or Israeli settlements virtually ceased. Movements within the Gaza Strip have been less obstructed, but the area has been strongly affected by economic isolation and warfare. Adding to these problems, there was a steady 3-4 percent annual increase in the working age population.

2) Introduction

In this paper we will discuss the development in key labour market indicators for the Gaza Strip and the West Bank before, and during the Second Intifada. The main focus will be on the development in the size of the labour force, labour force participation rates, underemployment - including unemployment, and the main sectors of employment.

In theory, the travel time by car between Gaza and the southern parts of the West Bank is less than one hour. However, already during the relatively quiet period after the "Oslo Agreements" and before the second Intifada, restrictions on Palestinian travel through Israel had turned the Gaza Strip and the West Bank into largely physically separated labour markets. Still, there were important links between the two regions' labour markets: First, because of the joint resource allocations of the Palestinian Administration (PA) and the UNRWA. Second due to the joint competition for Israeli work permits among workers from the two regions.

During the whole of this period the labour force in Gaza and the West Bank grew sharply, in some years up to 10 percent. This was mainly due to the high natural population growth, but also due to increased labour force participation. Nonetheless, the overall labour force participation in Gaza and the West Bank remained low, both in a World and in a regional perspective. The main reason was extremely low female labour force participation. In the West Bank it fluctuated at only at 15 percent.

In the Gaza Strip it was as low as 10 percent, less than half of the female labour force participation rate in most MENA countries.

In both regions there were three main types of employment. Locally, workers were employed in the private or in the public sectors (including the PA and the UNRWA). Moreover, many were employed in Israel, mainly as unskilled workers in the Agriculture and Construction sectors. Employment in Israel has traditionally been very well paid, relative to domestic employment. However, these higher wages were to some extent matched by substantial monetary and other costs associated with obtaining and holding Israeli employment, and the risk of interruptions in all Palestinian employment in Israel due to "security reasons".

Currently, the employment situation in Gaza and the West Bank is profoundly dominated by the war like effects of the Second Intifada. Since the Intifada erupted, there have been severe Israeli restrictions on Palestinian workers' mobility in particular, and economic activity in Gaza and the West Bank in general. Israeli mobility restrictions do not only affect employment in Israel and the Israeli settlements and industrial zones, but also domestic mobility within the West Bank, where the main towns have been separated from each other. Movements within the Gaza Strip have been less obstructed, although the area has been strongly affected by economic isolation and warfare. Another important underlying determinant is the steady 3-4 percent annual increase in the working age population.

3) Labour force participation

During the last five years prior to the "Temple Mount Intifada" the annual growth in the Palestinian labour force was higher than, or on pair with the *total* population growth, both in Gaza and the West Bank (Figure 1 and Figure 2).

Figure 1: **Annual growth rates in the West Bank total population and labour force**
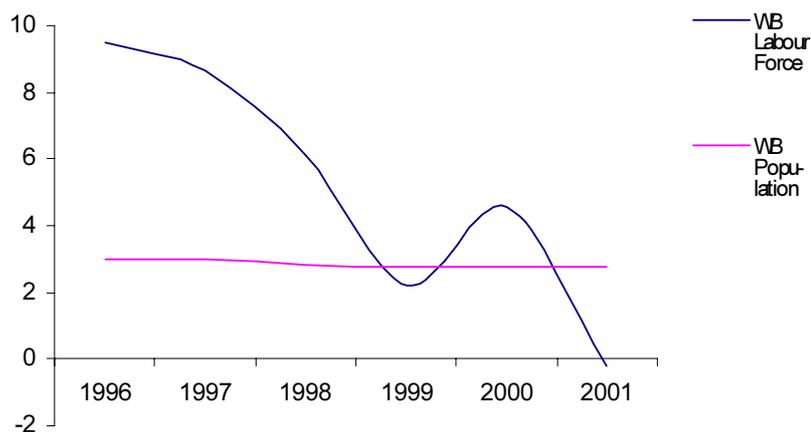
This occurred partially because the share of the working age population in the labour force increased slowly in the West Bank, and was constant in the Gaza Strip. Another reason was that the share of the population below work the working age dropped slightly, even though the generally high fertility

levels continued throughout the 1990's, in particular in Gaza[1]. During the whole period, the labour force participation rate in the West Bank was higher than in Gaza (Figure 3).

Figure 2: **Annual growth rates in the Gaza total population and labour force**
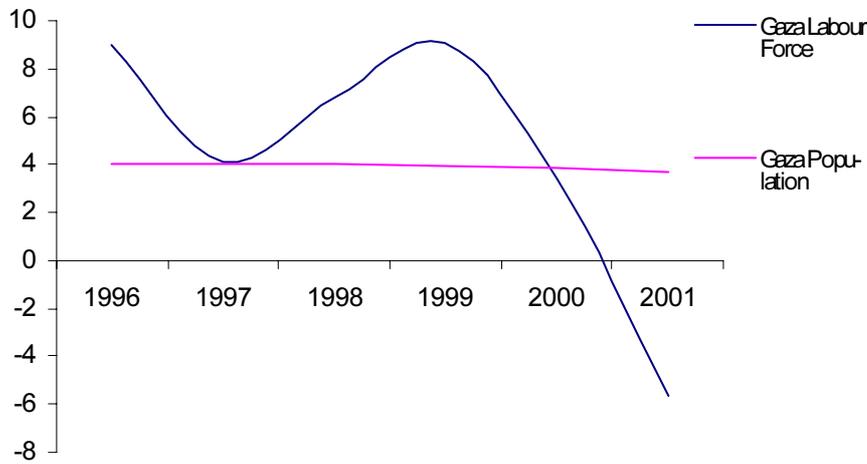
There was no dramatic change in the gender composition of the labour force during this period (Figure 4). The male labour force participation rate increased by 3 percentage points during the period, and the female by 1.5 percentage points. Due to the already low female participation rate, the *relative* percentage increase was higher for women. Most probably due to the Intifada, the participation level in 2001 dropped back to, or below the 1995 level for both sexes.

Figure 3: **Percentage of working age population in the labour force; by region**

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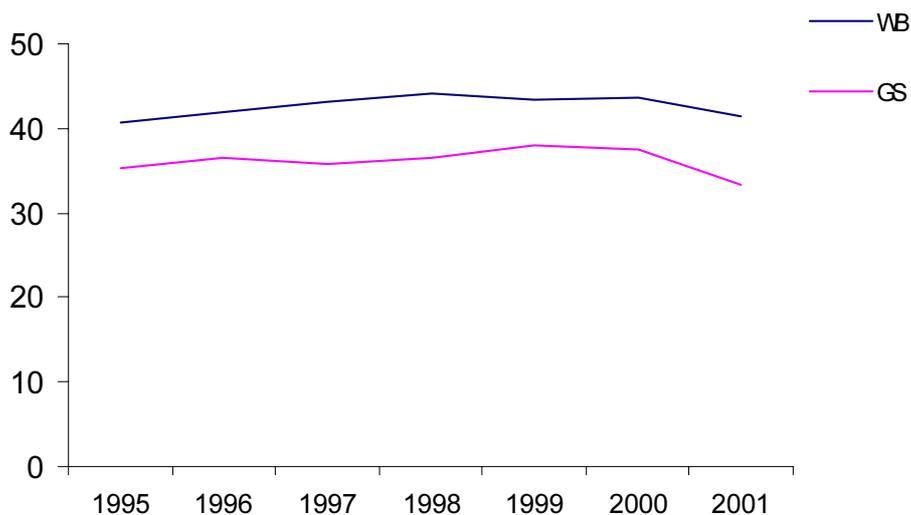
[1] (Due to the relatively few persons above 65 years, we have defined the working age population as all persons 15 years or more)

Figure 4: Percentage of working age population in the labour force; by gender
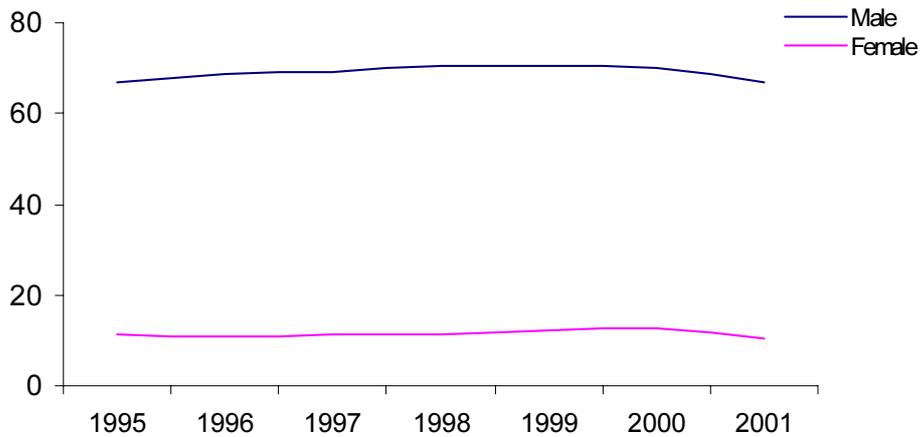
Due to high Palestinian fertility levels in the mid-eighties and low adult mortality rates, the growth in the absolute size of the working age population was high in both areas. Thus, an almost constant *share* of the working age population in the labour force was translated into a steady growth in the *absolute* size of the labour force, (Figure 5).

Figure 5 Persons in the labour force (1000); by main area
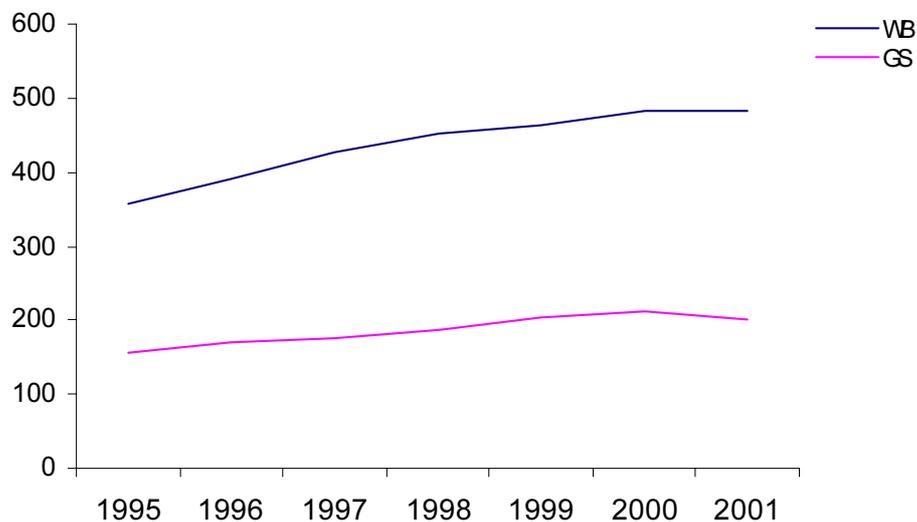
Summing up, the main developments in the Gaza and West Bank labour force during 1995-2001 were as follows: There was a steady increase in the size of the labour force until the Second Intifada. Except for 2001, the labour force participation rates were constant, or slightly increasing, both for men and women. Together with the annual increase in the number of persons becoming of working age, caused by high fertility levels in the mid 1980-ies, this lead to a relatively marked increase in the *absolute* size of the labour force.

4) Unemployment

As indicated above, unemployment is but *one* manifestation of under-employment of labour. The key definition "unemployment" is the combination of a person not even working one hour during the reference week, and at the same time *actively* trying to find work. The unemployed obviously face both a labour market and a welfare problem. However, in the total absence of savings, credit, or transfers from inside or outside the household, a person cannot "afford" to be unemployed, but must seek *any* type of work in order to cope. One should also note that the unemployment rate is measured as the number of unemployed as share of the *labour force*, neither as share of the total population, nor the working age population.

Figure 6 and Figure 7 show that the *absolute* number of unemployed in the West Bank and Gaza were at its lowest in 1988-89, and started to increase already prior to the Second Intifada. However, this does not directly translates into changes in the unemployment *rate* (shown in Figure 8 and Figure 9). Due to the steady growth in the size of the labour force in the late 1990-ies, the unemployment *rates* initially fell more, and subsequently increased less, than indicated by the *number* of unemployed *persons*. Still, it seems that there was a turning point in the positive developments in falling unemployment rates around 1999-2000.

Figure 6 West Bank and Gaza unemployment (1000), by year
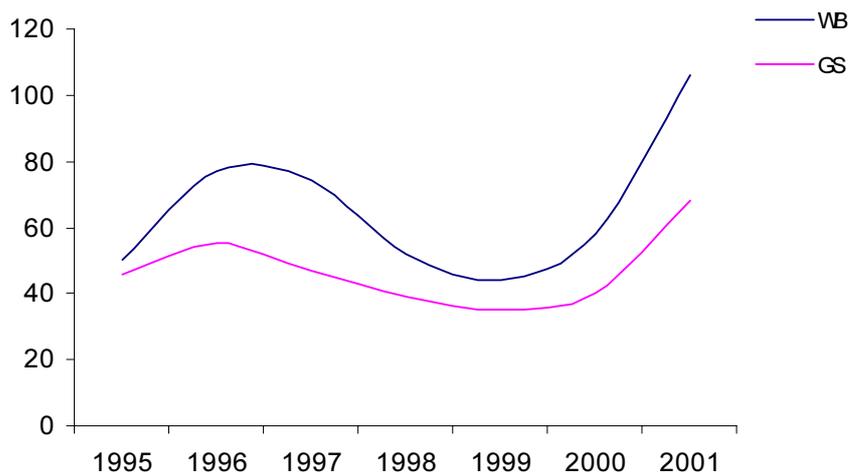
Figure 7 Annual percent change in West Bank and Gaza unemployment, by year
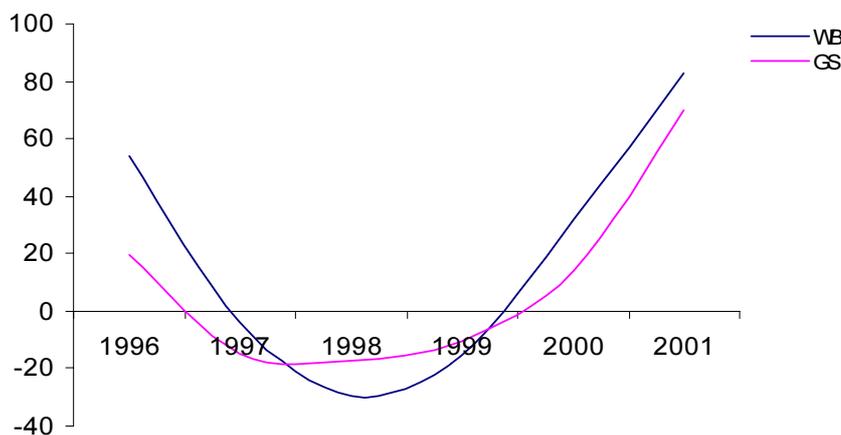
5) Under-utilization of labour

Formally, the labour force is made up of the "employed" and the "unemployed" persons. However, it is often useful to single out the "underemployed" persons from the group of the employed persons. This group is formally employed, but still suffers from employment problems[2].

The five-year period prior to the second Intifada was characterized by a steady increase in the share of employed persons in the labour force in both areas. In particular in Gaza the increase was so strong that the 1995 differences in under-utilization of labour between Gaza and the West Bank had almost disappeared when the second Intifada started, (Figure 9).

Figure 8 Composition of the West Bank labour force, by year
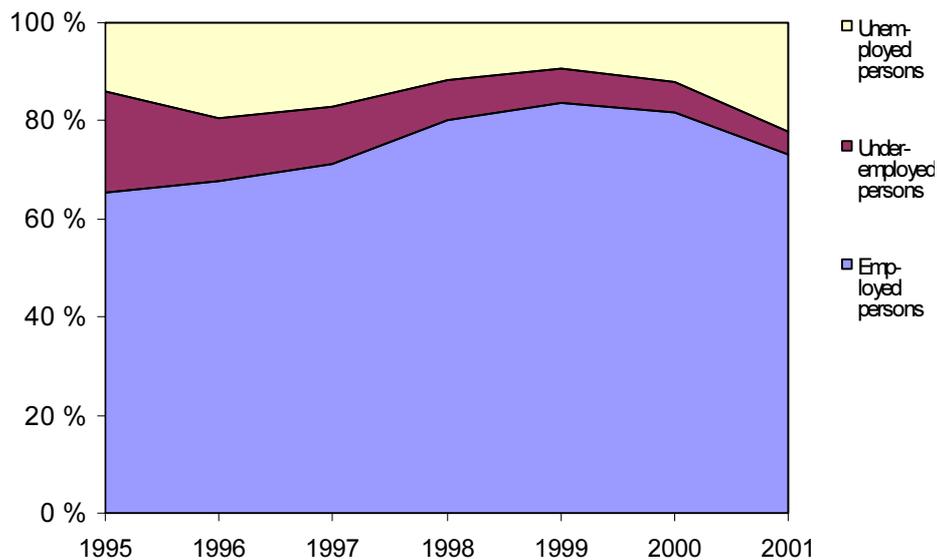
Figure 9 Composition of the Gaza labour force, by year

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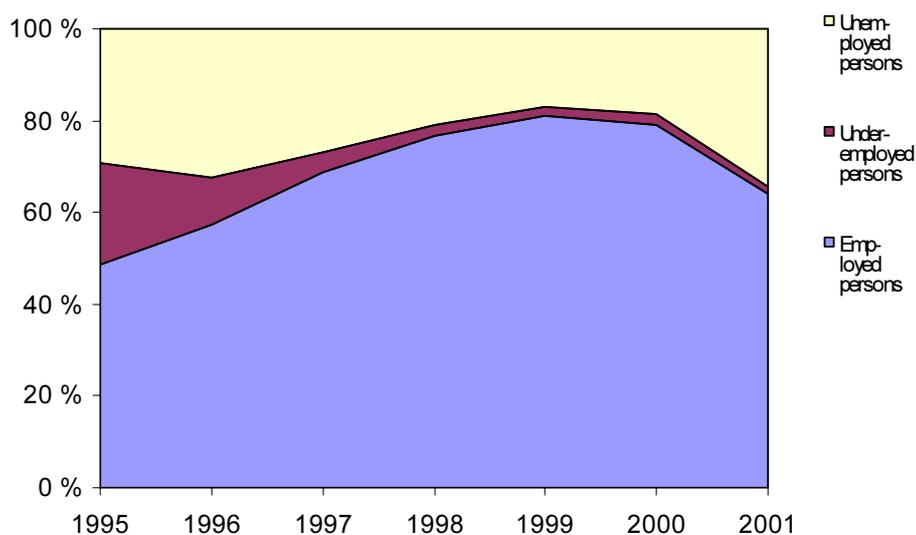
[2] See the PCBS web page referred to above for the exact definition applied

6) Employment sectors and the Second Intifada

As mentioned above the workers from the West Bank and Gaza work in three main sectors: Locally in each region, in the private or the public sector, or in Israel or Israeli settlements. The public sector includes employment in the Palestinian Administration and UNRWA, while the "private" sector includes waged workers, self-employed persons, and unpaid family workers.

In order to investigate the immediate employment effects of the Second Intifada in somewhat more detail, we have used *quarterly* employment data for 2001 and 2002, while data for 1999 and 2000 are *annual averages* (Figure 10 and Figure 11). The most apparent measured effect is the dramatic decrease in Palestinian employment in Israel or Israeli settlements from the first quarter of 2001 and onwards. In Gaza employment in Israel or Israeli settlements virtually ceased completely. In the West Bank the situation was less dramatic, probably because many persons were still employed in Israeli Settlements in the West Bank. Since the PCBS labour force data are based on household interviews conducted by Palestinians, it is reasonable to assume that "illegal" workers in Israel and Israeli Settlements are *included* in these figures[3].

Figure 10 Employed persons residing in the West Bank (1000's); by sector of Employment
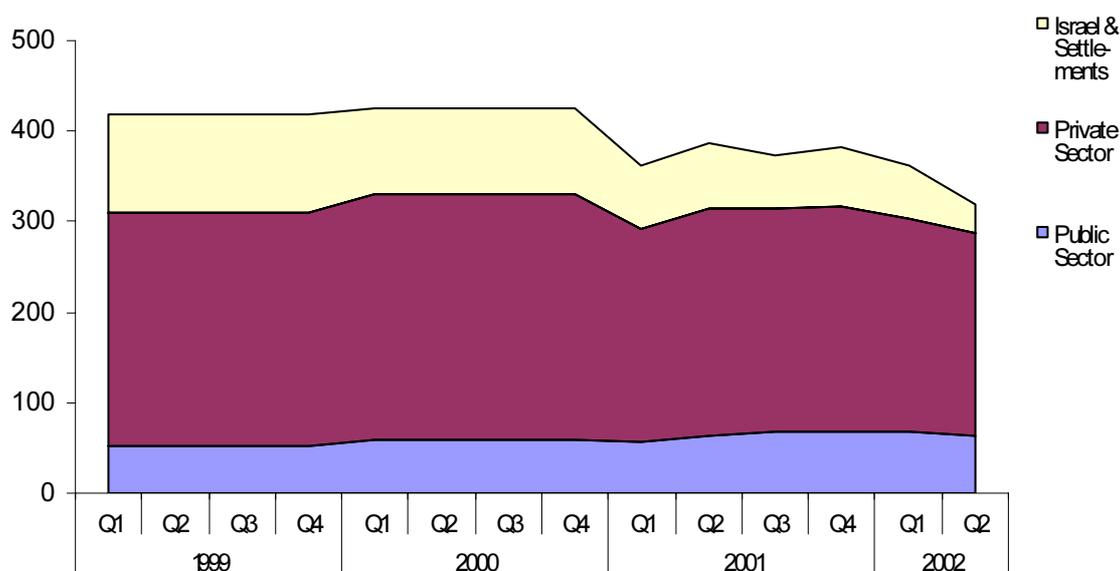
The seemingly constant number of employees in the public and private sectors does not reveal the probably strong changes in remuneration of workers in these sectors during the period[4]. While most public sector workers were paid even when they are not able to reach their work places, this was not common the private sector. Moreover, a large reorganization of the private sector probably also took place. Many waged workers became "self-employed" in the informal sector, at much lower income levels than their pre-Intifada employment, sometimes in spite of facing even longer working hours. Also not mentioned here is the frequently dramatic increased travel time faced by many workers.

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[3] Although excluding those (probably few) persons who also resided illegally in Israel, and who would consequently not be present for interviews in Gaza or the West Bank.
[4] For example, a 10 percent "Intifada tax" for workers employed with the PA was introduced.

Figure 11 Employed persons residing in Gaza (1000's); by sector of Employment
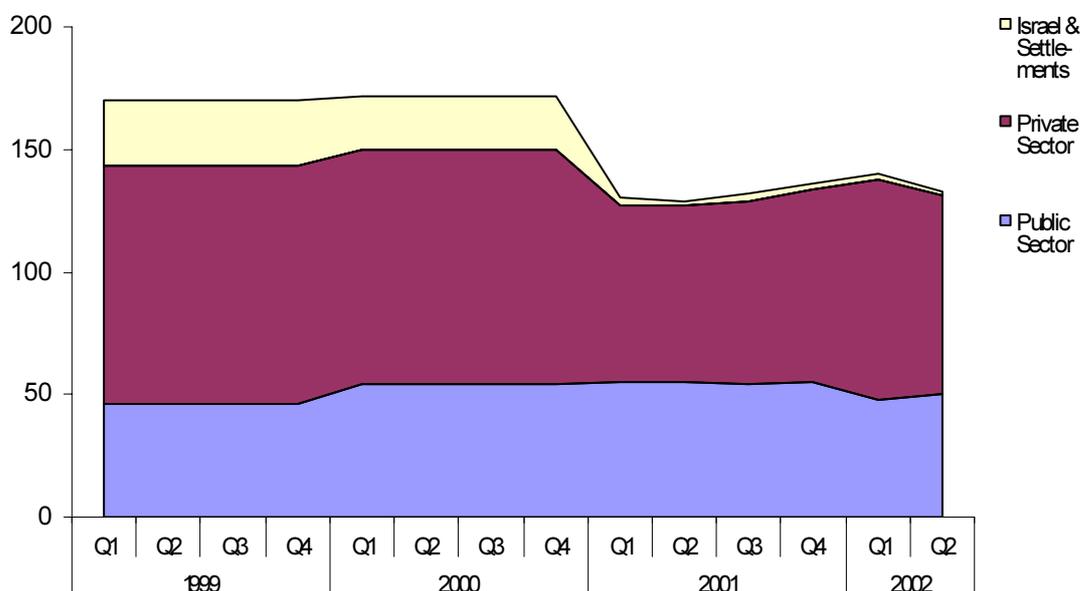
7) The labour market situation of refugees

The PCBS has not presented its labour force data in terms of refugee status. Hence, little statistics has been available about how (UNRWA registered) refugees fared at the labour markets in the West Bank and Gaza during the 1990-ies, relative to non-refugees.

The gross *statistical* effect of being a refugee is closely associated with the differences of living in Gaza relative to living the West Bank. The reason is that the refugee share is much higher in Gaza (2/3 of the population), than in the West Bank (1/3). Moreover, the share of refugees living in camps is also higher in Gaza than in the West Bank. The *net* effect of being a refugee (independent of the refugee's location) is probably much smaller[5].

Since Gaza has, at least initially, was harder hit by the Second Intifada than the West Bank, it is reasonable to assume that refugees in total have been stronger negatively affected than non-refugees. In particular with respect to loss of work in Israel and Israeli settlements we know that Gaza, and hence the refugees have been hardest hit in general. However, we would expect that those issuing Israeli work permits are much more concerned with Palestinian workers' security records than their refugee status. In this respect it is not likely that the Israeli authorities exert any *intentional* positive or negative discrimination according to applicants' refugee status.

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[5] Although one may argue that the main reason for Gaza's absolute and relative deprivation is *caused* by the enormous influx of refugees in 1948-49.

For public employment in the West Bank and Gaza it is reasonable to assume there are more systematic differences according to refugee status also *within* each region. Among UNRWA employees, 99 per cent are locally recruited Palestinians, almost all of them refugees[6]. We do not have corresponding figures for employment with the PA.

How refugees have fared during the Second Intifada compared to non-refugees in the private sector is still an undetermined issue. Once more Gaza, and hence refugees, are most negatively affected. In most societies one would have expected that refugees were worse off than non-refugees due to a relative lack of networks. However, the Palestinian refugees are a special case. In many cases villages and other communities both fled, and settled en bloc, to a large extent preserving their original networks and hence their opportunities for private support.

8) Conclusion

It seems that the labour markets in the West Bank and Gaza increased their ability to absorb the available manpower in the first years after the Oslo accords. Labour force participation rates remained constant, or increased slightly. The composition of the labour force changed. Unemployment rates fell, and employment rates increased. Moreover, the share of underemployed (among the employed) dropped. These developments took place in spite of a strong increase in the working age population during the period, which in itself would put most labour markets under strain.

From 1999-2000 and until the outbreak of the Second ("Temple Mount") Intifada the positive trends were broken, and unemployment started rising again. During the Second Intifada the situation has significantly deteriorated on all indicators, in particular in Gaza. The negative development in labour *income* is probably much stronger than in employment time. Because the standard ILO-indicators used here are time-based rather than income-based, expected decrease in wages are not manifest. The strongest decrease has been in employment in Israel or Israeli settlements, which used to be at the top of the wage ladder in the West Bank and Gaza. In Gaza employment in Israel or Israeli settlements virtually ceased completely.

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[6] http://www.un.org/unrwa/org/staff.html

Population Forecasts of
Palestinian Refugees 2000-2020

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Population Forecasts of Palestinian Refugees 2000 - 2020

The purpose of the present paper is threefold: First, two show how the Palestinian refugee population in Jordan, the Occupied territories, Lebanon and Syria may increase until 2020. Second, to show how the population growth affects the relative distribution of Palestinian refugees, provided there is no migration between the different areas. By extension, this also indicates the level of out-migration needed to reduce or keep constant the number of Palestinian refugees in any given area. Third, we will consider the diminishing numbers of the first generation refugees.

Summary of results

Currently the Palestinian refugee population counts some 3.34 million persons and is growing with about 78 thousand persons yearly, a growth rate of 2.3 percent. The growth rate is steadily diminishing, reaching 1.4 percent or 66 thousand persons in 2020, when the population will reach 4.6 million.

If we consider only the population outside of the West Bank and Gaza Strip the yearly increase is currently 36 thousand people (1.8 percent) and will be 26 thousand people (1.1 percent) in 2020.

The share of refugees in the West Bank and Gaza Strip increases from 40.7 percent in 2002 to 45.5 percent in 2020 due to the fact that the Gaza Strip increases it share from 23.1 percent to 28.1 percent in the period.

Around 8 percent or 274 thousand of the current Palestinian population are first generation refugees. This figure will rapidly diminish to only 2 percent in 2020. This percentage will differ somewhat in the different areas and the Gaza Strip will have a lower percentage than other areas.

The Methods and Data

The projection method used in this study is the so-called cohort-component method. The core of this method is to take the current population and its age and gender structure as point of departure, and then simulate that for each year into the future the various cohorts experience death as described by age specific death rates. Similarly for each year of the simulation the population is replaced by births as generated by simulating that the women of each age group give birth consistent with the age specific fertility rates.

The use of the cohort-component projection method defines the need for data: the size and structure of the population at present, and the description of change, i.e. the rates of births, death and migration. The bulk of the data used derive from surveys carried out by Fafo in cooperation with various partners in the West Bank, the Gaza Strip, Jordan, Lebanon and Syria (Table 1). They have been supplemented with official and other statistics from the areas.

Table 1: Fafo surveys used for forecasting the Palestinian refugee population

Survey	Year	Cooperating Partner	Sample			
			Coverage	*House-holds*	*Women 15-54*	*Events in birth history*
West Bank and Gaza demographic Survey (DS)	1995	Palestinian Central Bureau of Statistics	West Bank and Gaza Strip	15,683	16,204	78,490
Jordan Living Condition Survey (JLCS)	1996	Department of Statistics	Jordan	6,472	4,975	23,974
Lebanon Camps Survey (LIPRIL)	1999	Palestinian Central Bureau of Statistics	All camps and communities of Palestinians	3,629	2,899	11,977
Syria Camps Survey (LIPRIS)	2001	Palestinian Central Bureau of Statistics	All camps and communities of Palestinians			

A summary of the derivation of the estimates required for each projection is shown in Table 2, and discussed in more detailed below.

Table 2: Sources for Population Estimation of Population Parameters

Characteristic:	*West Bank and Gaza*	*Jordan*	*Syria*	*Lebanon*
Size of initial population	Palestinian census of 1997	Projection of Census 1994 by DOS (taking into account different regional growth rates)	LIPRIS, PCBS Census of Palestinians, adjusted with UNRWA enrolment figures	LIPRIL, PCBS Census of Palestinians
Age/sex distribution	Palestinian census of 1997	JLCS and projection of population by Department of Statistics of the Hashemite Kingdom of Jordan (DOS)	LIPRIS	LIPRIL
Refugee proportion	Demographic survey	JLCS	Not applicable	Not applicable
Mortality (In all cases life expectancy were estimated and the life table defined by the appropriate Coale-Demeny West model life table)	Demographic Survey, Matched and smoothed from direct infant/child mortality estimates and adult orphanhood estimates using Coale-Demeny West model life tables	JLCS, Matched and smoothed from direct infant/child mortality estimates and adult orphanhood estimates using Coale-Demeny West model life tables	LIPRIS, Matched and smoothed from direct infant/child mortality estimates and adult orphanhood estimates using Coale-Demeny West model life tables	Matched from child mortality estimates using Coale-Demeny West model life tables
Total and age specific fertility rates	Demographic Survey, directly calculated from 90-94 birth history	JLCS, directly calculated from 91-95 birth history	LIPRIS, directly calculated from 1996-2000 birth history	LIPRIL; Directly calculated from 94-98 birth history

The Initial Population and the Number of Refugees

Finding the initial population for the projection amounts to estimating the number of Palestinian refugees. The determination of that number depends on the definition of a Palestinian refugee. While this definition is controversial, in this paper the simple expedient of counting as refugees those that identify themselves as refugees has been chosen. In practice this definition is very close to that operationally used by UNRWRA because the UNRWA definition is

considered as valid by the refugees. UNRWA has defined as eligible for their support a person who:

> "…whose normal place of residence was Palestine during the period 1 June 1946 to 15 May 1948 … and who lost both his home and means of livelihood as a result of the 1948 conflict, and took refuge in 1948 in one of the five countries or areas where UNRWA provides relief. Refugees within this definition and their direct descendants are eligible for UNRWA assistance if they are: registered with UNRWA; living in areas of UNRWA operations; and in need…" (UNRWA 1990:6 cited here after Artz 1997:60-70).

In this paper there is no distinction between those that say they are refugees and who are registered by UNRWA and those that consider themselves refugees and who are *not* registered. The difference pertains to a rather small part of the population (in the West Bank and the Gaza Strip about 3.6 percent of the total refugee population or 1.5 percent of the population resident), and stems mainly from the fact that some who lost their home, but not their livelihood were not registered originally. Also, some were for various other reasons not registered. A key feature of the definition is the inclusion of descendants, with the implicit assumption that Palestinian rules of descent are employed, i.e. descent in the male line only, but unlimited in depth.

The size of the West Bank and Gaza Strip population has been determined using the Palestinian census of 1997. This census yielded somewhat lower figures than many would have thought, but they where broadly consistent with the demographic survey of 1995 carried out by the Palestinian Central Bureau of Statistics and Fafo, and also with previous projections.

The refugee population in Jordan was estimated from the 1996 Jordan Living Conditions Survey (JLCS) and the population growth of the total population was estimated by the Department of Statistics on the governorate (regional) level. Since the fertility of Palestinian refugees and Jordanians do not differ much, the percentage of refugees from JLCS was then used to estimate the number of refugees in 1998. It is possible that the fertility decline has been somewhat faster than what the Department of Statistics used in their estimates, if so the population of Jordan has been slightly overstated.

The Palestinian populations of Syria and Lebanon are more difficult to estimate. The Palestinians make up a small proportion in either country, so national surveys have limited use because of the wide sampling error one may expect. Moreover, neither country has good estimates of its total population or sub-groups. Lebanon carried out its last census in 1932. Syria's latest census took place in 1994, but the quality of the updating of population figures to the present is uncertain.

The Palestinian Central Bureau of Statistics (Damascus Branch) has carried out censuses of Palestinians in both Lebanon and Syria. In Lebanon this took place in 1999, in Syria in 2000. The procedure was in both cases the same. The PCBS made a complete census of all camps and all known clusters of Palestinian refugees larger than approximately 25 households. This procedure obviously misses some of the refugees, namely those that live isolated from other Palestinians, and also clusters that were not known to PCBS.

How large proportions of the refugees that are missed in the two countries is difficult to say. Some indication is given by enrolment rates in primary school. UNRWA provides number of children enrolled, and this number can also be estimated from the surveys. If we assume that all children that are enrolled are enrolled in UNRWA schools, we can estimate the missing population by first calculating the ratio of children reported enrolled by UNRWA to enrolment reported in the surveys. Then, if we assume that the proportion of adults missing is the same as the proportion of children missing the UNRWA/Survey-ratio can be used as a multiplier for the survey population estimate to arrive at total population estimate. The method disregards children attending government or private schools. The biases introduced by attendance in schools outside the UNRWRA system are especially serious in Lebanon, where enrolment in such schools are more important than in Syria. We have therefore only attempted the correction in Syria, with varying assumptions (Table 3). As the table shows, the population with which the comparison is done is quite important.

Table 3: Correction of Total Population Using Enrolment Figures in Syria

Assumption (Population included)	Enrolled according to UNRWA	Enrolled in UNRWA schools according to survey	Adjust-ment factor	Population according to survey and census	Adjusted population (thousands)
All UNRWA schools	43,398	31,820	1.93	172,569	333
Only primary	23,928	43,398	1.81	172,569	313
Only primary 7-12	21,542	34,731	1.61	172,569	278

The population registered by UNRWA at midyear 2000, i.e. 383,000, is far higher than the population estimated here. Even the highest estimates is only 87 per cent of the UNRWRA one and the lower makes up only 73 percent. There are at least two reasons why the UNRWRA figure may overestimate the population. First, UNRWRA registers the population with respect to de-jure status in its fields of operation, rather than actual residence. Thus, a person that lives in Europe or the Gulf may be registered in Lebanon. Second, the registration of deaths is deficient (see Endresen and Øvensen 1994) leading to too many people at high ages remaining in the registers. This, of course, may also be a result of the residence outside of the field.

The PCBS (Damascus) believes that around 291 thousand refugees actually live in Syria. Like ours it is based on comparison with enrolment, but use the PCBS-census instead of the survey. We will use that figure, since that will maintain consistency between the PCBS estimation and ours and also because it appears as a reasonable choice between the various assumptions that can be made with regard to which age groups to use in the correction of the population size using enrolment data.

In Lebanon, development of the sample frame for the 1997 Living Standards Survey (CAS) estimated the number of Palestinian refugees to 196,500, including those in camps. Another survey estimated the number as 67,650 in 1994-96, but then excluding camp dwellers (Household and Population Survey of the Ministry of Social Affairs). Simple mathematics would then suggest around 130 thousand camp dwellers, while UNRWA suggests 210 thousand in the camps in

June 2000 and 376 thousand altogether. The 1998 PCBS/Fafo survey found a total of 101 thousand people in the camps. That figure is roughly comparable to those of the Lebanese national surveys, especially given that the sampling variability of the Lebanese estimates is likely to be quite large because of the interaction between the cluster samples and the concentration of Palestinians in particular areas. On the 196,500 estimate, for example, one would expect, based on description of the sample design experience from surveys on Palestinians in other areas of the Middle East, a confidence interval spanning from perhaps 155 to 240 thousand refugees.

In both Syria and Lebanon we have made two projections: one for the population living in the camps, and one for the estimated total population. The camp projection has the benefit that it starts out with a well known size of the population, but the drawback that due to migration out of the camps it cannot be assumed to be a realistic projection of the future population of the camps. The total population projection has the benefit of being more realistic with respect to internal migration, but the population size at the start is more uncertain.

In all cases we have accepted the age sex-distribution as recorded in the surveys without smoothing. While there are some irregularities in the distributions, it is difficult to smooth these out without at the same time removing real features of the population, such as a deficit of adult men due to migration.
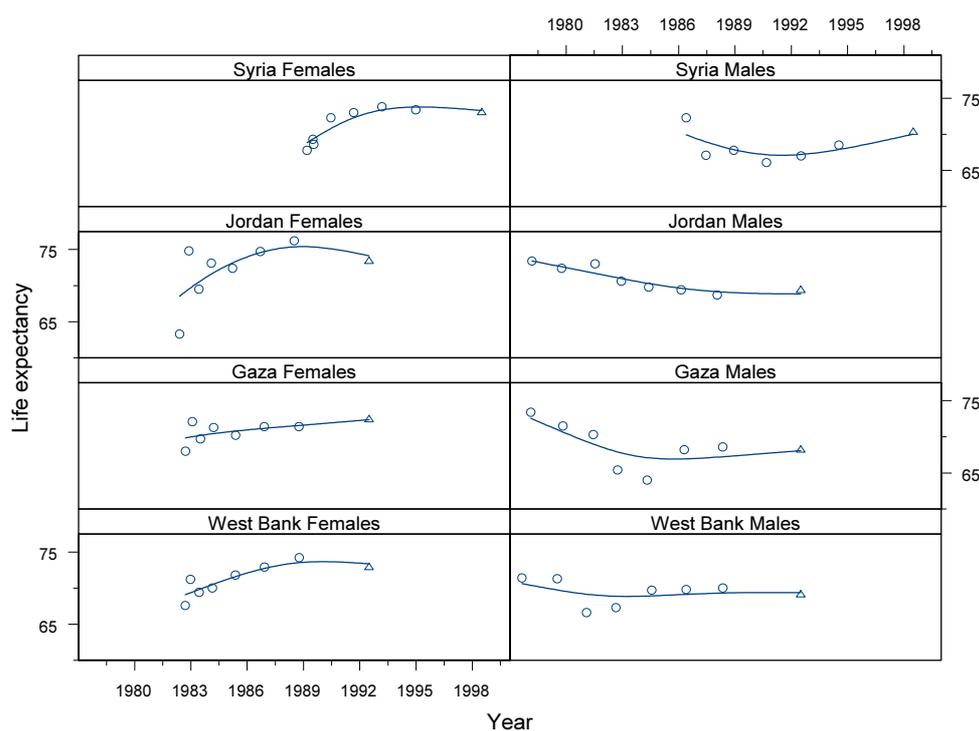
Figure 1: Development of Life Expectancy for Palestinians by Gender. Smoothed line is a Cubic Spline. Circles represent estimates derived from orphanhood data, triangles from infant mortality data.

Mortality

As noted age specific mortality rates (or in fact survival rates) are necessary in order to properly project the population using a cohort-component model. In all areas these have been obtained by estimating life expectancy. Thereafter, the so-called Coale-Demeny "West" model life table corresponding to the life expectancy has been used to find the actual survival rates for each year.

Table 4: Estimated Life expectancy in year 2000

Region	Males			Females		
	Life expectancy at birth (years)			Life expectancy at birth (years)		
	Last 4 estimates	Regression	Regression estimate of yearly increase (years)	Last 4 estimates	Regression	Regression estimate of yearly increase (years)
West Bank	69.6	68.5	-0.06	72.9	78.3	0.48
Gaza	67.2	63.8	-0.30	71.4	74.5	0.25
Jordan (refugees)	69.3	65.3	-0.34	74.2	80.9	0.59
Lebanon	67	NA	NA	72.4	NA	NA
Syria	68.0	69.8	0.20	73.3	74.1	0.26

Life expectancy at birth is the mean number of years a person may expect to live when he or she is born. All else being equal a population will obviously grow

faster when people can expect to live long than if they have a short life span. Moreover, the distribution of the population across age groups depends on when people die: the same average life expectancy may be achieved with a combination high infant mortality and low adult mortality or with a combination low infant mortality but high adult mortality.

Life expectancy should ideally be estimated from observed deaths at different ages. This is however not possible, because there is no proper vital registration of Palestinian refugees.
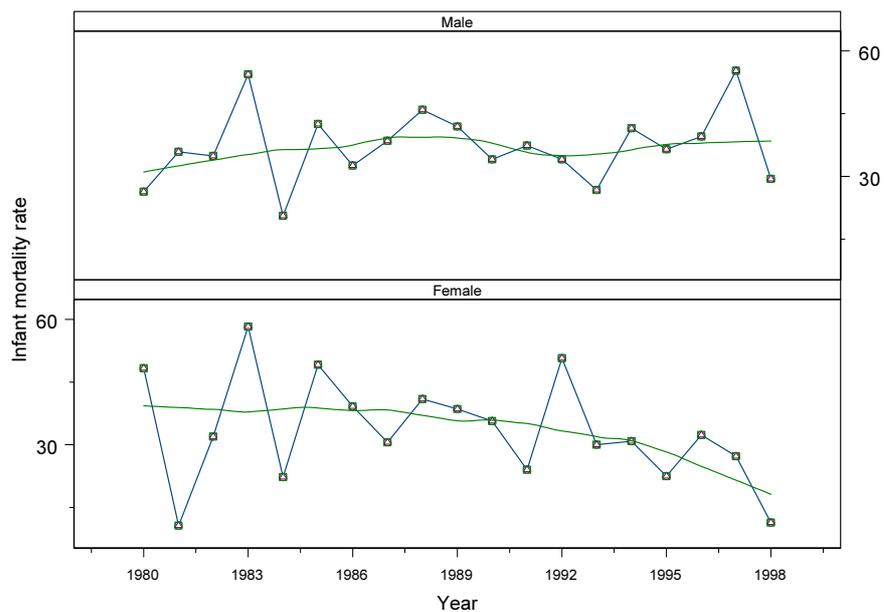
Figure 2: Trends in Infant Mortality among Palestinian Refugees in Lebanon (line is a loess smooth)

In order to circumvent the limitations of the data we have combined two sources of information: First, we have gauged adult mortality by the so-called orphanhood method, i.e. from reports that children give of whether their parents are still alive. From the conditional survival probabilities found by this method life expectancies can be estimated under the assumption that a given mortality pattern is valid. In this case we have used the Coale-Demeny "West"-model. Second, we used infant mortality data to find corresponding life expectancies, again given that the age distribution of mortality follows the Coale-Demeny "West"-model.

The resulting estimates have different location in time, and they have been combined using two methods: linear regression and the simple expedient of using the average of the four most recent estimates. While linear regression may be deemed preferable because it can be used to suggest the likely development of the life expectancy, it shows that the development of the life expectancy does not follow a straight line, and in most cases the life expectancy seems to be stable for the most recent period. Somewhat puzzling is the suggestion revealed in that male life expectancy has decreased while female has increased when we

consider the adult mortality data. Since the trends are difficult to interpret, the mean of the last four estimates are used (Table 1) and we will assume no change in mortality rates in our forecast. On average we find that Palestinian life expectancy is about 68 years for men and 73 years for women.

Lebanon has been treated differently from the other cases. The orphanhood data were not reliable, suggesting ridiculously high life expectancies. Therefore we have only used infant mortality data in this case. One should note that in contrast to other areas the infant mortality of Palestinian refugees in Lebanon has not changed much in recent years (Figure 2), although there may have been a reduction of the mortality of girls.

Fertility

There are three main characteristics of Palestinian refugee fertility. First, during the early 1980ies it was at quite high levels, each Palestinian woman on the average giving birth to an average of 6 to 8 children during her lifetime. Second, there has been a dramatic fertility reduction, with a decrease of one child in the average lifetime number (i.e. the total fertility rate) approximately every seventh year. Third, the exception is the Gaza Strip, where the surveys show no or little evidence of a fertility decline. (It should be noted, though, that the Palestinian Census of 1997 shows some evidence, but this is inconsistent with the survey results).
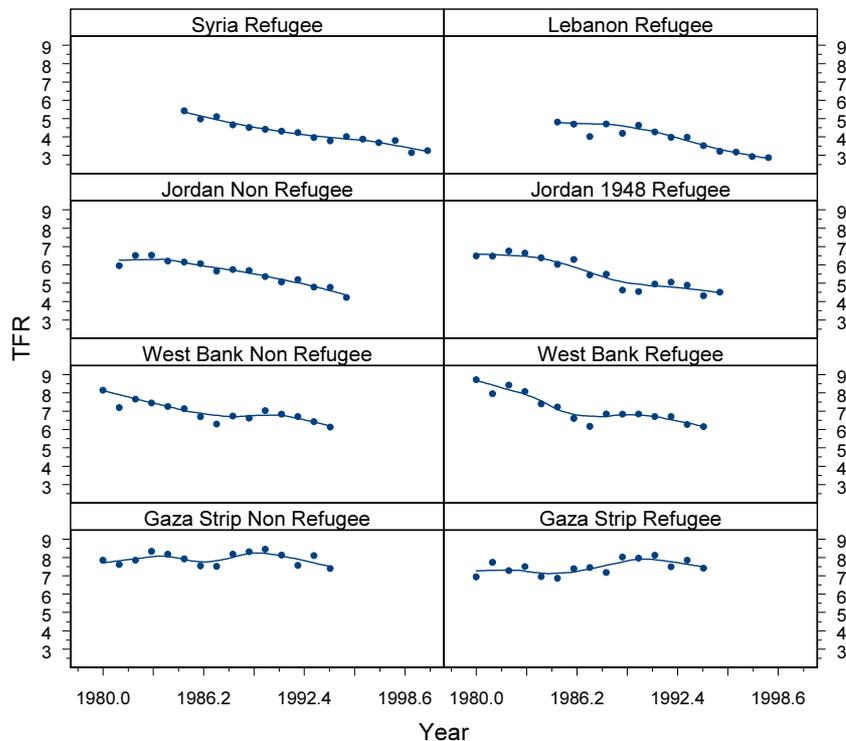
Figure 3: Development of Total Fertility Rates

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Table 5: Projection of Development of Total Fertility Rates

Refugees	Regression results			Projected value for year					Years for one child change	Year of achieving replacement fertility
	Intercept	Year	R-square	2000	2005	2010	2015	2020		
Jordan	341.676	-0.169	0.853	3.5	2.6	1.8	0.9	0.1	-5.9	2008
Syria	261.755	-0.129	0.930	3.2	2.5	1.9	1.2	0.6	-7.7	2008
Lebanon	303.614	-0.151	0.849	2.6	1.9	1.1	0.4	-0.4	-6.6	2003
West Bank	320.932	-0.158	0.749	5.1	4.3	3.6	2.8	2.0	-6.3	2019
Gaza	-82.437	0.045	0.257	8.0	8.2	8.4	8.6	8.9	22.1	-
Non-Refugees										
Jordan	288.599	-0.142	0.877	3.8	3.1	2.4	1.7	1.0	-7.0	2012
West Bank	202.741	-0.099	0.673	5.7	5.2	4.8	4.3	3.8	-10.2	2037
Gaza	8.992	-0.001	0.000	8.0	8.0	8.0	8.0	8.0	-2,000.0	-

While the trends in fertility in the different areas are not completely linear (Figure 3) they are close to being so (Table 5). When the line that can be drawn through the data points is extended into the future, it can be seen that the year at which replacement fertility is reached varies from 2003 in Lebanon to 2019 in the West Bank. For the Gaza Strip no estimate can be given. Replacement fertility is the number of children a woman must bear in order just to replace the population from one generation to the next. Given that some children die before reaching reproductive age, it is approximately 2.1 children. The population may continue to grow for a while even when replacement fertility is reached. This is related to the age distribution. A history of high fertility in a population will have led to a dynamic where the number of people at reproductive ages will increase until the number becomes stationary when the children born to the first replacement fertility generation reaches reproductive age.

Predicting how low Palestinian fertility will get is a matter of guesswork. There are no Arab countries that may serve as models, and in any case there is considerable variation within the Arab world. If we consider Western European countries where fertility has fallen below replacement levels, the various countries exhibit quite different patterns and levels. For example, Italy currently has a very low total fertility rate (around 1.1), while fertility in the Scandinavian countries hover at slightly below replacement levels.

Here we will assume that for all areas except Gaza the linear trend will continue until the projected achievement of replacement fertility. Then the trend will level out and there will be a slow decrease and convergence between all the areas to a level of 1.8 in 2020. In order to avoid an unrealistic sharp change in the fertility trends at the time when the replacement level is reached the resulting trends have been smoothed using a logistic function. Apart for the more realistic smooth overall change the main result of this is that the time when replacement fertility is reached is moved to a later date, as the fertility change will be slower the lower the level of fertility.

The West Bank and the Gaza Strip has been treated differently. Given the linear projection, the West Bank does not quite reach a level of 1.8 in 2020. Therefore, the convergence in 2020 is not applied in the case of the West Bank. It should

be noted that even so the fertility decline in the West Bank stipulated here is more rapid than the one used by the Palestinian Central Bureau of Statistics.

For the Gaza Strip The Palestinian Census of 1997 provides a TFR of 6.91 for 1997 (for the refugee and non-refugee population together). This may suggest a prolongation of the downward curve seen in Figure 3 and thereby the start of a rather rapid fertility decline, but this conjecture is at best dubious. The figure may just as well stem from the different estimation methods employed in the census and the survey, or reflect the general slightly fluctuating high fertility that has been seen in the Gaza Strip up to now. The assumption used here, is that the Gaza Strip was at the verge of a fertility decline in 1995 and that it will follow a similar path as the other areas, with decline in TFR of –0.15 children per year, being the mean of the observed decline among refugees in Jordan, Syria, Lebanon and the West Bank. This corresponds to a decline from 7.93 in 1992 to 3.68 in 2020.

The development of the age specific fertility rates is another issue that must be considered. The change in the age specific fertility rates that we observe is partly a shift from early onset of childbearing to later. The UN Standard Arab fertility model does not appear appropriate, because it even at low fertility specifies comparatively early onset. We have therefore used the current fertility pattern of Syrian women with high education as a model for fertility in the future.

Results

The projection shows that currently the Palestinian refugee population counts some 3.34 million persons (Table 6). The population is currently growing with about 78 thousand persons yearly, a growth rate of 2.3 percent. The growth rate is steadily diminishing, reaching 1.4 percent or 66 thousand persons in 2020, when the population will reach 4.6 million.

Table 6: Numbers of Palestinian Refugees 2002-2020 (1000's)

Year	West Bank	Gaza Strip	Jordan	Lebanon only Camps	Lebanon including non-camp	Syria only camps	Syria including non-camp	Total including estimated non-camp
2002	585	772	1,484	106	198	159	296	3,335
2005	628	854	1,563	110	206	166	309	3,561
2010	692	996	1,681	117	218	177	330	3,918
2015	749	1,143	1,790	123	229	188	350	4,261
2020	801	1,293	1,895	129	240	198	368	4,598

If we consider only the population outside of the West Bank and Gaza Strip the yearly increase is currently 36 thousand people (1.8 percent) and will be 26 thousand people (1.1 percent) in 2020.

Because of the different growth rates of the West Bank and Gaza Strip compared to the other areas the share of refugees accounted for by the West Bank and Gaza Strip increases from 40.7 percent in 2002 to 45.5 percent in 2020. This relative increase is exclusively accounted for by the Gaza Strip, which increases it share from 23.1 percent to 28.1 percent. In fact, because the Gaza Strip projection depends on the uncertain assumption that a fertility decline has started there, the Gaza share may well be larger in the future if the decline does

not take place or is less rapid than assumed here. The percentage distribution is shown in Table 7.

Table 7: Distribution of Palestinian Refugees 2002 - 2020 (percent)

Year	West Bank	Gaza Strip	Jordan	Lebanon including non-camp	Syria including non-camp	Total with estimated non-camp
2002	17.5	23.1	44.5	6.0	8.9	100
2005	17.6	24.0	43.9	5.8	8.7	100
2010	17.7	25.4	42.9	5.6	8.4	100
2015	17.6	26.8	42.0	5.4	8.2	100
2020	17.4	28.1	41.2	5.2	8.0	100

Around 8 percent or 274 thousand of the current Palestinian population are first generation refugees. Naturally, this figure will rapidly diminish because of the age of the first generation (Table 8).

Table 8: Numbers of First Generation Palestinian Refugees 2002 – 2020 (1000's)

Year	West Bank	Gaza Strip	Jordan	Lebanon only camp	Lebanon including non-camp	Syria camps	Syria including non-camp	Total with estimated non camp
2002	44	48	134	10,525	21,295	14,419	26,959	274
2005	39	43	120	9,321	18,831	12,884	24,109	245
2010	31	33	97	7,291	14,707	10,283	19,242	195
2015	22	24	72	5,329	10,732	7,643	14,301	144
2020	15	16	49	3,546	7,143	5,166	9,668	97

In 2020 only 2 percent of the population will be first generation. The percentage will differ somewhat in the different areas. This is because of the different fertility rates. When a population is growing fast many children are born, effectively reducing the proportion of old people. Thus, the Gaza Strip will have a lower percentage of first generation refugees than other areas in 2020.

Table 9: First Generation Palestinian Refugees 2002 – 2020 (percent)

Year	West Bank	Gaza Strip	Jordan	Lebanon only camp	Lebanon including non-camp	Syria camps	Syria including non-camp	Total with estimated non camp
2002	8	6	9	10	11	9	9	8
2005	6	5	8	8	9	8	8	7
2010	4	3	6	6	7	6	6	5
2015	3	2	4	4	5	4	4	3
2020	2	1	3	3	3	3	3	2

In 2002, still 29,5% of the total refugee population in the region lived in refugee camps. Of the total number of camp dwellers (984,000 persons) 502,000 persons lived in Jordan, Lebanon and Syria.

Table 10: Population living in refugee camps (1000's)

Year	West Bank	Gaza Strip	Jordan	Lebanon	Syria	Total camp population
2002	135	347	237	106	159	984

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Possession of Assets in Gaza and the West Bank:

Do Refugee Status or Camp Residence Matter?

By Geir Øvensen
November 2003

In this paper we use the 1997 PCBS Census in the West Bank and the Gaza Strip to investigate whether possession of assets are linked to refugee status and refugee camp residence. More information about the data used can be found on the home page of the Palestinian Central Bureau of Statistics (PCBS): http://www.pcbs.org/inside/selcts.htm.

Table of contents

1) Summary of findings

This paper has two main topics. First, can Palestinian 1948 refugees be clearly distinguished from non-refugees with respect to their economic situation? Second, does refugee camp residence have any independent effect on the economic situation of households in the Gaza Strip and the West Bank?

Our main data source is a 10% sample taken from the 1997 PCBS Census. In an earlier paper we used Census employment data as indicator for *current* household income. Due to short reference periods for employment questions and fluctuating labour market conditions, we must use other indicators for the *long*-run economic situation of households. Because the census - in accordance with common practice - did not contain information about household income and consumption, we have used an index of household assets and infrastructure as a proxy for long-run household wealth. The construction of the index is described in general in section 4, and in detail in the Appendix.

Several factors could be expected to cause refugees in general, and camp refugees in particular to be economically disadvantaged: The 1948 refugees lost most of, or all their productive means when they fled, many camps are "artificial" societies without a natural economic base or infrastructure and the physical structure of the camps obstructs many types of economic activity. Somewhat surprising the paper on employment found that the relatively long time span from 1948 to 1997 have erased many of the factors originally causing (camp) refugees to be disadvantaged, at least *within* the West Bank and *within* the Gaza Strip.

Our current investigation shows that overall, refugee status and refugee camp residence have little, effect on asset possession in the Gaza Strip and in the West Bank. In both areas refugees are at least as well off as non-refugees. In both areas rural localities are worse off than refugee camps, and in Gaza, refugee camps are "better" off than other localities. Governorate of residence is more important for a household's score on the asset index than refugee status.

In contrast to the pattern for employment activity, we do neither observe a "refugee", nor a "camp", nor a "Gaza effect" on the asset index scores. An important reason for this result is that the asset index includes infrastructure assets, such as piped water, sewage and grid electricity. These are generally less available in the rural and hilly areas of the West Bank than in the flat and sandy Gaza Strip where the UNRWA has played a pivotal role in the upgrading the refugee camp infrastructure.

West Bank refugee camps are somewhat disadvantaged compared to other urban localities. However, because relatively more non-refugees live in the rural areas, and because the refugee camps - with their relatively developed infrastructure – are almost exclusively inhabited by refugees, the group of refugees as a whole has at least as high average score on the asset index as non-refugees. Rather than refugee status, proximity to major population centres is important. The highest scores are found in the Greater Jerusalem area (including Bethlehem and Ramallah), and Nablus, regardless of locality type.

In conclusion, the relatively long time span from 1948 to 1997 has led the economic situation for refugees and non-refugees to converge. The urbanization process in both areas, and in particular Gaza, has obviously been an advantage for the refugees, because they right from the outset found shelter in urban areas. The fact that the camps seem to have been integrated into the local urban economies where they are situated, have prevented the camps to be transformed into poor neighborhoods that *generally* attract refugees and non-refugees with economic problems.

2) Introduction

The aim of this paper is to discuss whether refugee status and refugee camp residence are important determinants in the long-term economic situation of households in the Gaza Strip and the West Bank. Can Palestinian 1948 refugees be clearly distinguished from non-refugees with respect to their economic situation? Does refugee camp residence have any independent effect on the economic situation of households in the Gaza Strip and the West Bank, compared to residence in other types of localities?

In an earlier paper we have used employment data as indicators for a household's *current* income[1]. Because income from employment is the most important income source, the employment situation of the households is essential for assessing the households' ability to generate current incomes. However, due to short reference periods for employment questions and changing labour market conditions, we must use other indicators for the *long*-run economic situation of households.

In the paper mentioned above, we listed several factors that could be expected to cause differences between the employment opportunities of refugees and non-refugees, and between camp residents and residents living in other types of localities: The 1948 refugees lost most of, or all their productive means when they fled, many camps are "artificial" societies without a natural economic base or infrastructure, the physical structure of the camps obstructs many types of economic activity, and over time the camps may host particularly poor refugees with labour market problems.

Somewhat surprising, our results showed that the relatively long time span from 1948 to 1997 have erased the differences between the employment situation of refugees and non-refugees, at least *within* the West Bank and *within* the Gaza Strip. Similarly, the strongly refugee dominated UNRWA camps seem to have been well integrated into the local urban economies, without ending up as neighborhoods that particularly attract persons with labour market problems. We would thus - in accordance with these findings - expect our current paper to show similar results.

As for the paper on employment, our main data source is a large, 10% sample taken from the 1997 PCBS Census. In accordance with common practice, the 1997 PCBS Census did not contain information about household income and consumption. Instead we have used an index of household assets as a proxy for long-run household wealth. In this context the term "asset" refers both to consumer durables and characteristics of the household's dwelling. The main problem of asset indices is usually to decide which weights to its various components. How this has been done here is discussed in the Appendix.

Although assets possession is less influenced by the political and security situation than labour activity, at least in the short term, one important reason for using the Census data is that the situation in 1997 was one of relative peace. Still, it is perhaps improper to label any period in a society under prolonged occupation as "normal". We are fully aware that data from 1997 do not capture the most recent economic developments in the current volatile political and economic situation in the area. However, we have previously argued that when (or if) conditions in the Palestinian Areas are truly "normalized", a similar pattern of economic activity as depicted by the Census may once again occur. The economic hardship suffered by the Palestinian population during the Second Intifada has obviously had severe negative consequences for their possession of assets. Some households even have lost both their homes and all their values[2]. However, because all citizens in Gaza and the West Bank - refugees and non-refugees, as well as those living inside, and outside camps - suffer from the same situation, there is less reason to believe that the *differences* between these groups have changed in a way that fundamentally outdates our current findings.

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[1] "Labour Force Participation in Gaza and the West Bank: Do Refugee Status or Camp Residence Matter?"
[2] For example during the complete demolition of family dwellings in the Jenin and Rafah refugee camps.

3) Refugee status and locality of residence

Let us first review the relation between the refugee status and place and locality of residence[3]. In the Palestinian Areas as a whole, 1948 refugees represent approximately 40 percent of the total population. In the West Bank roughly one third of the population are refugees, in Gaza roughly *two* thirds are refugees.

The 1997 PCBS Census identifies three types of localities, "urban", "rural" and "refugee camp". In the West Bank only 6 percent of the population live in refugee camps, while respectively 46 and 47 percent of the population live in urban and rural areas. In the Gaza Strip the corresponding figures are 64, 5 and 31 percent. Hence, the West Bank still contains a substantial rural population, while few live in refugee camps. The Gaza Strip, to the contrary, is much more urbanized – only one of twenty persons lives in "rural" localities, which anyhow are usually situated close to urban areas.

The refugee share is close to 100 percent in all refugee camps[4]. The shares that are refugees in the urban and rural localities differ quite strongly between the West Bank and the Gaza Strip. In Gaza refugees heavily influence all types of localities. In the (non-camp) urban and rural areas of the West Bank, only one in five persons is a 1948 refugee. Figure 1 gives an overview:

Figure 1 Refugee status by main region (West Bank left, Gaza right) and type of locality
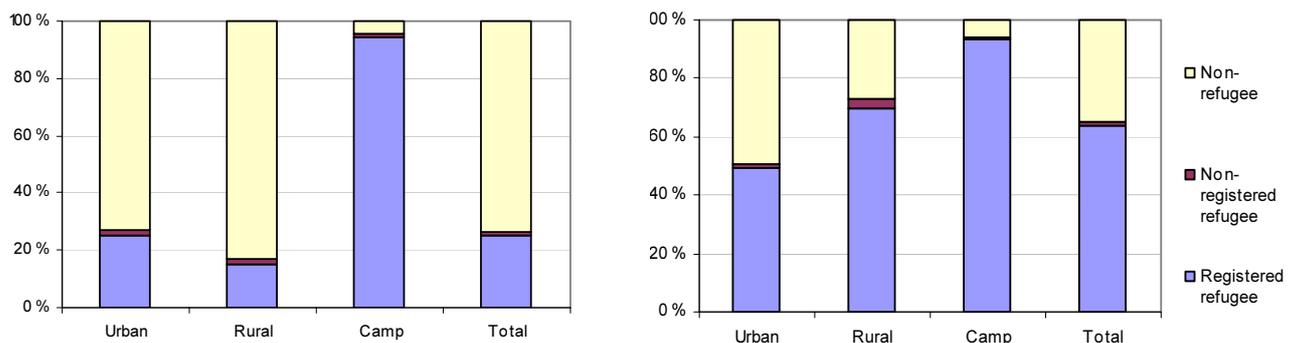
Figure 2 1948 Refugees' locality of residence by main region and registration status
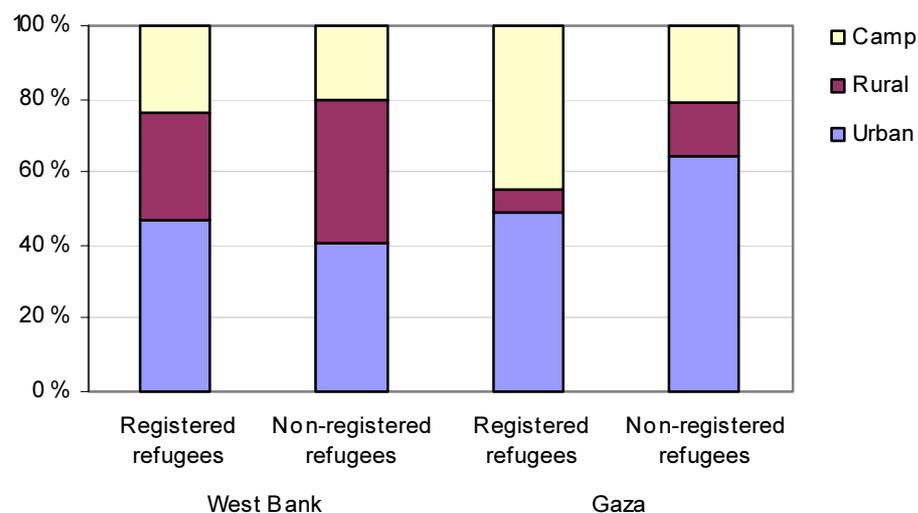
[3] Most of this section has been taken from the paper "Labour Force Participation in Gaza and the West Bank: Do Refugee Status or Camp Residence Matter?"
[4] Non-refugees may also live in camp households together with registered refugees. It is, however, difficult to see why the prevalence of such households should be different than the camp average in the two camps mentionned above.

Both in the West Bank and Gaza roughly half of the registered refugees live in urban areas. The major difference between the two regions is that in Gaza, half of the registered refugees live in the camps, while in the West Bank only one in four lives in the camps. Due to the combined effect of the West Bank having relatively few refugees, and that a small share of these refugees live in the camps, as many as 75 percent of the refugees live in Gaza. The distribution of the 1948 refugees by type of locality is given in Figure 2.

Non-registered refugees represented respectively 7 and 2 percent of all self-defined 1948 refugees. In contrast to the *registered* refugees two thirds live in the West Bank. Because the group of non-registered refugees is so small, and because most empirical work on Palestinian refugees tend to focus on *UNRWA* registered refugees, we will not deal with this group in the remainder of this paper.

The distribution of GSWB refugees by governorate

	Registered		Non-registered	
Governorate	**#**	**%**	**#**	**%**
Jenin	52 102	5	4 256	11
Tubas	5 284	1	151	0
Tulkarm	39 544	4	2 071	5
Nablus	59 969	6	3 712	9
Qalqilia	26 361	3	1 323	3
Salfit	3 307	0	275	1
Ram/ Al-Bireh	55 513	5	3 205	8
Jericho	14 775	1	819	2
Jerusalem	42 466	4	3 787	10
Bethlehem	36 565	4	1 461	4
Herbron	59 121	6	7 251	18
North Gaza	124 931	12	2 038	5
Gaza	183 047	18	3 906	10
Deir Al-Balah	122 117	12	1 620	4
Khan Yunis	108 906	11	2 340	6
Rafah	98 961	10	1 251	3
GSWB Total	1 032 969	100	39 464	100

4) The household asset index

The discussion in this section is based on the use of an asset index as an indicator for household "long-run wealth", along the guidelines of Filmer and Pritchett (1998)[5]. The simplest type of asset index would be one that just sums the household assets, giving the score of 1 if a household has the asset, and the score 0 otherwise. This approach, which implies that all assets are given equal weights, has been characterized as adding "apples and oranges". The problem is that giving equal weights to all assets is a simple, but completely arbitrary method, when assets have varying prices, quality and importance.

Alternatively, Filmer and Pritchett suggest estimating the weights of the asset index, using the statistical procedure of *principal components*. Principal component analysis (PCA) involves a

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[5] D. Filmer and L. Pritchett, World Bank Working Paper #1994, (1998).

mathematical procedure that transforms a number of (possibly) correlated variables into a (smaller) number of uncorrelated variables called *principal components*.

The first principal component accounts for as much of the variability in the data as possible, and each succeeding component accounts for as much of the remaining variability as possible. The crucial assumption is that for an extensive list of asset variables, long-run household wealth is what causes this most common variation in the variable set. Hence, the first principal component estimated may be labelled "long-run household wealth".

The "scoring factors" of the first principal component among the asset variables is listed in the left column in Table 6. These factors are used as index weights in the index, "normalized" by their standard deviation. Since most assets contribute positively to household wealth, it is reasonable that they have positive weights. However, as we can see from the first column in Table 6, having some "assets", as e.g. "no piped water", "no toilet", "no kitchen", etc. have a *negative* effect on a household's total score on the index.

The construction of the index is explained in detail in the Appendix. Although our results will be presented for Gaza and the West Bank separately one should note that there is only *one* index, which uses the *full* sample from the 1997 PCBS Census in Gaza and the West Bank as basis[6]. In this way we opt to combine the very detailed coverage of the 1997 Census at the governorate level with information about the household's economic situation, in spite of the complete lack of data about household incomes and consumption expenditures in the Census. Figure 3 shows the mean index values for each governorate:

Figure 3 Mean value of the asset index by governorate

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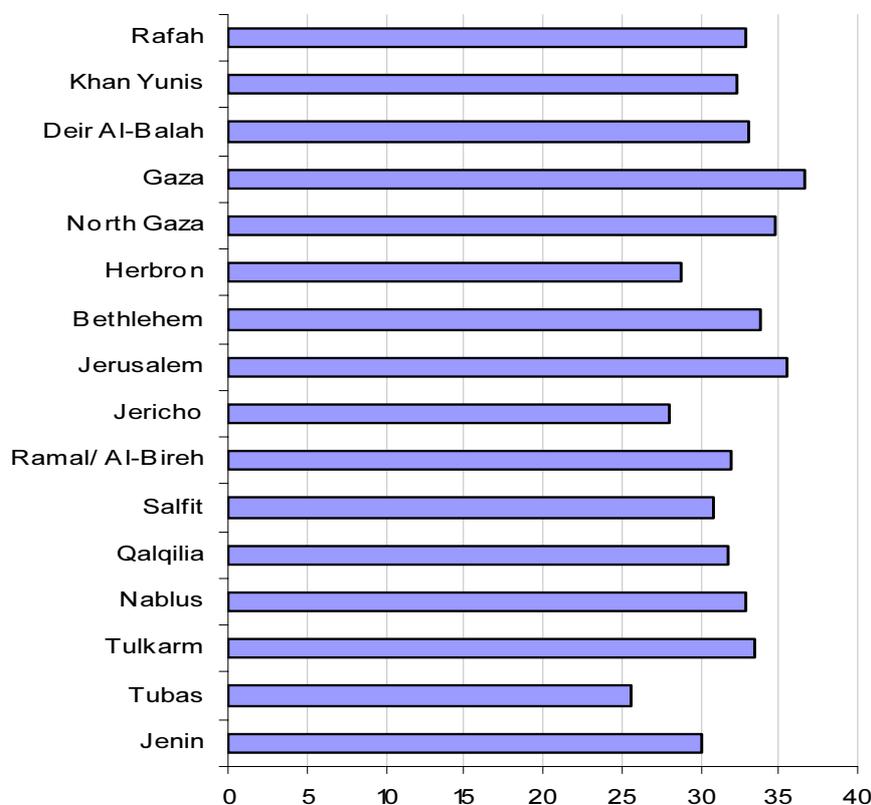
[6]A large sample of 10% of the Census were available to us. While the *mean* index value for the full sample by definition should amount to zero, the need to adapt the index for graphical presentation, has made us rescale the index by giving the lowest (negative) value to zero, hence obtaining only positive index values for all households.

5) The household asset index by refugee status

Perhaps somewhat surprisingly, the Gaza governorates on the average have at least as high mean score on the asset index as the West Bank governorates. As we will see later, the main reason for this is that the asset index includes infrastructure assets, such as piped water and grid electricity. These are generally less available in the rural and hilly areas of the West Bank than in the flat and sandy Gaza Strip and the degree of urbanization is also higher in Gaza.

Figure 4 Mean value of the asset index in the West Bank by governorate and refugee status
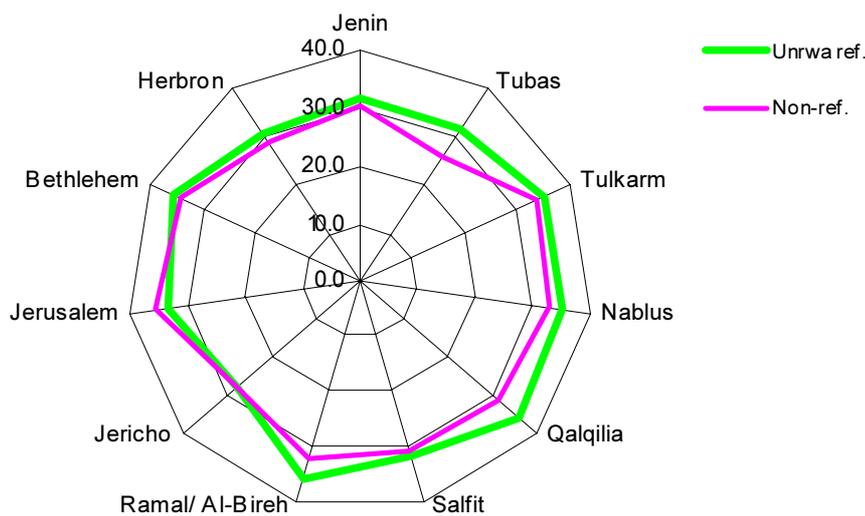
Governorate of residence is more important than refugee status as determinant for a household's score on the asset index in the *West Bank*. The *mean* value of the asset index is actually higher for refugees than for non-refugees (Figure 4). The main reason for this is probably that relatively fewer refugees than non-refugees live in rural localities where the infrastructure is least developed (see Figure 1). In our previous paper about labour force participation and employment we also found female labour force participation to be lowest in the *rural* localities. Figure 5 and Figure 6, highlight the share of households which belong to the upper and the lower 20% of the total Gaza and West Bank index score for each governorate.

Figure 5 UNRWA refugee grouped asset index in the West Bank by governorate
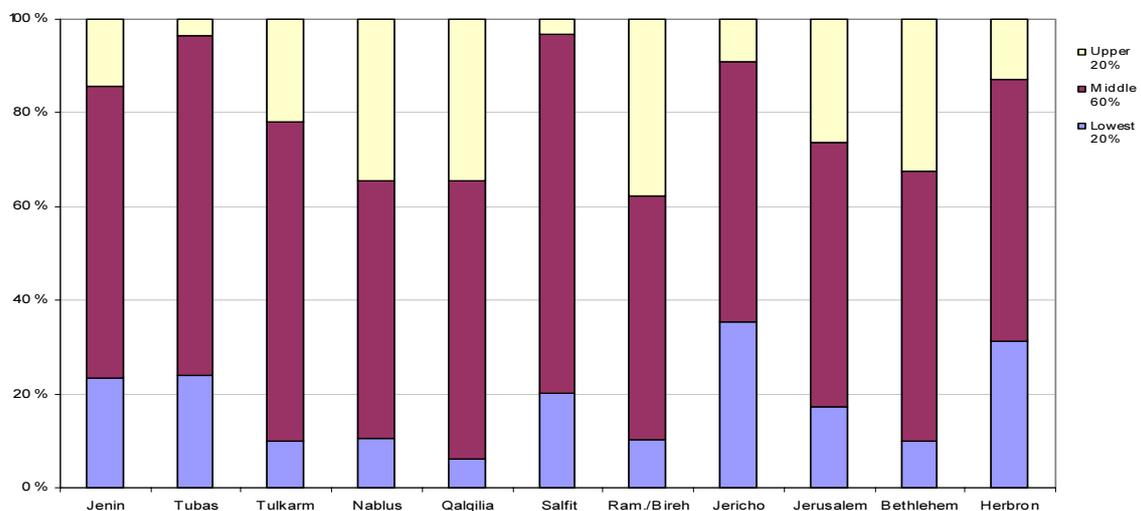
Figure 6 Non-refugee grouped asset index in the West Bank by governorate
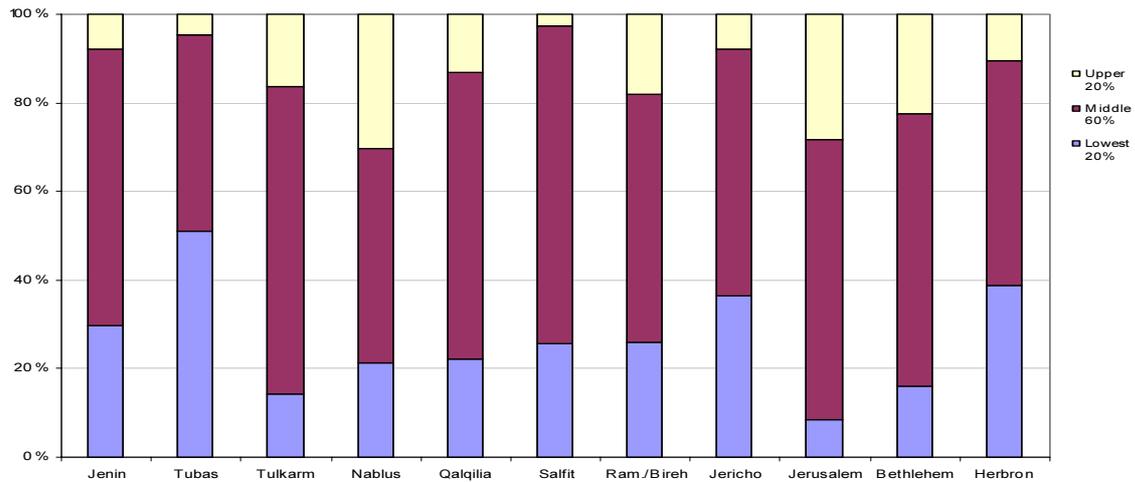
In *Gaza* it is hardly possible to distinguish the index scores of the 1948 UNRWA refugees and non-refugees (Figure 7). The biggest difference in the index scores are found between Gaza City and all other governorates, regardless of refugee status (Figure 8 and Figure 9).

Figure 7 Mean value of the asset index in Gaza by governorate and refugee status
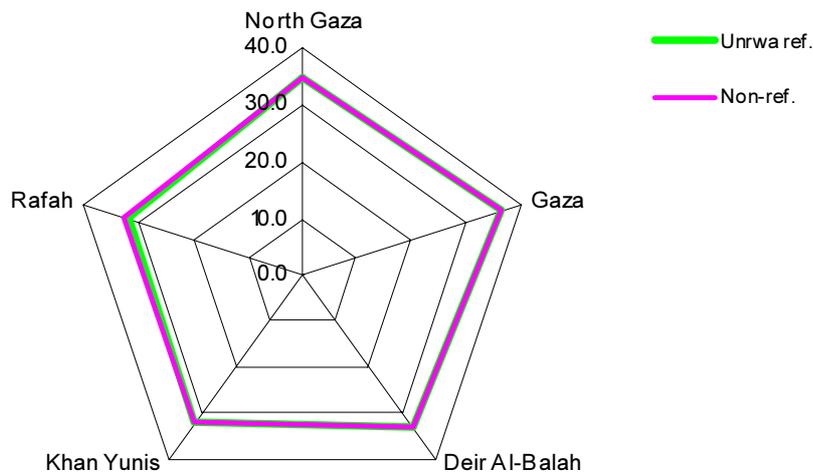
Figure 8 UNRWA refugee grouped asset index in Gaza by governorate
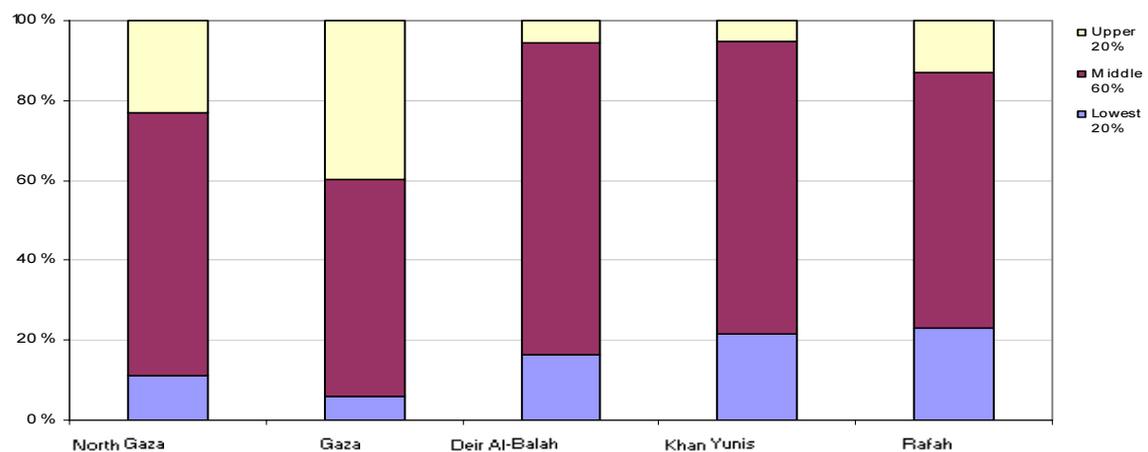
Figure 9 Non-refugee grouped asset index in Gaza by governorate
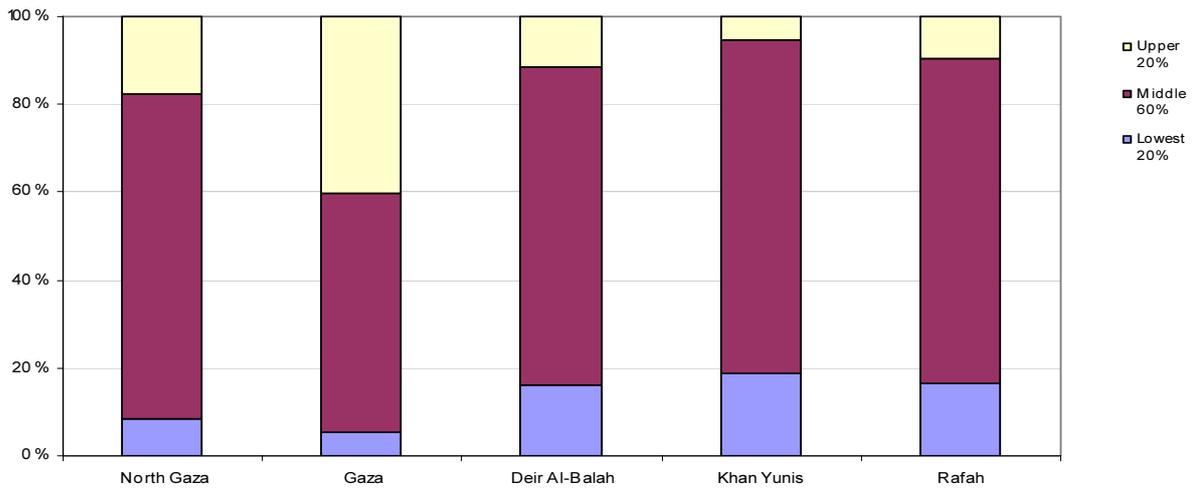
5) The household asset index by type of locality

Although we found that 1948 UNRWA refugees as a group had at least as high mean score on the asset index as non-refugees, we would expect refugee camps to be a particularly disadvantaged type of locality. For the *West Bank*, this assumption is mostly true –if we compare the (usually) urban refugee camps with other urban localities. However, the clearly most disadvantaged locality type in all West Bank governorates are the "rural" communities (Figure 10). Proximity to major population centres is the essential determinant. For all types of localities the highest scores are found in the Greater Jerusalem area (including Bethlehem and Ramallah) and Nablus (Figure 11, Figure 12 and Figure 13).

Figure 10 Mean value of the asset index in the West Bank by governorate and locality type

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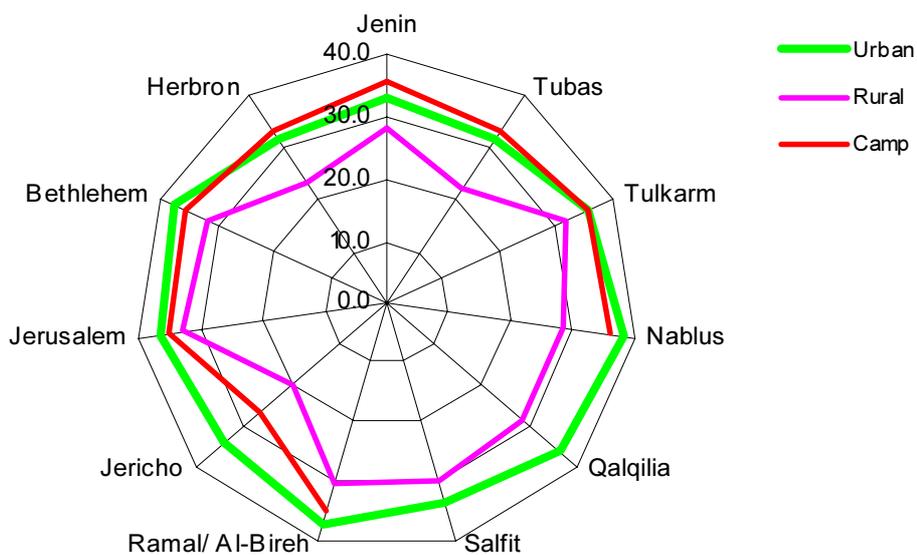
Figure 11 Urban grouped asset indexes in the West Bank by governorate
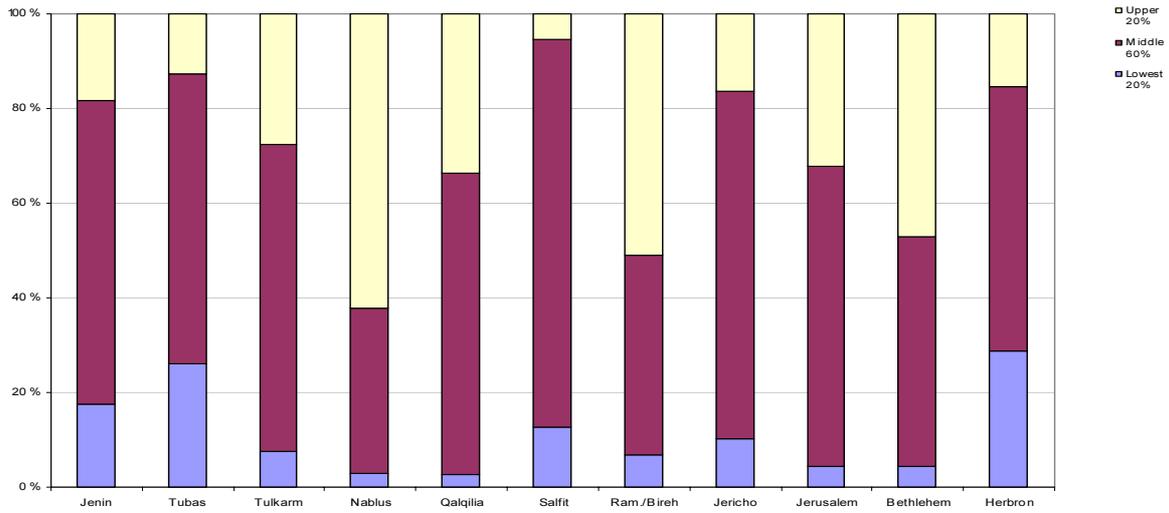
Figure 12 Rural grouped asset indexes in the West Bank by governorate
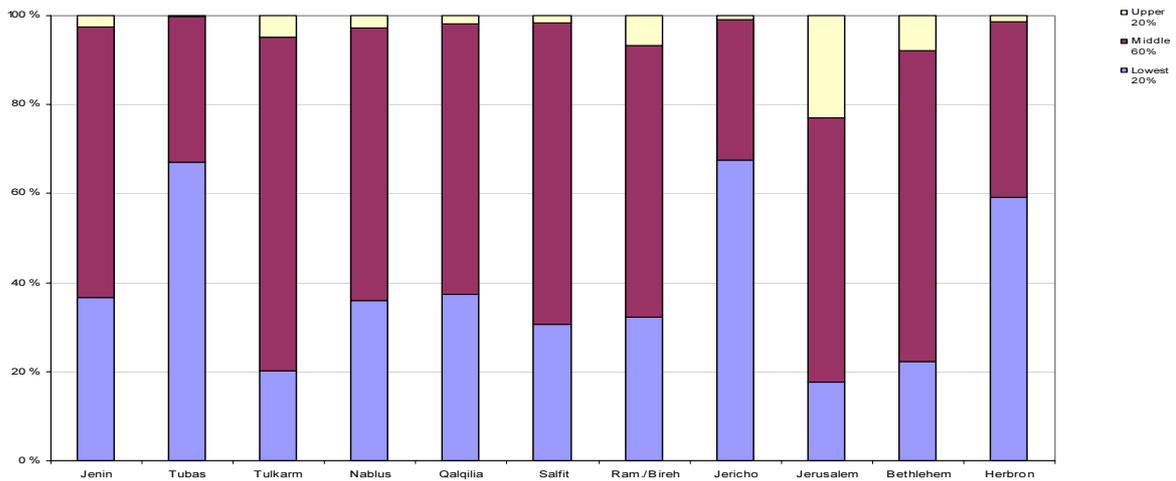
Figure 13 Camp grouped asset indexes in the West Bank by governorate

11
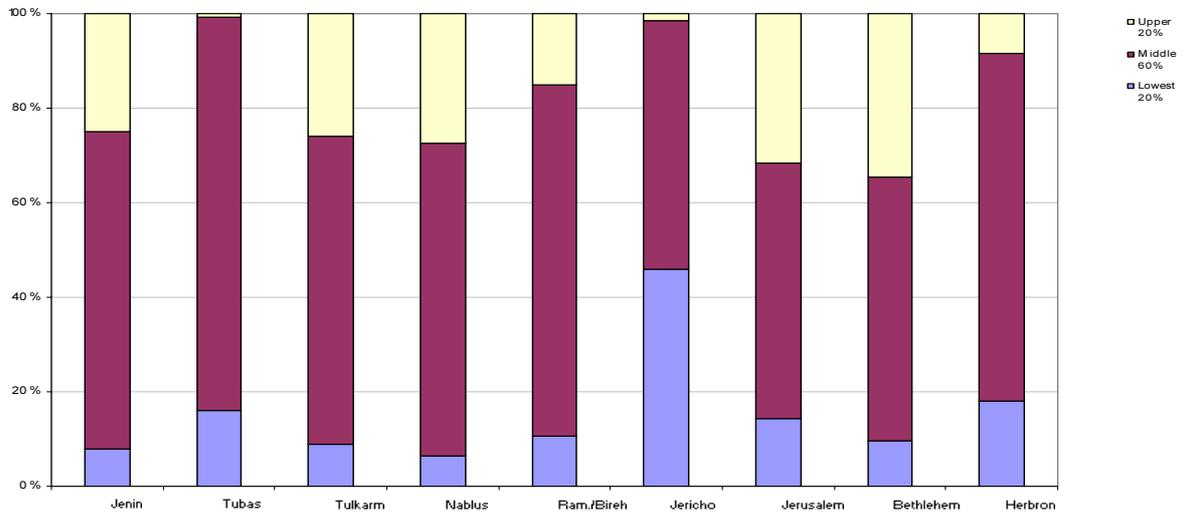
Also in *Gaza* the rural localities are the most disadvantaged, although this group is much smaller in size than in the West Bank (Figure 2). The highest scores on the asset index are Once again found in the Gaza City governorate (Figure 14). Figure 15, Figure 16, and Figure 17 highlight the upper and the lower 20% of individuals, calculated from the *total* Gaza and West Bank index score.

Figure 14 Mean value of the asset index in Gaza by governorate and locality type
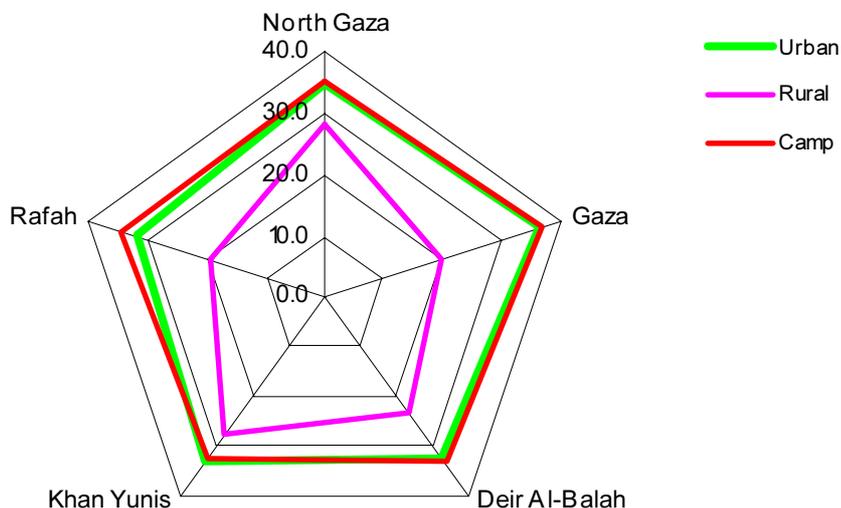
Figure 15 Grouped asset index in urban Gaza, by governorate
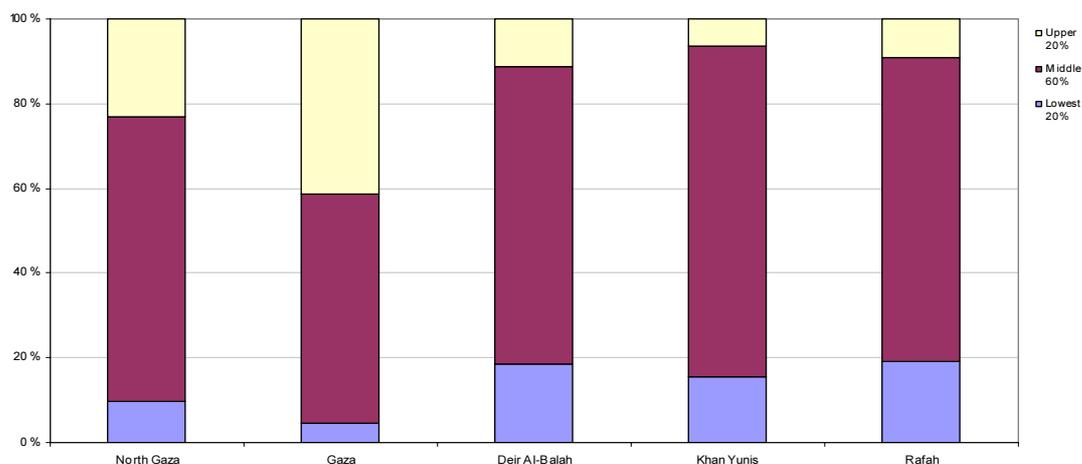
Figure 16 Grouped asset index in rural Gaza, by governorate
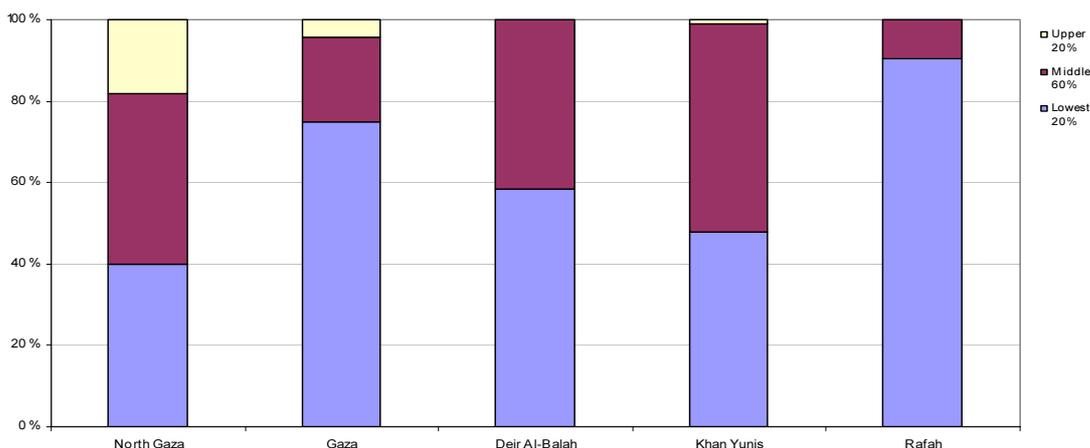
Figure 17 Grouped asset index in Gaza Camps, by governorate
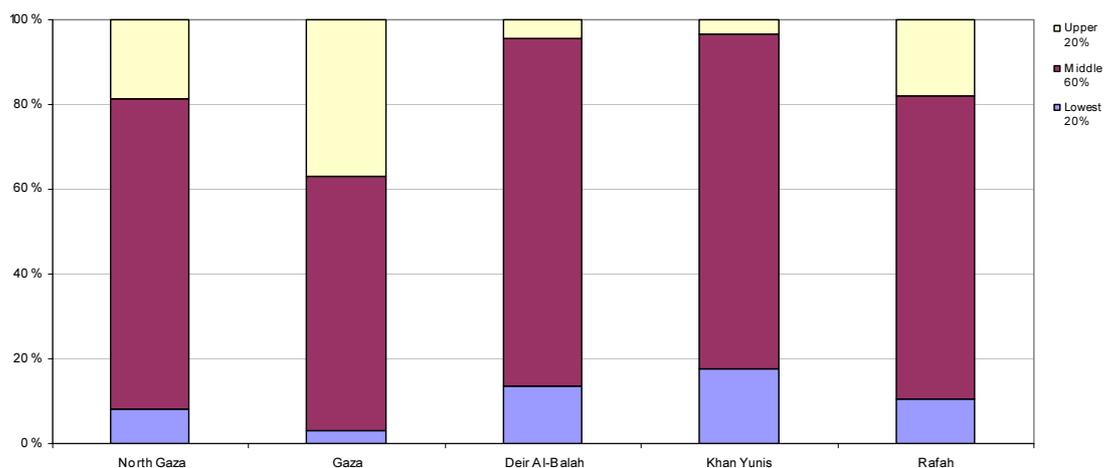
6) Conclusion

In the introduction, we listed several factors that we would expect refugees and camp residents to be economically disadvantaged relative to non-refugees and non-camp residents. However, our discussion above shows that 1948 UNRWA refugees in general, and those living in refugee camps in particular, are not disadvantaged with respect to our asset index for Gaza and the West Bank.

Rural communities are the worst off in both regions. The main reason is that rural communities have low scores on variables related to infrastructure, i.e. piped water, sewage and connection to electricity grids. The geographic distribution of the refugees, who are relatively more urban than non-refugees, cause them to have a higher score as a *group*, in spite of having a lower score when compared to non-refugees in "*urban*" localities.

One may argue that because other institutions than the households themselves have provided some of the infrastructure assets, they are not good indicators of *household* long-term wealth. The UNRWA has for example had a particular responsibility for providing good infrastructure for the refugee camps. However, as refugee households are the only type of households formally entitled to residence in the camps, we think that the relatively good infrastructure of the camps should be taken into account when comparing the material condition of (camp) refugees with non-refugees in other types of localities.

Our current findings demonstrate the relative success of UNRWA to compensate the overall score with respect to household assets for the group of camp refugees. One may have expected that due to the possible *economic* disadvantage of the camps' dense physical structure and crowded dwellings, the differences would have been to the camps' disadvantage. However the dense settlement pattern of the camps also facilitates the provision of grid based infrastructure for electricity, water and sewage at a relatively low per capita cost.

Once again, we notice that the relatively long time span from 1948 to 1997 has equalized the asset situation for refugees and non-refugees, and for camp residents and residents in other types of localities. Moreover, the urbanization process which have taken place in both areas, and in particular in Gaza, have benefited the refugees, which right from the outset took shelter in urban areas. The fact that the refugee camps seem to have been integrated into the local urban economies and the

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compensatory contribution by the UNRWA, have prevented them from turning into particularly poor neighborhoods that *generally* attract refugees and non-refugees with economic problems.

The clear regional difference we *did* find with respect to labour force participation, employment and unemployment between Gaza and the West Bank did *not* re-appear on the wealth index. The reason is probably that the high number of camp refugees in Gaza implies that the UNRWA contribution to upgrade the camp infrastructure has a larger relative importance in Gaza. In addition to this come the differences in the physical landscape between the two regions. It is obviously cheaper to provide for piped water and sewage grids in the flat and sandy Gaza Strip, than in the hilly stony West Bank.

In conclusion, we do neither observe a "refugee", nor a "camp", nor a "Gaza effect" on the asset index scores. An important reason for this positive result is probably the continuous efforts to improve the refugee camps' infrastructure by the UNRWA. Although data from 1997 do not capture the most recent economic hardship sustained by the Palestinian population during the Second Intifada we argue that when (or if) conditions in the Palestinian Areas are truly "normalized", a similar pattern of distribution of assets as depicted by the Census is likely to occur again. Because all citizens in Gaza and the West Bank currently suffer from the same extreme situation, there is less reason to believe that the population's internal *differences* will change in a way that will render our current findings obsolete.

Appendix 1: Tables

(Note: There are no refugee camps in the Qualqilia and Salfit governorates).

Table 1 Refugee status by main region and type of locality (Percentages and count)

(Reference: Figure 1)

Type of locality	Registered #	%	Non-regist. #	%	Non-refugee #	%	Not stated #	%	Total #	%
Gaza and West Bank										
Urban	495 086	36	20 725	2	850 480	62	7 849	1	1 376 189	100
Rural	152 550	36	14 818	2	635 442	79	5 722	1	809 337	100
Camp	385 333	93	3 922	1	22 869	6	1 837	0	414 325	100
Total	1 032 969	40	39 464	2	1 508 791	58	15 408	1	2 599 851	100
West Bank										
Urban	183 394	25	13 651	2	535 996	72	5 503	1	739 990	100
Rural	115 325	15	13 116	2	621 046	82	5 424	1	755 670	100
Camp	96 288	94	1 543	1	4 523	4	535	1	102 981	100
Total	395 007	25	28 310	2	1 161 565	73	11 462	1	1 598 641	100
Gaza										
Urban	311 692	49	7 074	1	314 484	49	2 345	0	636 199	100
Rural	37 225	69	1 702	3	14 396	27	299	1	53 667	100
Camp	289 045	93	2 379	1	18 346	6	1 302	0	311 344	100
Gaza Total	637 962	64	11 154	1	347 225	35	3 946	0	1 001 209	100

Table 2 Refugees' locality of residence by main region and type of locality (Percentages and count)

(Reference: Figure 2)

Type of locality	Registered #	%	Non-registered #	%
West Bank				
Urban	183 394	47	13 651	48
Rural	115 325	29	13 116	46
Camp	96 288	24	1 543	24
West Bank Total	395 007	100	28 310	100
Gaza				
Urban	311 692	49	7 074	64
Rural	37 225	6	1 702	15
Camp	289 045	45	2 379	21
Gaza Total	637 962	100	11 154	100

Table 3 Shares of refugees in population by type of locality and governorate (Percentages and count)

	Registered refugees								Non-registered refugees							
	Urban		Rural		Camp		Total		Urban		Rural		Camp		Total	
Governorate	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Jenin	20 197	26	23 660	22	8 245	90	52 102	27	2 211	3	1 790	2	255	3	4 256	2
Tubas	685	6	599	3	4 000	95	5 284	15	5	0	140	1	5	0	151	0
Tulkarm	14 961	25	9 529	18	15 053	94	39 544	31	1 060	2	905	2	105	1	2 071	2
Nablus	22 832	22	12 196	10	24 940	94	59 969	24	1 817	2	1 353	1	541	2	3 712	1
Qalqilia	23 456	56	2 906	11	0	0	26 361	38	967	2	357	1	0	0	1 323	2
Salfit	1 237	9	2 070	6	0	0	3 307	7	110	1	165	0	0	0	275	1
Ram/ Al-Bireh	32 412	47	10 819	9	12 281	93	55 513	27	2 005	3	1 081	1	118	1	3 205	2
Jericho	5 933	43	3 829	36	5 013	85	14 775	49	306	2	309	3	205	3	819	3
Jerusalem	15 412	34	20 863	34	6 191	92	42 466	38	1 419	3	2 276	4	91	1	3 787	3
Bethlehem	13 916	31	12 545	17	10 103	96	36 565	28	754	2	561	1	147	1	1 461	1
Herbron	32 351	12	16 310	13	10 460	96	59 121	15	2 997	1	4 178	3	75	1	7 251	2
North Gaza	61 645	55	5 654	86	57 632	95	124 931	70	1 572	1	249	4	216	0	2 038	1
Gaza	128 520	44	4 314	68	50 214	81	183 047	51	2 617	1	500	8	789	1	3 906	1
Deir Al-Balah	28 591	63	3 060	68	90 465	95	122 117	84	580	1	129	3	912	1	1 620	1
Khan Yunis	60 329	44	14 647	58	33 929	98	108 906	55	1 709	1	428	2	202	1	2 340	1
Rafah	32 607	65	9 549	86	56 806	96	98 961	82	596	1	395	4	260	0	1 251	1
Total	495 086	36	152 550	19	385 333	93	1 032 969	40	20 725	2	14 818	2	3 922	1	39 464	2

Table 4 Shares of refugees in population by type of locality and governorate (Percentages and count)

(Reference: Figure, Figure 4, Figure 7, Figure 10 and Figure 14)

Governorate	Registered Refugee	Non-refugee	Urban	Rural	Camp	Total
	Mean	Mean	Mean	Mean	Mean	Mean
Jenin	31.4	30.1	33.1	28.3	35.5	30.5
Tubas	31.5	25.5	31.4	21.9	33.0	26.5
Tulkarm	34.9	33.4	35.5	31.6	35.5	33.9
Nablus	35.4	32.9	38.1	28.6	35.9	33.5
Qalqilia	36.1	31.8	36.6	28.4		33.6
Salfit	31.8	30.8	33.3	29.8		30.8
Ramal/ Al-Bireh	35.7	32.1	36.9	30.4	34.8	33.1
Jericho	28.4	28.1	34.5	19.8	26.9	28.2
Jerusalem	33.3	35.4	36.4	33.1	34.9	34.6
Bethlehem	35.4	33.8	37.2	31.8	35.7	34.3
Herbron	30.1	28.7	31.2	23.5	33.1	28.9
North Gaza	34.7	34.7	34.7	28.0	35.4	34.7
Gaza	36.3	36.6	36.7	19.6	36.9	36.4
Deir Al-Balah	32.8	33.0	32.6	23.4	33.4	32.8
Khan Yunis	31.9	32.3	32.8	27.5	32.6	32.1
Rafah	32.1	32.9	32.2	19.2	34.9	32.2
WB Total	33.6	31.3	34.6	28.8	34.7	31.9
Gaza Total	33.9	34.8	34.9	24.5	34.7	34.2
WB and Gaza total	33.8	32.0	34.7	28.5	34.7	32.7

Table 5 Grouped Asset Index by Refugee Status and Locality Type (Percentages and count)

(Reference:Figure 5, Figure 6, Figure 8, Figure 9, Figure 11, Figure 12, Figure 13, Figure 15, Figure 16, and Figure 17)

Governorate	Group	Registered Unrwa ref.	Non- Non-ref.	Urban Urban	Rural Rural	Camp Camp	Total Total
Jenin	Lowest 20%	23	30	18	37	8	28
	Lower middle 30%	38	46	39	48	24	44
	Upper middle 30%	25	16	25	12	43	19
	Upper 20%	14	8	18	3	25	10
Tubas	Lowest 20%	24	51	26	67	16	47
	Lower middle 30%	44	30	29	29	51	32
	Upper middle 30%	29	15	32	3	32	17
	Upper 20%	4	5	13	0	1	5
Tulkarm	Lowest 20%	10	14	8	20	9	13
	Lower middle 30%	30	44	29	56	22	39
	Upper middle 30%	38	26	36	19	43	30
	Upper 20%	22	16	27	5	26	18
Nablus	Lowest 20%	10	21	3	36	6	18
	Lower middle 30%	22	29	8	46	24	27
	Upper middle 30%	33	19	27	15	42	23
	Upper 20%	35	30	62	3	27	31
Qalqilia	Lowest 20%	6	22	3	37		16
	Lower middle 30%	20	38	22	45		31
	Upper middle 30%	39	26	41	15		31
	Upper 20%	34	13	34	2		22
Salfit	Lowest 20%	20	26	13	31		25
	Lower middle 30%	43	51	46	52		50
	Upper middle 30%	34	21	36	16		22
	Upper 20%	3	3	5	2		3
Ramallah and Al-Bireh	Lowest 20%	10	26	7	32	11	21
	Lower middle 30%	19	29	14	34	29	26
	Upper middle 30%	34	27	28	27	45	29
	Upper 20%	38	18	51	7	15	24
Jericho	Lowest 20%	35	36	10	68	46	36
	Lower middle 30%	30	33	34	26	36	32
	Upper middle 30%	25	23	40	6	17	24
	Upper 20%	9	8	16	1	1	8
Jerusalem	Lowest 20%	17	8	4	18	14	12
	Lower middle 30%	20	22	20	23	19	21
	Upper middle 30%	36	41	43	36	35	39
	Upper 20%	26	28	32	23	32	27
Bethlehem	Lowest 20%	10	16	4	22	10	14
	Lower middle 30%	20	30	13	39	18	27
	Upper middle 30%	38	31	35	31	38	33
	Upper 20%	33	23	47	8	34	26
Herbron	Lowest 20%	31	39	29	59	18	37
	Lower middle 30%	28	29	30	28	34	29
	Upper middle 30%	27	21	26	11	40	22
	Upper 20%	13	11	15	1	8	11
North Gaza	Lowest 20%	11	9	10	40	8	10
	Lower middle 30%	22	32	25	26	24	25
	Upper middle 30%	44	42	42	16	49	44
	Upper 20%	23	17	23	18	19	22
Gaza	Lowest 20%	6	5	5	75	3	6
	Lower middle 30%	15	16	15	20	17	16
	Upper middle 30%	40	38	39	1	43	39
	Upper 20%	40	40	41	4	37	40
Deir Al-Balah	Lowest 20%	16	16	18	58	13	16
	Lower middle 30%	42	38	35	36	44	41
	Upper middle 30%	37	34	35	5	38	36
	Upper 20%	6	12	11	0	4	6
Khan Yunis	Lowest 20%	22	19	16	48	18	20
	Lower middle 30%	42	45	44	39	46	43
	Upper middle 30%	31	32	34	12	33	31
	Upper 20%	5	5	6	1	3	5
Rafah	Lowest 20%	23	17	19	90	10	22
	Lower middle 30%	27	34	34	9	26	28
	Upper middle 30%	37	40	37	1	46	38
	Upper 20%	13	10	9	0	18	13
WB Total	Lowest 20%	17	27	14	36	12	24
	Lower middle 30%	26	33	24	40	26	31
	Upper middle 30%	32	23	30	19	40	26
	Upper 20%	25	17	32	5	22	19
Gaza Total	Lowest 20%	14	10	10	60	10	13
	Lower middle 30%	28	28	26	28	31	28
	Upper middle 30%	38	37	38	8	42	38
	Upper 20%	20	25	26	3	16	22
Gaza and WB total	Lowest 20%	15	23	12	37	11	20
	Lower middle 30%	27	32	25	39	30	30
	Upper middle 30%	36	26	34	19	41	30
	Upper 20%	22	18	29	5	18	20

Appendix 2: Construction of the Asset Index

Introduction
The aim of this section is to derive a valid and reliable indicator of a household's long-run wealth or "economic status". Traditionally, the debate about finding the best of such indicators has been to compare the feasibility of the two indicators "household (per capita) income" and "current consumption expenditure". The latter has commonly been the preferred choice. First, for theoretical reasons, e.g. because of consumption smoothing, second, for pragmatic reasons, because expenditures are easier to measure than income, in particular in rural settings.

In the World Bank Working Paper #1994, (1998), D. Filmer and L. Pritchett present a linear index of asset indicators as an alternative indicator for *long-run* household wealth. This approach is of particular interest when income and/ or consumption expenditure data are not available, as is the situation in our case.

However, in contrast to for example Montgomery, Burke Paredes and Zaidi, (1997), the aim of Filmer and Pritchett is *not* to create a proxy for current consumption expenditures. In their view *both* the asset index and current consumption expenditures are proxies for a household's (unobserved) long-run wealth or "economic status"[7]. Possible discrepancies between the two with respect to classification of households cannot only to be ascribed to the "mistakes" of the asset index. The "current consumption expenditure" only serves as a perfect measure for long-run wealth under the unrealistic assumption of perfect foresight and perfect capital markets.

Using principal components analysis to derive weights for an asset index
As mentioned above, the main problem of asset indices have been to assign weights to its various components. Filmer and Pritchett outline three common solutions to the problem in the literature:

The *first* solution would be one where all assets are given equal weights, a method which is quickly written off. The problem is that giving equal weights to all assets is a simple, but completely arbitrary method when assets have varying prices, quality and importance.

The *second* approach is to enter all asset variables individually in a multivariate regression equation (Montgomery et al, 1997). The problem with this method is that many assets may have both a *direct* (i.e. wealth) and an *indirect* effect on the phenomenon of interest. For example in studying the effect of household wealth on children's education, having electricity is an indicator of household wealth, but also facilitates reading at night. Similarly, having piped water is an indicator of household wealth, but also reduces the need for water collection, and hence reduces the opportunity cost of schooling for children (in particular girls, whose task is often to collect water).

The *third*, and perhaps most desirable, solution is to estimate the index weights from the prices of the various assets. However, such price data are rarely available (and *not* in our case), and it is also difficult to estimate prices of old, and sometimes partially non-functioning assets.

Alternatively, Filmer and Pritchett suggest estimating the weights of the asset index, using the statistical procedure of *principal components*. Principal component analysis (PCA) involves a mathematical procedure that transforms a number of (possibly) correlated variables into a (smaller) number of uncorrelated variables called *principal components*.

The first principal component accounts for as much of the variability in the data as possible, and each succeeding component accounts for as much of the remaining variability as possible. The crucial

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[7] Montgomery et al assess the "quality" of an asset measure from a diagnostic regression of consumption expenditure on the asset measure(s).

assumption is that for a list of asset variables, long-run household wealth is what causes this most common variation in the variable set. Hence, the assumption is that the *first* principal component estimated may be labelled "long-run household wealth".

The "scoring factors" of the *first* principal component among the asset variables are listed in the left column in Table 6. These factors are "normalized" by their standard deviation, and then used as asset weights in the index. Since most assets contribute positively to household wealth, it is reasonable that they have positive weights. However, as we can see from the left column in Table 6, some of the "assets", such as e.g. "no piped water", "no toilet", "no kitchen", etc. have a *negative* effect on a household's total score on the index. Although our results have been presented for Gaza and the West Bank separately one should note that there is only *one* index, which uses the *full* sample from the 1997 PCBS Census in Gaza and the West Bank as basis.

The formula for the asset index suggested by Filmer and Pritchett is that household j's value on the index, Aj, is calculated as follows:

$$ A_j = \frac{f_1 * (a_{j1} - a_1)}{s_1} + ... + \frac{f_n * (a_{jn} - a_n)}{s_n}, $$

where f_1 is the "scoring factor" for the first (of a total of n) assets in the index, determined by the principal component analysis, a_{j1} is the j'th household's variable value for the first asset, and a_1 and s_1 are, respectively, the mean and the standard deviation of the first asset variable over all households.

The mean value of the index over all households is zero by definition. Since all variables, except the number of rooms, are binary with values 0-1, the interpretation is acquiring an asset (or a feature such as kitchen with water) changes the index by f_i / s_i, (i=1,…,n). For example, Table 6 shows that owning a refrigerator increases the index by 1.42 units, while having no kitchen lowers the index by 2.47 units.

The right hand side of Table 6 also shows the mean values for the asset index (bottom) and its components for each of 4 groups defined by their scores on the index (bottom 20%, lower middle 30%, upper middle 30%, and upper 20%). The gap in the mean value of the index between the two lowest groups is large, at 13 units. To move one group up from the lowest group, a household with no bath, kitchen and toilet would have to acquire bath with water, kitchen with water and water toilet. This would raise its score on the asset index by roughly 14 points. In order to move from the third to the highest group, a household would need to acquire for example a fridge and a washing machine[8].

The reliability of the asset index
Filmer et al suggests three criteria for evaluation of the performance of the asset index. First, that it is internally coherent, i.e. that it produces clear separations across the poor, the middle and the rich households for each asset included in the index. Second, that the index is "robust" to the assets included, and third, that it produces reasonable comparisons with related indicators, e.g. with poverty or GDP per capita.

Let us first turn to the question about *internal coherence*. The right hand side of Table 6 contains four columns, one for each of four groups that are constituted by their score on the overall asset index.

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[8] The simple bi-variate correlation coefficient between a simple addititive index for the 14 first consumer durables listed in Table 6 and the full asset index using principal components analysis to derive its weights, was estimated to be 0.75.

Table 6 Scoring factors and summary statistics for variables entering the computation of the first principal component (long-term wealth)

Asset variable	The West Bank and Gaza				Group means			
	Scoring factors (F_1)	Mean (a_1)	Std.dev (s_1)	(F_1)/(s_1)	Lowest 20%	Lower middle 30%	Upper middle 30%	Upper 20%
Own car or truck	0.256	0.203	0.402	0.636	0.062	0.111	0.197	0.489
Own refrigirator	0.567	0.801	0.399	1.421	0.409	0.765	0.968	0.998
Own solar boiler	0.535	0.611	0.487	1.098	0.154	0.570	0.759	0.909
Own central heating	0.116	0.015	0.120	0.963	0.001	0.001	0.004	0.064
Own home library	0.214	0.139	0.346	0.618	0.038	0.077	0.137	0.334
Own cooking stove	0.382	0.969	0.174	2.196	0.866	0.988	0.998	1.000
Own washing machine	0.567	0.729	0.445	1.275	0.294	0.643	0.928	0.994
Own tv	0.449	0.845	0.362	1.241	0.575	0.807	0.962	0.996
Own video player	0.244	0.133	0.339	0.720	0.024	0.051	0.129	0.369
Own personal computer	0.156	0.040	0.196	0.796	0.005	0.011	0.025	0.141
Own ordinary telephone	0.334	0.196	0.397	0.842	0.018	0.062	0.189	0.587
Own gas or electric stove	0.419	0.962	0.191	2.188	0.831	0.988	0.999	0.999
Own gas or electric oven	0.245	0.493	0.500	0.490	0.304	0.378	0.590	0.711
Own kerosene or diesel oven	0.088	0.136	0.343	0.256	0.085	0.135	0.165	0.148
Live in villa	-0.241	0.534	0.499	-0.484	0.714	0.699	0.486	0.180
Live in appartment	0.351	0.445	0.497	0.706	0.192	0.298	0.513	0.820
Public water network	0.529	0.834	0.372	1.421	0.527	0.790	0.973	0.998
Private water network	-0.222	0.122	0.328	-0.677	0.255	0.210	0.027	0.002
Not piped water	-0.609	0.043	0.202	-3.012	0.213	0.000	0.000	0.000
Connected to grid	0.295	0.954	0.345	0.856	0.814	0.973	0.997	0.999
Sewage network	0.397	0.337	0.473	0.840	0.066	0.150	0.420	0.763
Cesspit	-0.245	0.637	0.481	-0.509	0.812	0.844	0.579	0.236
No sewage	-0.441	0.025	0.156	-2.834	0.116	0.005	0.000	0.000
Kitchen with water	0.840	0.849	0.358	2.344	0.283	0.976	1.000	1.000
Kitchen without water	-0.642	0.106	0.308	-2.086	0.501	0.019	0.000	0.000
No kitchen	-0.499	0.043	0.202	-2.468	0.206	0.004	0.000	0.000
Bath with water	0.863	0.857	0.350	2.468	0.301	0.992	1.000	1.000
Bath without water	-0.584	0.076	0.264	-2.210	0.374	0.002	0.000	0.000
No bath	-0.589	0.065	0.247	-2.388	0.316	0.006	0.000	0.000
Water toilet	0.848	0.850	0.357	2.379	0.287	0.979	0.999	1.000
Toilet without water	-0.706	0.115	0.319	-2.215	0.559	0.009	0.000	0.000
No toilet	-0.427	0.032	0.177	-2.416	0.146	0.010	0.000	0.000
Numer of rooms	0.386	3.233	1.390	0.277	2.395	2.990	3.460	4.096
Own house	-0.039	0.781	0.414	-0.094	0.790	0.823	0.777	0.712
Gas for cooking	0.419	0.962	0.191	2.188	0.831	0.988	0.999	0.999
No heating	0.042	0.307	0.461	0.091	0.260	0.298	0.381	0.255
Gas for heating	0.265	0.187	0.390	0.679	0.044	0.080	0.209	0.455
Kerosine for heating	0.062	0.123	0.328	0.190	0.081	0.130	0.156	0.103
Electricity for heating	0.110	0.085	0.279	0.393	0.035	0.064	0.112	0.125
Wood for heating	-0.397	0.279	0.448	-0.886	0.555	0.419	0.130	0.014
Diesel for heating	0.083	0.014	0.117	0.710	0.003	0.005	0.009	0.045
Economic status index		0.002	7.997		-13.672	0.694	3.984	6.692

The first column shows the mean value for each asset among those 20% (of individuals) who have the *lowest* score on the asset index. The second column, the mean asset value for the next 30%, and

so on. We would then expect the mean asset value to increase when we move from the very left, towards the very right column.

First in Table 6 are 14 consumer durable assets. Some assets, like central heating or personal computer are not common in Palestinian households, even among the upper 20% on the asset index. However, the mean value for all assets increases as we move from the left to the right column[9]. This is particularly the case for items that we know are commonly owned by the rich, but by the poor, such as refrigerator, washing machine, video, or (ordinary) telephone. The only exception in this group of assets is "owning kerosene or diesel oven", where the mean value decreases slightly from the third to the fourth column. (We will comment more on this below).

The remaining assets in table 6 are mainly related to household infrastructure, of which many are provided on a community basis. This helps to explain the somewhat odd phenomenon, that the mean value of "living in a villa" decreases as the total index score increases. The "villas" are to a large extent old houses situated in rural areas, where community infrastructure such as piped water, sewage and electricity grids are sparse, while "apartments" are typically newer dwellings situated in developed areas. In contrast, the mean number of rooms in the households' dwelling increases nicely with the index scores. It is also reasonable that the mean value of the assets such as "have kitchen, bath and toilet with water" increases with the asset index, while the prevalence of households that have "kitchen, bath and toilet *without* water", or even "no kitchen, bath or toilet at all" decreases with increased value on the asset index.

With respect to various forms of heating "assets" at the bottom of Table 6, one can see that the probable reason for the decreasing mean value of "owning kerosene or diesel oven" when the overall asset index increases, is that the rich prefer to use gas or electricity for heating. A somewhat disturbing factor is that the need for heating varies across the regions. It is mainly the hilly West Bank (except for the costal plain and the Jordan Valley) that is exposed to cold winters. This may explain the fairly high, and less systematic mean score on the "asset" "having no heating".

In order to check the *robustness* of the index towards the assets included, we divided the assets in the full index into three groups, and estimated (sub-) asset indices for each of these. Table 7 shows how those individuals *who belonged to the lowest 20%* on the full asset index were (re-) classified by each of the three *sub*-indices. The three sub-indices were calculated for consumer durable, for non-water infrastructure, and for water dependent infrastructure, respectively. As shown by Table 7, this worked fairly nicely for the two first sub-indices, where respectively 95 and 85 percent of those individuals in the lowest 20% group for the *full* asset index were classified into the two lowest groups on the *sub*-indices.

However, for the water dependent infrastructure the result was to the contrary, with none of these individuals being classified into the lowest group. The probable reason for this is that the first principal component estimated for these variables is *not* long-term wealth at all, but something else. One may argue that this indicates that the water dependent infrastructure should be taken out of the overall index, but since each of these assets is reasonably related to an increasing score on the *full* index, we decided to keep them.

Another issue, which may be raised, is whether the water related infrastructure assets should be taken out of the overall index because they are provided for by *other* institutions than the households. However, since households may sell their dwellings with these features included, we think that the relatively good infrastructure should be taken into account when comparing the material conditions of various groups.

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[9] Since the asset variables take the value 1 if the household owns the asset, and 0 otherwise, one may simply multiply the column figures by 100 in order to obtain the *percentage* of households in each group that owns the asset.

Table 7 Sub-index classification of the 20% lowest in the full index for long-term wealth

	Sub-index for 14 consumer durables	Sub-index for 15 non-water house features	Sub-index for 12 water house features*
Lowest 20%	64.1	49.0	0.0
Lower middle 30%	31.5	35.4	7.7
Upper middle 30%	3.6	13.6	7.9
Upper 20%	0.8	2.1	84.4
Total	100.0	100.0	100.0

The third reliability check recommended by Filmer et al. was to see whether the asset index produces *reasonable comparisons with related indicators*, e.g. with poverty or GDP per capita. We do not have data for poverty at the governorate level, only for the two regions Gaza and the West Bank. Table 8 shows some key indicators from the 1997 PCBS Household Expenditure and Consumption Survey.

Table 8 Main indicators of PCBS Household Expenditure and Consumption Survey 1997

Indicators	West Bank	Gaza Strip
Average Household Size	6.7	7.9
Average Monthly Household Cash Expenditure in Jordanian Dinar	618.2	490.3
Average Monthly Household Food Cash Expenditure in Jordanian Dinar	239.0	185.9
Average Monthly Household Consumption in Jordanian Dinar	669.6	535.3
Average Monthly Household Food Consumption in Jordanian Dinar	250.9	189.1
Average Monthly Cash Expenditure Per Capita in Jordanian Dinar	91.7	62.3
Average Monthly Food Cash Expenditure Per Capita in Jordanian Dinar	35.5	23.6
Average Monthly Consumption Per Capita in Jordanian Dinar	99.4	68.1
Average Monthly Food Consumption Per Capita in Jordanian Dinar	37.2	24.0

We note that for many of the indicators the West Bank has a 50 percent higher score than Gaza. This is contrary to our asset index, where Gaza has a slightly *higher* score than the West Bank. The reason is, as we have mentioned before, that we have included a range of infrastructure variables in the asset index. On many of these Gaza has a relatively high score, in particular compared to rural West Bank localities.

Even though the asset index has been calculated on the basis of the *joint* Gaza and West Bank sample, we do not consider the discrepancy between the index and other indicators as a problem for the purpose of this paper. First, our results are mainly presented separately for the two regions. Second, the main intent of this paper is not to compare Gaza and the West Bank, but to compare refugees with non-refugees and camps with other localities *within* each of these regions. Third, we have made a deliberate choice to include infrastructure assets, which are relevant for households' living standards, even though some of them have been provided by other institutions than the households themselves.

Filmer and Pritchett mention three criteria

The method of using principal components analysis to derive the weights of the asset index is applied to the National Family Health Survey (NFHS)[10] data in India, and is validated against surveys from Indonesia, Pakistan and Nepal, which contain data on *both* consumption expenditures and asset ownership. There is a reasonable coherence between the index and current consumption expenditure and – somewhat surprisingly – the index worked as well as, or even better than traditional expenditure data in predicting enrollment status[11].

Asset posession was found to be clearly positively correlated with household income in all the three surveys made on Palestinian camp refugees in Jordan, Syria and Lebanon from 1999 to 2001. This result is in accordance with empirical findings made by the World Bank[12].

Figure 18 The relation between income groups and asset groups in Lebanese camps
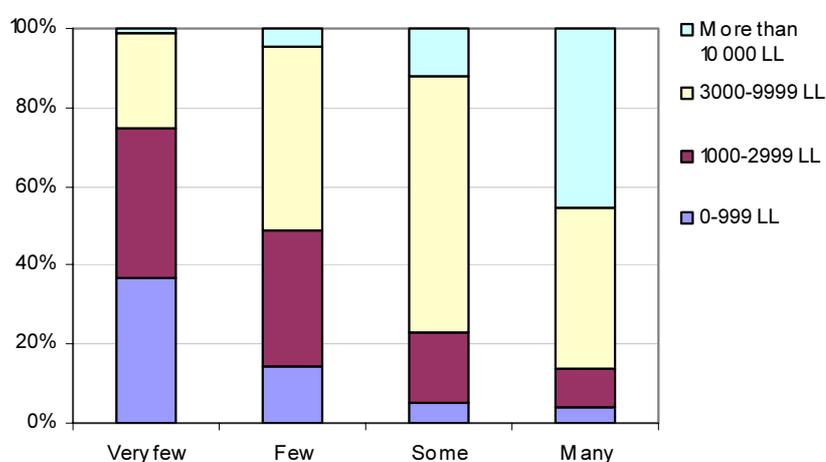
Figure 19 The relation between income groups and asset groups in Syrian camps

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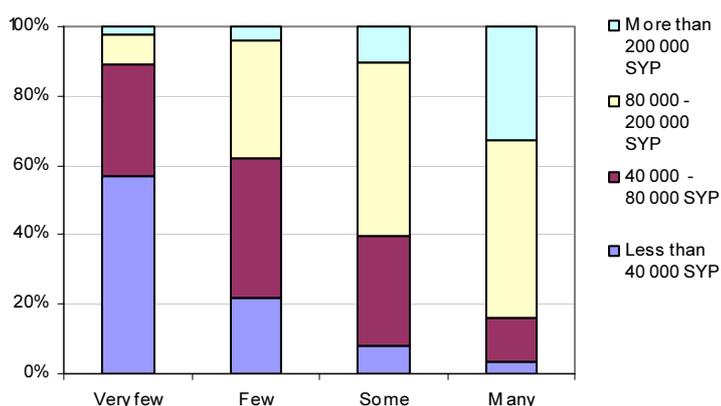
[10] The survey is nearly identical to the well-known Demographic and Helath Studies (DHS) conducted in almost 50 countries.
[11] The likely explanation is that asset posession is less subject to measurement errors due to erroneous reporting.
[12] World Bank Working Paper #1994, (D. Filmer, 1998).

Figure 20 The relation between income groups and asset groups in Jordanian camps
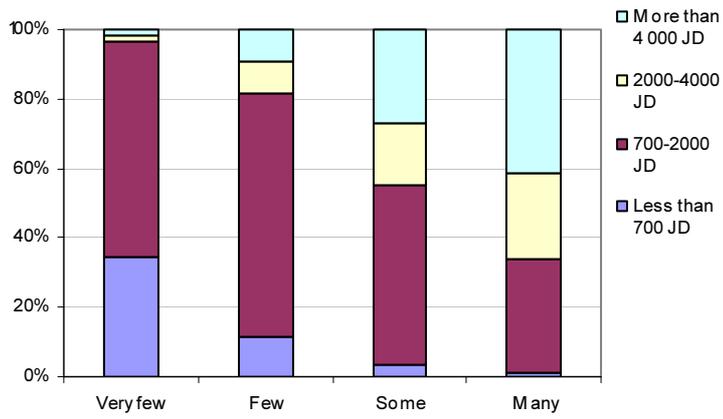
Bivariate correlation between household income and asset index.

Jordan   Lebanon   Syria

   0.26   0.34   0.43

"A Vanishing Option"

The Reduced Importance of the Israeli Labour Market for the West Bank and Gaza

By Geir Øvensen
April 2004

*In this paper we use data from the Israeli CBS labour force surveys to highlight developments in registered employment among workers from the West Bank and Gaza in Israel before, and during the first year of the Second, "Temple Mount Intifada"[1]. If not explicitly quoted from other sources the data have been downloaded from the home page of the Israeli Central Bureau of Statistics (CBS). "Statistical Abstract of Israel 2002; No 53: (**http://www.cbs.gov.il/shnatonenew.htm**).*

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1) Summary of findings

During the first 20 years after the Israeli occupation of the West Bank and Gaza in 1967, Palestinian workers moved freely into Israel. The Israeli labour market played an important role in absorbing the large, 3-4 percent annual growth of the Palestinian labour force. The wages of Palestinian workers increased, and the West Bank and Gaza unemployment rates were low. From outbreak of the First Intifada in 1987 and until the Oslo accord in 1993, the share of the Palestinian labour force employed in Israel dropped from 35 to 20 percent. The main reasons were political unrest, Israeli work permit requirements, and Israeli "closures".

 After the 1993-94 "Oslo accords" Palestinian employment in Israel dropped even more due to border closures and stricter enforcement of permit restrictions. Non-Jewish contract workers from countries such as Romania, Philippines, Thailand and China to a large extent replaced Palestinian workers in unskilled employment in the Israeli agricultural and construction sectors. However, from 1995-1996 the number of Palestinian workers in Israel rose again, partially driven by the increased Israeli demand for construction workers that followed the large Jewish immigration from the former Soviet Union in the early 1990s. Even though the absolute number of Palestinian workers in Israel reached the pre-Intifada level, their *relative* share of the Palestinian labour force was down to 25 percent due to its large growth during the 10 previous years.

During the last part of the 1990s the separation of Gaza from the West Bank, and the rationing of work permits to Israel, had led to three salient wage gaps among Palestinian workers: First, there was a 24 percent wage gap between employment in the West Bank and employment in Gaza. Second, there were wage gaps between employment in Israel and locally in the West Bank and Gaza, of respectively 61 and 85 percent. Third, there was a 50 percent wage gap between workers from the West Bank and Gaza and other workers in the Israeli construction and agricultural sectors. The latter gap was constant over time and across sectors.

From 1999, the number of Palestinian workers in Israel again started to fall again, partially due to reduced demand in the Israeli construction sector, as most new immigrants to Israel had been settled. During the whole period between the two Intifadas the West Bank had easier access to the Israeli labour market than Gaza because illegal border crossings were less difficult, and because the West Bank had more Israeli settlements that demanded local labour. In both regions there were frequent, albeit short-term "closures" that caused more or less complete interruptions in the Palestinian employment in Israel.

The immediate effect for the Palestinian labour market of the Second "Temple Mount" Intifada in October 2000 was a dramatic decrease in the number of Israeli work permits. The Israelis eventually started to re-issue work permits for Palestinians, but the number was much lower than before. Again the Israelis substituted non-Palestinian foreign workers for workers from the West Bank and Gaza. The Israeli re-occupation of Palestinian towns and villages caused heavy fighting, and the disruption of the economic activity were much higher during the Second, than during the first Intifada.

As the number of Palestinian workers in Israel remained at a very low level, the indirect effects of the workers' lost incomes had a strong negative impact on local Palestinian demand. There was a decrease in their real wages among those few who continued to work in Israel. Partially there was an increased risk premium from the perspective of the Israeli employers with respect to workers' absenteeism. From the perspective of the Palestinian workers there were increased "harassment costs" from the amount of time that had to be spent to obtain work permits and pass border controls. In spite of the reduced real wages associated with employment in Israel, the enormous difficulties experienced by the private sector in the West Bank and Gaza seemed to disrupt the local labour market so strongly that the Palestinian demand for employment in Israel actually grew.

In the case of a future peace accord we argue that *Palestinian employment in Israel is likely to be of much less significance than before*, in particular compared to the peak in the late 1980s. Those children born during the 1990s will double the Palestinian working age population within 20-25 years. Even though Palestinian the fertility rate currently decreases, this may rather yield a larger labour force in the short term, if the fertility reduction goes together with an increase in the female participation rate. Only in the case of a large inflow of capital from outside, the *domestic* labour market is likely to satisfactorily absorb these new workers. Consequently, the supply of Palestinian workers for the Israeli labour market is likely to be even stronger than as of today.

In the future the new "security wall" around the West Bank will reduce the possibilities for illegal border crossings also among West Bank workers. This will give the Israeli authorities even more direct control of Palestinian employment in Israel. Moreover, previous pressure from Israeli employers to issue more permits is likely to decrease. From the perspective of Israeli employers the availability of non-Palestinian workers now serves as substitute for Palestinians. Workers from the West Bank and Gaza also compete with the "Israeli Arabs", whose number is also rapidly increasing.

The employment shares of the two largest Israeli sectors demanding Palestinian unskilled labour, the construction and the agricultural sectors are decreasing, and technological progress may further reduce the need for unskilled labour. The removal of Israeli settlements from Gaza and a sharper divide between the larger West Bank settlements inside the "Security Wall", and the smaller (and later to be evacuated?) settlements outside the Wall will close an important alternative branch of the Israeli labour market to Palestinian workers.

Together, an increased supply of Palestinian workers for the Israeli labour market, and an unchanged or even decreased demand for such worker, may reduce the absolute number of Palestinian workers to below the pre-Temple Mount Intifada level, with wages possibly lower than before. Not at any time since the occupation of the West Bank and Gaza, workers from the West Bank and Gaza have constituted more than a few percent of the total number of employees in the Israeli economy. The gloomy message to the West Bank and Gaza is that although Palestinian employment in Israel is (potentially) very important for the *Palestinians*, it is to a much lesser extent important to the *Israelis*.

2) Introduction

The present exposition gives an overview of Palestinian employment in Israel, with a particular focus on the 7-8 year period from the Oslo Accords and into the two first years of the Second Intifada. Where not otherwise stated, the data used in the figures have been downloaded from the home page of the Israeli CBS. The main limitation of using data from the CBS is that, in contrast to the Palestinian PCBS, only *registered* Palestinian employment in Israel is covered. However, we have deliberately chosen to use this data source to be able to compare the wages of Palestinian workers with their Israeli colleagues, and to better document the close relation between the Israeli demand for Palestinian workers and the demand for other (non-Palestinian) foreign workers.

After a brief historical introduction, section 3 deals with the development of Palestinian employment in Israel between the two Intifadas. We investigate the relationship between the number of Palestinian other foreign workers in the Israeli labour market, taking into consideration trends in the general demand for workers in the important construction and agricultural sectors. Moreover, we compare the development of the relationship between the wages of Palestinians and other workers in these Israeli sectors. Section 4 shows the developments in Palestinian employment in Israel during the first two years of the Intifada in some detail, and documents how the upward trend of the wages of Palestinian workers in Israel changes downward in 2001. In section 5 we discuss the likely importance of the

Israeli labour market for workers from the West Bank and Gaza in the case of a future peace accord. Section 7 briefly discusses the implication of our findings for the UNRWA refugees. Finally, section 7 sums up our discussions.

3) Palestinian employment in Israel before the Second Intifada

Starting with the Israeli occupation in 1967, workers from the West Bank and Gaza moved freely into Israel during the 1970s and 1980s[2]. The Palestinian labour force continued to expanded rapidly during the whole period. There was an annual growth in the working age population of 3-4 percent. Moreover, also the share of the working age population in the labour force increased, from 40 percent in the mid 1980s to 44 percent in 1993 (Divan and Shaban 1999). In spite of this large manpower increase, Palestinian unemployment remained low. An important reason was that many of the new workers were absorbed by the Israeli labour market. Over time, the Israeli demand for labour also increased local wages, and hence contributed to closing the wage gap between employment in Israel and employment in the West Bank and Gaza – the structural imbalance behind the massive labour flow in the first place.

The share of the Palestinian labour force that was employed in Israel reached a peak of 35 percent in 1987[3]. The influx of the Palestinian workers reinforced the dualistic nature of the Israeli labour market, with already had a fairly distinct divide between skilled and unskilled employment. Due to "security reasons", workers from the West Bank and Gaza were generally only allowed to perform unskilled jobs, in particular in the Agriculture and Construction sectors.

From 1988 and onwards several political shocks brought about severe mobility interruptions, followed by a general decline in the number of Palestinian workers in Israel. First, the war-like conditions during the First Intifada from late 1987 to 1992 negatively affected the Palestinian economy. Second, a tight and comprehensive six weeks curfew was imposed on the West Bank and Gaza during the First Gulf War in early 1991. Third, also in 1991, Israel introduced compulsory work permits for workers from the West Bank and Gaza. Fourth, there was yet another major "closure" in March 1993, following incidents involving Palestinian workers in Israel.

Due to these and other, similar events the absolute number of Palestinian workers in Israel dropped. Combined with the steady growth of the Palestinian labour force, this caused the share of the Palestinian labour force working in Israel to fall to just above 20 percent in 1993. After the 1993-94 "Oslo accords" permit restrictions and border closures were enforced to a much larger extent than before, which also hampered the de facto mobility of Palestinian workers into Israel.

The new Israeli policy affected Gaza much more than the West Bank. While the border to Gaza was effectively sealed off, a steady flow of Palestinian workers continued to cross illegally into Israel from the West Bank (See the discussion in the appendix). The strong rationing of the number of Palestinian workers who were allowed entry into Israel also caused the wage gap between employment in Israel and local employment to re-emerge. At the same time the Palestinian unemployment rates rose to above 30 percent.

In the early 1990s two new factors strongly affected Palestinian employment in Israel. First, the collapse of the Soviet Union led to a wave of Jewish immigration to Israel, totalling more than one million persons. The immigration wave increased the number of Jews in Israel by 25 percent in a period of only 5 years. In order to provide housing for the newcomers, the construction sector boomed, and its demand for unskilled labour increased. Because a very high proportion of the new

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[2] Defined as employment in Israel, Israeli settlements and Israeli Industrial Zones (ISI)
[3] This figure is taken from the PCBS labour force surveys, which also include unregistered Palestinian workers.

immigrants had academic background, relatively few wanted to take unskilled jobs, and the increased demand was directed towards non-Israeli labour.

The second new factor, brought about by the increased demand for unskilled workers and the new restrictions on the entry of Palestinian workers from the West Bank and Gaza, was a sharp increase in the stock of non-Jewish contract workers from countries such as Romania, Philippines, Thailand and China. Their number increased to almost 100 000 in 1996-97 (Figure 1). Although these workers constituted a relatively small share of the total employment in Israel, the contract workers made up almost a quarter of the total employment in the construction and agricultural sectors (Figure 2).

Figure 1 The number of (non-Palestinian) workers in Israel from "abroad" (1000s)
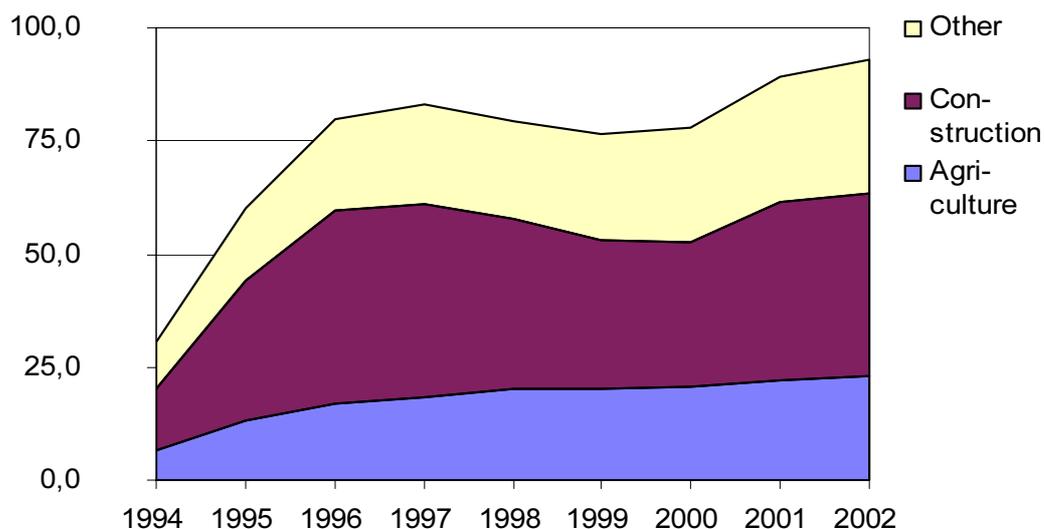
Figure 2 The share of employees in Israel constituted by (non-Palestinian) workers from "abroad"
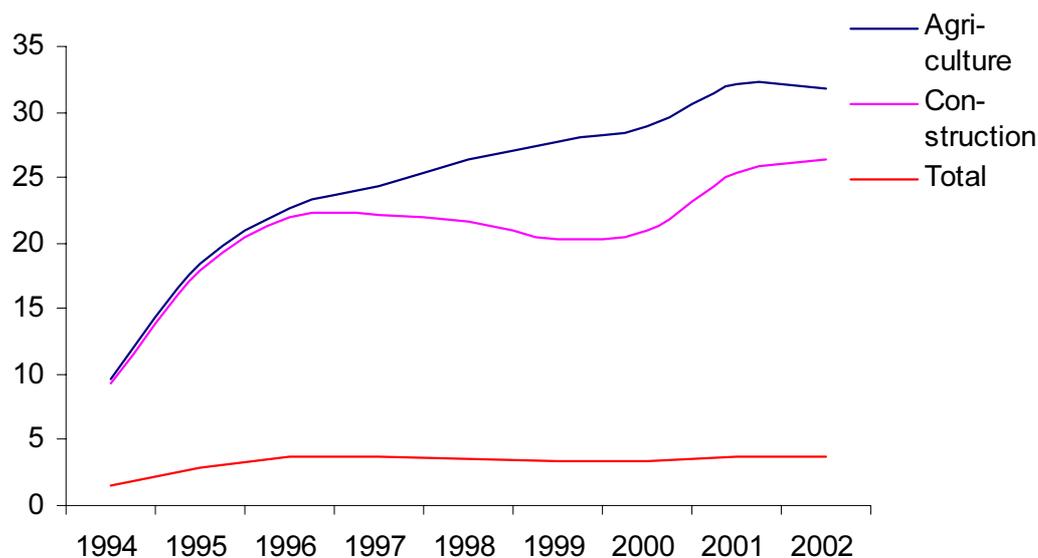
From 1996 Israel again started to increase the number work permits issued to persons from the West Bank and Gaza, and due to an excess Palestinian demand for employment in Israel, the number of

Palestinian workers employed in Israel rose (Figure 3). However, because of the large increase in the Palestinian labour force, the same number of workers employed in Israel now represented a much smaller share of the Palestinian labour force than before the First Intifada (from 35 percent in 1987 down to 25 percent in 1998)[4]. While the number of Palestinian workers in Israel grew, there was a flattening out of the number of (non-Palestinian) workers from "abroad" (Figure 1). Apparently, the Palestinians and the workers from "abroad" were "technical substitutes" in the Israeli labour market, in particular in construction and agricultural sectors (Figure 2 and Figure 4). As could be expected, the rise in Palestinian employment in Israel was followed by a strong decrease in unemployment in the West Bank and in particular in Gaza[5]. However, due to the large increase in the Palestinian labour force, the same absolute number of workers in Israel now represented a much smaller share of the Palestinian labour force than before the First Intifada (from 35 percent in 1987 down to 25 percent in 1998).

Figure 3 Registered workers from the West Bank and Gaza employed in Israel (1000)
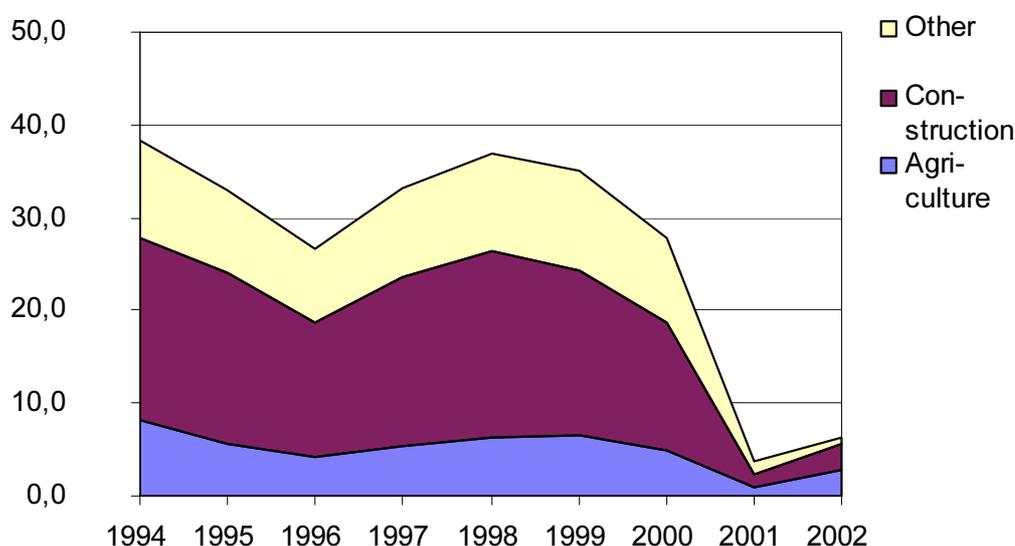
Figure 4 Share of employed in Israel constituted by workers from the West Bank and Gaza
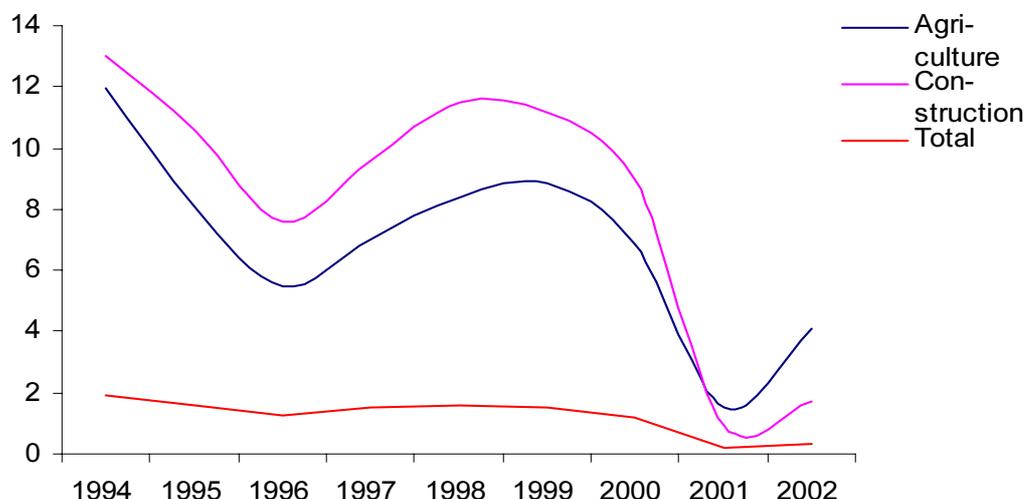
[4] According to the Palestinian PCBS data, which also includes "illegal" workers.
[5] See Øvensen 2004, figures 6 and 7

Most Palestinians who were registered as "workers in Israel" actually worked inside Israel. However the numbers shown above also include a number of workers from the West Bank and Gaza who worked in Israeli settlements in their respective areas. As could be expected, the share who worked in the Israeli settlements rather than inside Israel proper was higher in the West Bank than in Gaza, which contained few, and relatively small settlements (Figure 5 and Figure 6). At least for West Bank residents there seemed to be a tendency towards more permits for employment in the settlements during the mid-1990s. This was probably due to the increased demand for construction workers that followed the great expansion of the Israeli settlements in the West Bank in this period. (From September 1997 the registration did no differentiate between employment permits for the settlements and for Israel proper).

Figure 5 Distribution of Israeli work permits for Palestinians residing in the West Bank[6]
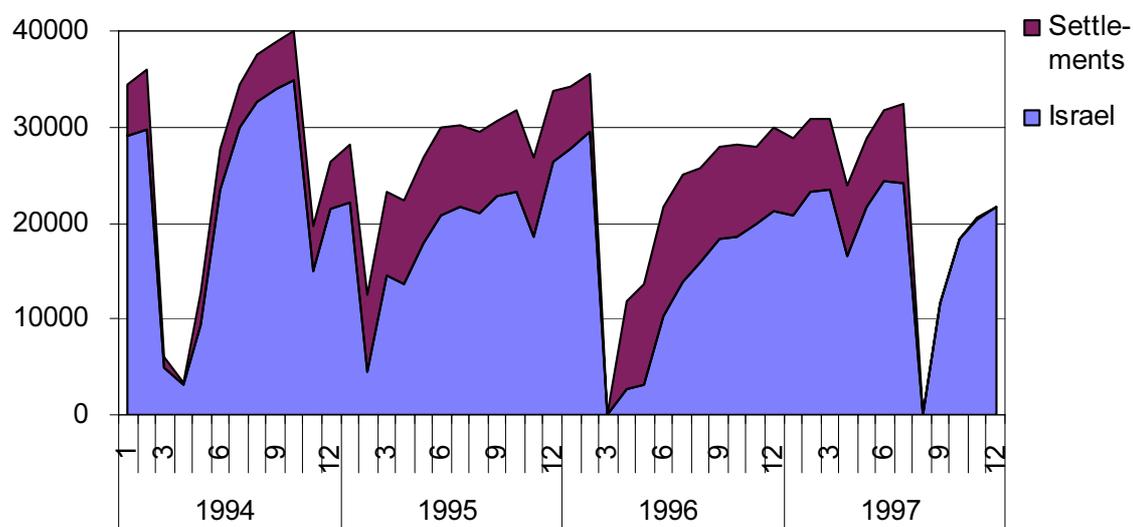
Figure 6 Distribution of Israeli work permits for Palestinians residing in Gaza
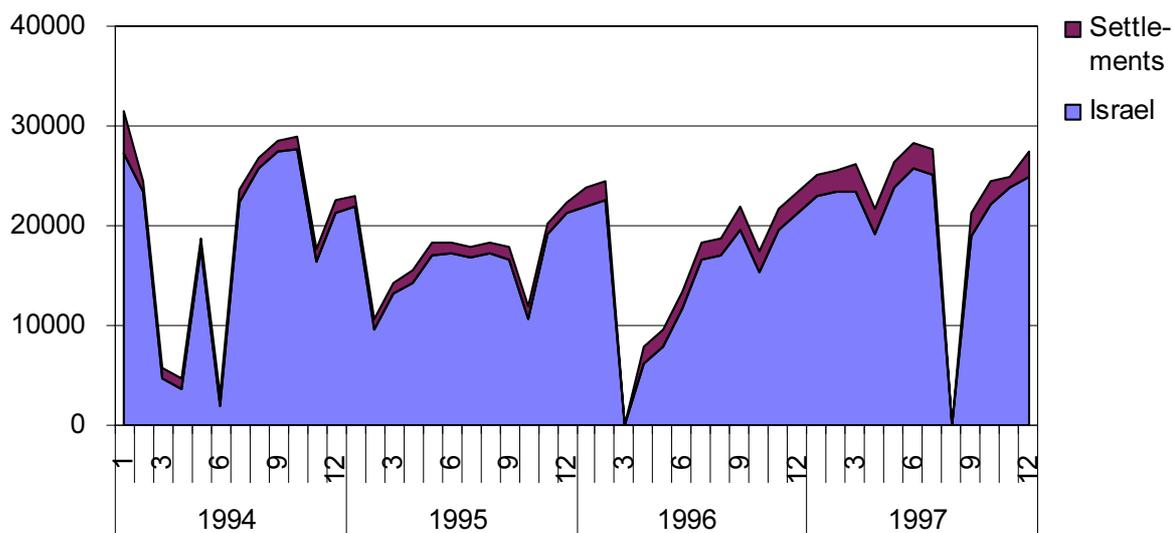
During the last part of the 1990s the labour market situation for the Palestinians was as follows: First, the introduction of "safe passage" between the Gaza and the West Bank had little substantial effect. To an even larger degree than before, the West Bank and Gaza were physically separated labour markets. Second, even *within* the West Bank, workers were subject to formal and informal mobility checks, enforced by Israeli checkpoints. Third, there was still excess demand for employment in Israel among Palestinian workers. Moreover, those who did obtain employment in Israel were largely confined to unskilled positions in the construction and agricultural sectors.

This labour market segmentation led to three salient wage gaps: First, there was a 24 percent wage gap between employment in the West Bank and employment in Gaza. Second, there were wage gaps between employment in Israel and the West Bank and Gaza, of respectively 61 and 85 percent (World Bank 2001)[7]. Third, there was a (average) 50 percent wage gap between workers from the West Bank and Gaza and other workers in the Israeli construction and agricultural sectors.

Figure 7 Average wages of workers from the West Bank and Gaza in percent of average wages of other workers in the Israeli construction and agriculture sectors[8]
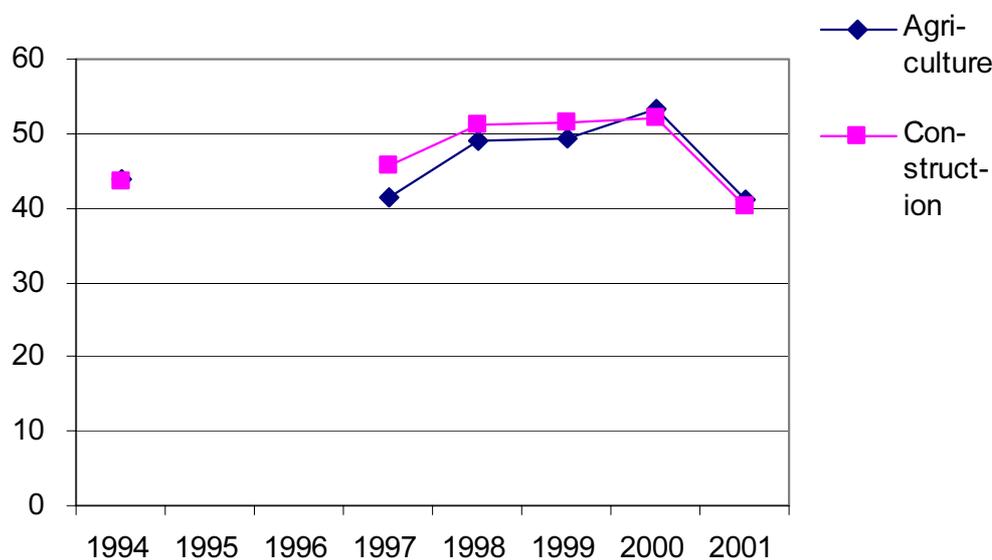
The latter wage gap – which we may label a "discrimination factor" – was surprisingly constant across sectors (Figure 7). Prior to the Second Intifada workers commuting from the West Bank and Gaza were on the average only paid 45-50 percent of the average wages of Israeli and other foreign workers. This gap was found both in the Agriculture or Construction sectors[9]. However, when the Second Initfada broke out, the Palestinians were only paid 40 percent of the sectors' average wage levels[10]. Figure 8 provides another illustration of the "discrimination factor". Agricultural workers'

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[6] Source: Palestinian Ministry of labour: http://www.mol.gov.ps/english/statistics/permits.htm#table9
[7] All gaps calculated for workers with similar individual characteristics
[8] Due to less immediate availability we lack data for 1995 and 1996 for all figures based on monthly wages. From 2002, data were not presented separately for Palestinian workers, but jointly for "Non-Israeli" workers.
[9] This does *not* imply that all wage differences between workers from the West Bank and Gaza may be explained by the workers' origin. The "human capital" and the productivity of the workers may of course differ, and restrictions on occupational choice for Palestinians employed in Israel may as well be an important determinant not accounted for here.
[10] Note that both for the left and right part of Figure 5 and Figure 8 the two lines have almost exactly the same value for 1994.

wages were only 70 percent of the construction sector workers' wages, both for workers from the West Bank and Gaza, and for Israeli and other foreign workers. Also this fraction was very stable until the outbreak of the Second Intifada.

Figure 8 Average wages of agricultural workers in percent of construction workers, by origin of workers[11]
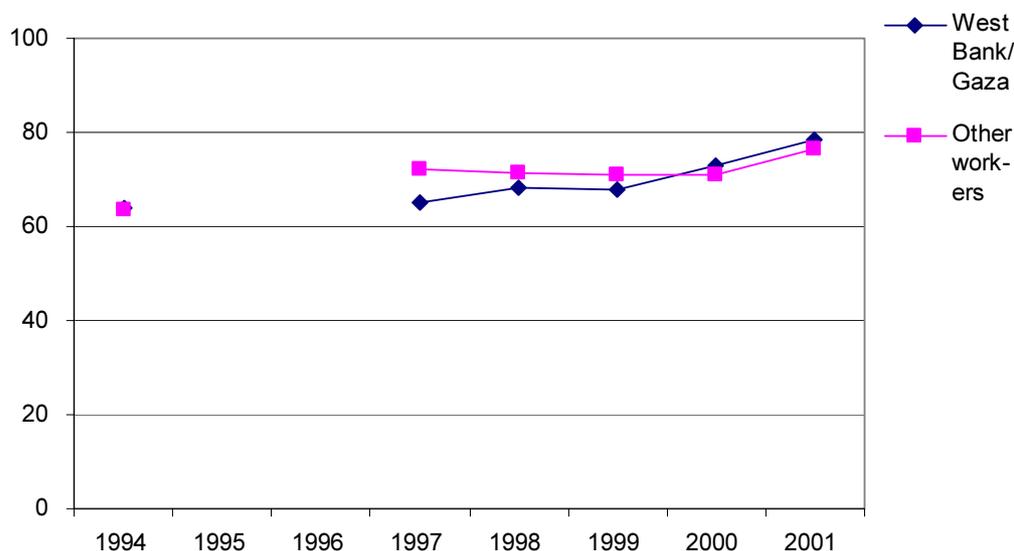
From 1999, the number of Palestinian workers in Israel again started to fall. However, this decrease should not necessarily be attributed to the Israeli-Palestinian conflict, or the influx of other foreign workers, but to changes in labour demand in the Israeli economy. Both Palestinian workers, and non-Jewish contract workers were employed in economic sectors whose *shares* of the total Israeli employment posts were decreasing in the late 1990s (Figure 9).

Figure 9 Index for employment posts in Israel, total, and for the Agriculture and Construction sectors (1994=100)
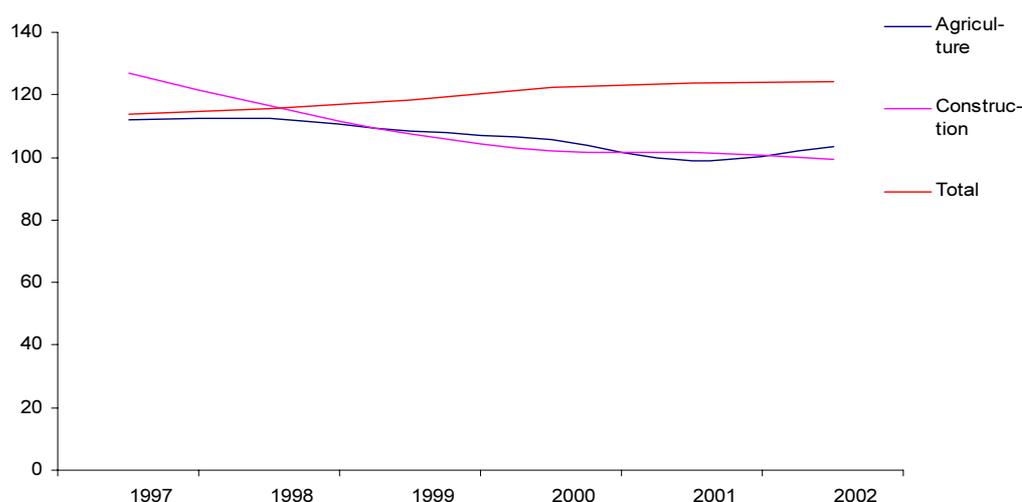
The decrease was strongest in the construction sector, which had been inflated to an artificially high after immigration wave from the former Soviet Union during the early 1990-ies. However, also the

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[11] Note that both for Figure 7 and the two lines have almost exactly the same value for 1994.

agricultural sector declined during most of the period. The total number of Palestinian and other foreign workers reached its peak around 1997-98 (Figure 10). It is also possible that the Israeli construction and agriculture sectors reached a "saturation" level with respect to the feasible share of unskilled non-Israeli employment at around 30 percent (Figure 11).

Figure 10 Number of registered foreign workers in Israel (1000)
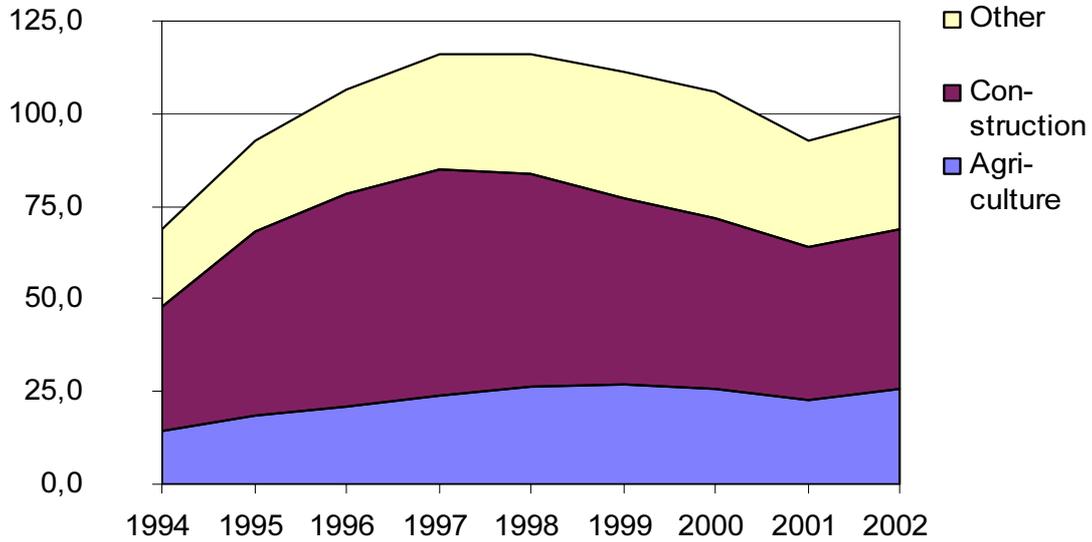

Figure 11 Share of employees constituted by foreign workers
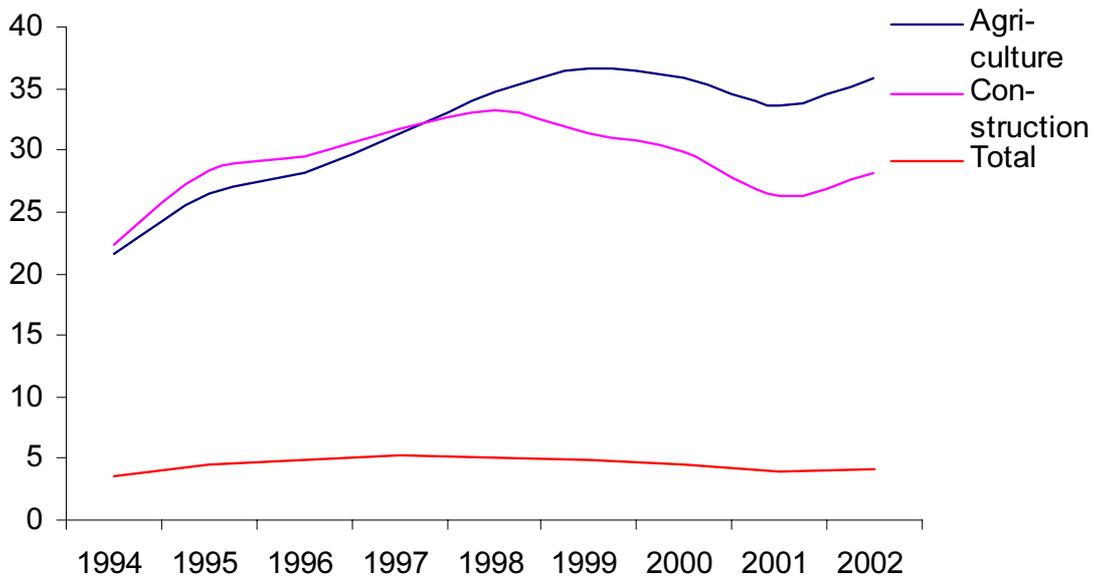
4) Palestinian employment in Israel during the Second Intifada

The Second "Temple Mount" Intifada started in October 2000. The immediate effect for the Palestinian labour market was a dramatic decrease in the number of Israeli work permits. Figure 12 shows that there had already been several total interruptions of Palestinian employment in Israel during the preceding years. However, these had been of relatively short duration, and the higher wages in Israel still made employment there relatively attractive in the long term.

However, when the Israelis started to re-issue work permits, the overall number of permits was much lower than before. Once again Gaza was hardest affected. Not only was the number of issued permits much lower than for the West Bank. Also the complete separation of the Gaza Strip from the West Bank made illegal border crossings impossible. To a certain degree foreign workers from other countries replaced the Palestinian workers. Their number grew for the first time since 1996 (Figure 1).

Figure 12 Work permits for work in Israel, Israeli settlements, and Israeli industrial zones for workers from the West Bank and Gaza.[12]
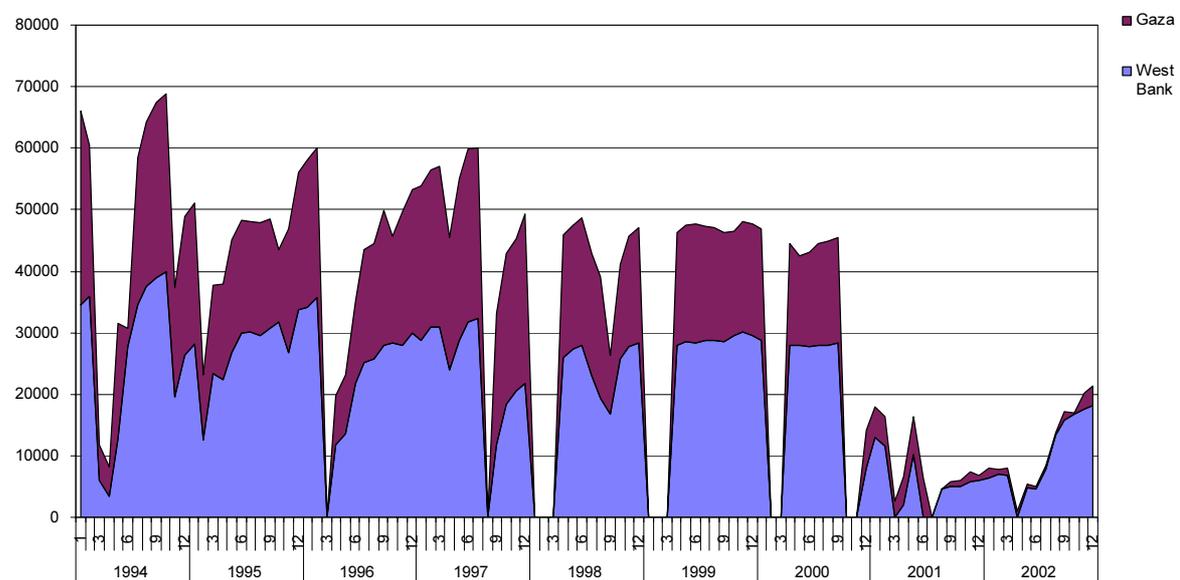
In contrast to the situation during First Intifada, many Palestinians were now equipped with firearms, and the Israeli re-occupation of towns and villages led to much heavier fighting than before. Hence, the physical destruction, and the degree of interruption of local economic activity were much higher during the Second than during the first Intifada. Numerous Israeli closures and checkpoints brought the de facto mobility space for Palestinian workers down to the village or town level, causing even more damage to the local labour markets. Moreover, as the number of Palestinian workers in Israel remained at a very low level, the indirect effect of the workers' lost incomes had a strong negative impact on local Palestinian demand.

Among those few who continued to work in Israel two new factors contributed to a decrease in their real wages. First, the wage gap between Palestinian workers employed in Israel and other Israeli workers, which we above labelled the "discrimination factor, increased from 40-45 percent to 60

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[12] **Note**: from the beginning of September 1997, the labor offices in the Districts did no longer record the number of permits issued to Palestinian workers in Israeli Settlements, which explains some of the West Bank decrease. Also note that the figure puts the figures of Gaza workers on top of, (and not behind) those of the West Bank.

percent (Figure 7). At least a part of this gap could probably be attributed to rational productivity calculations among the Israeli employers. Due to the Israeli mobility restrictions and closures, there was at any time an increased and substantial risk for absenteeism among workers from the West Bank and Gaza. This insecurity imposed an additional "cost" the Israeli employer, which implied that a "risk premium" was deducted from the Palestinian workers' wages (World Bank)[13].

Second, from the perspective of the Palestinian workers, the Israeli mobility restrictions and closures implied that an increasing amount of time had to be spent to obtain work permits and passing through border controls, often characterized by harassment of Palestinian workers. This "harassment factor" imposed increased monetary and other costs associated with employment in Israel relative to local employment in the West Bank and Gaza. Illegal workers had to spend even more money and time to surpass border checkpoints. Finally, the economic risk to the workers caused by the frequent interruptions in all Palestinian employment in Israel due to "security reasons" contributed to reduce the real value of the relatively higher wages for Palestinian workers in Israel.

Figure 13 Average monthly wages of employees in Israel in constant 1994 NIS, by sector and residence
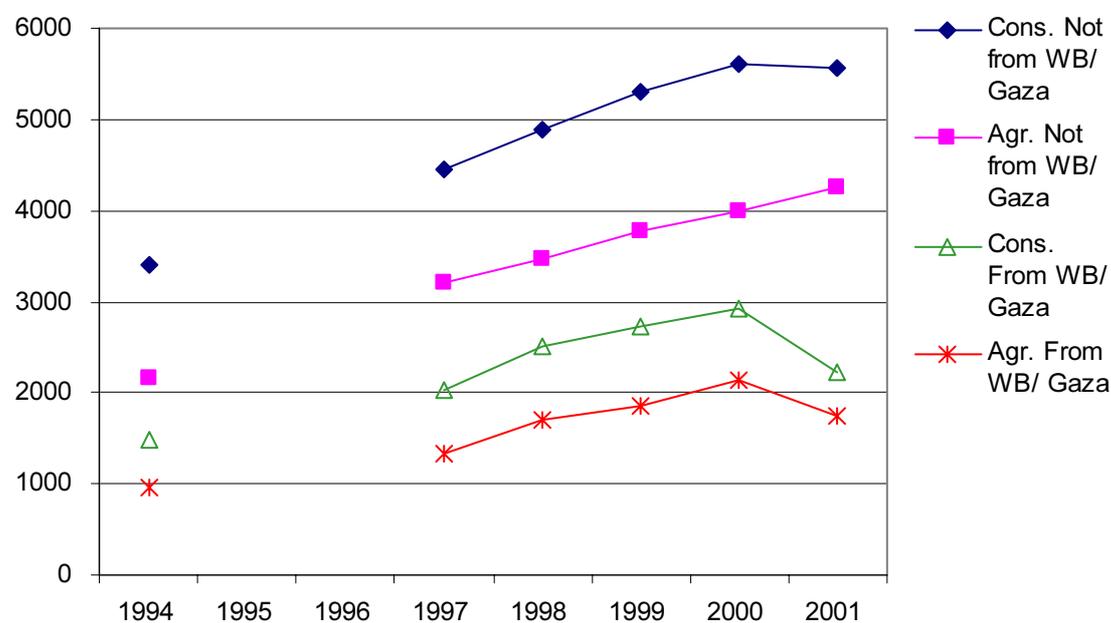
Since the "discrimination" and the "harassment" factors should reduce *both* the demand for, and the supply of Palestinian labour to Israel, one may have expected that the Palestinian wage levels would prevail. However, the initial wage gap between work in Israel and in the West Bank or Gaza seems to have been so high that also the nominal wages for registered Palestinian workers in the construction and agricultural sector still fell substantially at the outbreak of the Second Intifada (Figure 13). Between 1994 and 2000 the *deflated* monthly wages of workers from the West Bank and Gaza, and workers from elsewhere increased at parallel paths in both sectors[14]. However, from the outbreak of the Second Intifada, there was a clear drop in the wages of the Palestinian workers in Israel.

That the wages of the Palestinians working in Israel were reduced in spite of increased harassment costs sadly illustrates the disastrous effects of the Second Intifada for the local employment in the

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[13] During the Second Intifada one may also include perceived threats to the personal security among some of these employers.
[14] Note that the latter (majority) category includes all other workers, i.e. Israeli Jews and Arabs, and registered "foreign", non-Jewish contract workers. We did have readily available data to single out the "contract workers" as a separate category.

West Bank and Gaza. Rather than a decrease in labour supply to Israel due to the high harassment costs, the total effect of the Second Intifada was most probably an *increase* in the (potential) supply of Palestinian workers to work in Israel.

Another possible explanation to the observed wage decrease among Palestinian workers who still held employment in Israel was that those workers who lost their work permits after the Second Intifada constituted a "positive selection" of the total pre-Intifada stock of Palestinian workers in Israel. Assuming that the most productive workers in manual occupations are young, male workers, those few, older Palestinian workers who remained employed in Israel after the Intifada may, on the average, have been less productive than the pre-Intifada average[15]. Eventually, the negative effects of the Second Intifada on tourism and Jewish immigration to Israel also increased the Israeli unemployment figures – and hence the demand for non-Israeli workers. However, if this effect was really important one would expect that such a *general* decline in the Israeli economy should affect wages of Palestinian and other workers in the same way, which was not the case (Figure 13).

5) The future importance of Palestinian employment in Israel

Although the present conflict level between Israel and the Palestinians is historically high, one may still discuss what role the Israeli labour market is likely to play for the Palestinians in the West Bank and Gaza under a future peace accord between a Palestinian state and Israel. Our main message is that *Palestinian employment in Israel is likely to be of much less significance than before*, in particular compared to its peak in the late 1980s.

There is currently an excess supply of workers from the West Bank and Gaza for the Israeli labour market. Most of those Palestinians who will reach the working age population during the next 15-20 years are already born. The high birth rates during the last 15 years, in particular in Gaza, implies that the working age population will grow 3-4 percent annually, i.e. that it will double in the next 20-25 years, even without any return of refugees under a peace accord.

Moreover, the labour force participation rate in the Palestinian areas is low, in particular for women. If the current tendency of fertility decline continues, it is likely that the female labour force participation rate will increase rather than decrease. Hence the West Bank and Gaza labour force may well double in less than 15-20 years. Unless there is a massive inflow of capital from outside the domestic labour market is unlikely to be able to satisfactorily absorb this large increased supply of workers. Hence the supply of workers from the West Bank and Gaza to the Israeli labour market is likely to be stronger than today.

When completed, the new "security wall" around the West Bank will probably reduce the possibilities for illegal border crossings among West Bank workers down to the current (zero) level of Gaza. The Israeli authorities will be able to directly determine Palestinian employment in Israel through the number of work permits they issue. It is likely that even under a peace agreement the security experiences learnt during the Second Intifada will cause a reluctance to allow a large number of Palestinians to enter Israel, let alone to let these workers work in other than unskilled positions.

The political pressure in Israel for increasing the number of work permits may very well be lower than it has been before. The availability and introduction of non-Palestinian workers as substitute for

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15 To work inside Israel a Palestinian male worker must be married and over 35 years while the age requirement falls to 25 years for those employed in Israeli settlements and industrial estates. Palestinian traders and businessmen applying for permits to enter Israel must be 28 and married, or single and over 40 years. ("Humanitarian Update, OCHA, March 15 2003; www.reliefweb.int/hic-opt.

Palestinians have changed the work supply situation of unskilled employment. Moreover, the population of "Israeli Arabs" is also rapidly increasing, and this group may also be direct competitors for certain types of work that were previously performed by workers from the West Bank and Gaza.

The employment share of the two largest Israeli sectors demanding Palestinian unskilled labour, the construction and the agricultural sectors, seem to be decreasing. Depending on the technological progress it is also possible that one has reached a saturation level with respect to the need for unskilled labour in these sectors. Finally, removal of the Israeli settlements in Gaza and a sharper divide between larger West Bank settlements inside the "Security Wall", and smaller (later to be evacuated?) settlements outside the Wall will remove the current "grey area" where Palestinians access the Israeli labour market without having to enter into Israel.

Together, an increased supply of Palestinian workers for the Israeli labour market, and an unchanged or even decreased demand for such workers, may reduce the absolute number of Palestinian workers to below the pre-Temple Mount Intifada level. Their wages may also be lower than before. The positive effect of Israeli employment for the Palestinian economy will be smaller than before in relative terms, both the *direct* employment effect, and the indirect effect from local demand generated by the incomes of the workers in Israel.

Whereas employment in Israel has been very important for the workers affected and their families, the *overall* importance of employment of Palestinian workers for the Israeli economy is relatively low. Not at any time since the occupation of the West Bank and Gaza, workers from the West Bank and Gaza constituted more than a few percent of the total number of employees in the Israeli economy (Figure 4). The gloomy message to the Palestinians in the West Bank and Gaza is that there is an ever-increasing asymmetry in the high importance of Palestinian employment in Israel has for the *Palestinians*, and the low importance of this employment for the *Israelis*.

6) The UNRWA refugees and the Israeli labour market

Neither the PCBS nor the Israeli CBS present their labour force data in terms of refugee status. A discussion of the implications of the findings above for the West Bank and Gaza 1948 refugees thus boils down to two issues: First, that the differences between the West Bank and Gaza also contains a refugee dimension. Second, that there may be a difference between refugees and non-refugees in the inclination to work in Israel *within* each of these regions.

A brief look at the Palestinian population statistics shows that the social outcomes of refugees compared to those of the non-refugees are closely associated with the differences of living in Gaza relative to living the West Bank. The reason is that the refugee share is much higher in Gaza (2/3 of the population) than in the West Bank (1/3). Moreover, the share of refugees living in camps is also higher in Gaza than in the West Bank.

The 24 percent wage gap between employment in the West Bank and employment in Gaza implies that work in Israel is relatively more profitable for Gaza residents than for West Bank residents, and hence, on the average, also to the refugees[16]. Although it seems from our data that the share of the Gaza labour force working in Israel has been slightly higher than the corresponding share in the West Bank, there have probably been more unregistered workers from the West Bank than from Gaza up through the 1990s. However, the current strict enforcement of permit requirements and the new security wall is likely to even out this difference.

[16] We could not find any data about whether the Israeli labour market pays similar wages for workers from the West Bank and workers from Gaza.

Two factors relating to refugee status may be expected to affect *whom* from each region that works in Israel. First, the refugee families' loss of land and productive capital in 1948 may still make them more inclined to work in Israel, where workers are not allowed to bring in physical capital such as machinery or trucks anyway. Second, although Israeli work permit authorities are not likely to be generally concerned about the applicants' refugee status, it may be more difficult for *camp* refuges to obtain work permits than for workers from other areas. The reason is that the refugee camp population has a reputation as more politically radical then residents in other localities.

The fact that most Palestinian employment in Israel is unskilled, but still well remunerated compared to employment in the West Bank and Gaza, implies that the wage gap between Israeli and local employment is higher for workers with low education, than for the highly educated. However, since there are small differences between refugees and non-refugees with respect to education, this is factor is probably not very important. In conclusion, it seems probable that access to the Israeli labour market has been somewhat more important for refuges than for non-refugees.

7) Conclusion

We have identified three main phases in the Palestinian employment in Israel during the 1990s. First, there was a politically determined decline for the first years after the 1993 Oslo accords. Second, there was an increase from 1996 to 1999, as the Israeli restrictions were relaxed. Finally, there was once again a decline during the last 1-2 years before the Second Intifada, most probably due to the general economic developments in Israel, and the decline in the construction sector in particular. During the whole period the Israelis substituted non-Palestinian foreign workers for workers from the West Bank and Gaza. The Second "Temple Mount" Intifada brought about a dramatic decrease in the number of Israeli work permits, and when the Israelis eventually started to re-issue work permits for Palestinians, the number was much lower than before, at lower wages. In addition, the disruption of the economic activity in the West Bank and Gaza was much higher during the Second, than during the first Intifada.

In the case of a future peace accord we argue that *Palestinian employment in Israel is likely to be of much less significance than before*, in particular compared to the peak in the late 1980s. Natural population growth is in itself going to double the Palestinian working age population within 20-25 years. Moreover, a fertility decline may well go together with an *increase* in the female labour force participation rate. The *domestic* Palestinian labour market is not likely to satisfactorily absorb these new workers, and the supply of Palestinian workers for the Israeli labour market is likely to be even stronger than as of today. The new "security wall" around the West Bank will reduce the possibilities for illegal border crossings also among West Bank workers and will give the Israeli authorities even more direct control of Palestinian employment in Israel. Moreover, previous pressure from Israeli employers to issue more permits is likely to decrease due to the increased availability of other foreign, and Israeli Arab workers. The employment shares of the two largest Israeli sectors demanding Palestinian unskilled labour, the construction and the agricultural sectors are decreasing, and technological progress may further reduce the need for unskilled labour. Finally, the removal of Israeli settlements from Gaza and a sharper divide between the larger West Bank settlements will close an important alternative branch of the Israeli labour market to Palestinian workers. Together, an increased supply of Palestinian workers for the Israeli labour market, and an unchanged or even decreased demand for such worker, may reduce the absolute number of Palestinian workers to below the pre-Temple Mount Intifada level, with wages possibly lower than before.

Appendix: Data for Palestinian employment in Israel

A reader of surveys about Palestinian employment in Israel may easily get lost. There are large deviations in the number of workers reported by different sources - even for the same year - and the concepts of "Palestinian" and "Israel" is ambiguous. In this appendix we will try to clarify on some of these issues.

There are two main data sources on the issue of Palestinian employment in Israel. First, the *Israeli Central Bureau of Statistics (CBS)* has collected data continuously from 1967. The CBS used both Israeli register data and household interviews in the West Bank and Gaza when these areas were occupied. Almost all workers from the West Bank and Gaza must commute to their work places in Israel on a daily basis[17]. Hence, they have had to pass through Israeli checkpoints twice daily. From 1991, compulsory work permits were introduced, and the registration of work related border crossings represented another valuable source of data.

The Oslo accord led to the establishment of the Palestinian Authority, including the *Palestinian Central Bureau of Statistics (PCBS)*. The PCBS replaced the CBS as the implementing agency for the labour force surveys in the West Bank and Gaza. However, the CBS continued to collect data from Israeli sources. This included data about the *registered* workers who received their wages through the Israeli "Payment Department of the Employment Service", i.e. the number of legal border crossings, the number of work permits issued to Palestinians, and the number of Palestinian workers legally employed with Israeli employers.

Both the CBS and the PCBS reserve the concept "*Palestinian worker*" for workers of Palestinian descent, residing in Gaza or the West Bank, excluding Arab (East) Jerusalem and the "Israeli Arabs" (the Arab population inside the 1967 Israeli borders)[18]. For some years the CBS also included workers from the Israeli controlled South Lebanon "Security Zone" under the heading "Palestinian worker"*[19]*.

For the CBS the concept of "Israel" includes all of Israel as defined by the 1967 borders. In addition all of "Jerusalem", defined by the expanded Israeli city limits, as well as the Israeli annexed part of the Golan Heights are included. All Israeli settlements in the West Bank and Gaza are also included under the heading "Israel", even when situated far inside the 1967 borders. Finally, the concept of "Israel" includes the Israeli-Palestinian "Industrial Zones", such as the Erez Industrial Zone, on Palestinian territory just inside the Israeli-Gaza border crossing[20]. The somewhat confusing consequence is that a worker from e.g. the West Bank may be considered as "working in Israel", even though he is employed with a Palestinian employer in Arab East Jerusalem, or at an Israeli settlement next to his West Bank village.

It is fairly obvious that it is difficult for the CBS to collect data about Palestinians working illegally in Israel. However, for somebody without a valid work permit, there is little risk involved in reporting employment in Israel to the *PCBS*. It is thus reasonable to assume that the PCBS data most correctly reveal the true number of Palestinian workers in Israel. The Israeli authorities have been open about
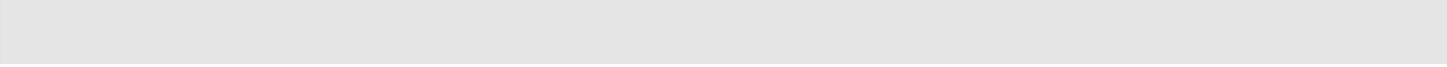
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17 The basic rule has been that workers were prohibited from staying overnight in Israel. However, in 1998 5000 workers were allowed to stay in Israel overnight". (Economic Relations between Israel and the Palestinian Authority; Background Paper, February 1998; Israeli MFA (http://www.mfa.gov.il/mfa/go.asp?MFAH00sd0).

18 Both groups can move freely within Israel

19 In 1998 there were reported to be 2200 of them, i.e. roughly 7 percent of all workers from "Judea, Samaria and South Lebanon" at the time Refer http://www.jpost.com/com/Archive/14.Dec.1998/Business/Article-2.html.

20 In 1998 only one industrial park was in operation, at Erez, where more than 80 Israeli and Palestinian enterprises provided jobs for 3,000 workers from Gaza.