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# The Million Person Gap: The Arab Population in the West Bank and Gaza

Bennett Zimmerman, Roberta Seid and  
Michael L. Wise

The Begin-Sadat Center for Strategic Studies  
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## **Preface**

This project was initiated and led by Bennett Zimmerman, a former Strategy Consultant with Bain & Company. Mr. Zimmerman holds an M.B.A. from Harvard Business School and has conducted numerous due diligence audits on business and governmental organizations. Roberta P. Seid, PhD, is a historian and former lecturer at the University of Southern California. She is a researcher and consultant on Israeli history, particularly on events surrounding Israel's War of Independence. Dr. Michael L. Wise, PhD, a physicist and expert in mathematic model techniques, is the founder and director of a wide range of public and private companies in the United States and Israel. The authors were engaged in both the primary research and the evaluation of all data and the population figures derived in this report.

The authors worked closely with the leaders of an Israeli research team, Yoram Ettinger, a consultant to members of Israel's Cabinet and Knesset and a former Minister in Israel's Washington Embassy, and Brig. Gen. (Ret.) David Shahaf, former Head of the Civil Administration in the West Bank who co-led Israel's last demographic survey of the West Bank in 1990. The Israeli team also included Professor Ezra Zohar who has published research papers on demographics in Israel since 1970, Dr. David Passig, Head of the Graduate Program of Communication Technologies and an expert in forecasting at Bar-Ilan University, and Avraham Shvout, a demographer who has tracked both Jewish and Arab population in the West Bank. The Israeli research team collected primary data and reports that assisted the American team in its research and analysis. As the Israeli team included individuals who performed Israel's last population work for the West Bank and Gaza, they were well positioned to obtain vital information and had first-hand experience with demographic analyses of the West Bank and Gaza.

*The authors appreciated the contribution of the Israeli research team but take full responsibility for the work as it is presented in this document.*



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## Chapter 1: Introduction and Summary of Results

This study assesses the source and veracity of population reports issued annually by the Palestinian Authority (PA) since 1997. The goal is to calculate an accurate population estimate for the West Bank and the Gaza Strip (the Territories) through mid-year 2004.

The Israel Central Bureau of Statistics (ICBS) had been responsible for recording population data in the Territories during Israel's Civil Administration from 1967 until 1994-1995 when, in conformity with the 1993 Oslo Accords, it transferred this responsibility to the PA and ceased its own work. The PA established the Palestine Central Bureau of Statistics (PCBS) to perform this function. In 1997, it conducted its first census and used the results to develop population growth projections for each year from 1998 to 2015.<sup>1</sup> It is these *predictions* that the PA has officially issued each year as its population size. These statistics have been routinely accepted by Israeli government agencies, the UN, the World Bank, the EU, the US State Department, and many demographers have used the PCBS data for their own projections.<sup>2</sup> However, the PCBS methodology, statistics, and assumptions have never been fully examined or evaluated.

This study examines the 1997 Census, both in its definition of *de facto* residents and against other population estimates from that era, and compares the PCBS projections to *actual* reported births, deaths and immigration recorded annually by official Palestinian and Israeli agencies. In this research, the West Bank population does not include Arabs living inside the Israeli-designated municipal boundaries of Jerusalem. This population is already recorded by the Israel Central Bureau of Statistics (ICBS) in its population surveys of Israel. This study reveals major discrepancies in the PCBS forecast.

The 1997 PCBS beginning population base for *de facto* residents was inflated by:

- ***Inclusion of Non-residents:*** The 1997 PCBS Census base included 325,000 Palestinian Arabs *living abroad*, even though these individuals had lived outside the Territories for many years. This group comprised 13% of the PCBS' reported population base.  
Reduction: 325,000

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- ***Inclusion of Jerusalem Arabs in West Bank Figures:*** Jerusalem Arabs who were already counted in Israel's population survey were also counted in the PCBS population estimate for the West Bank. Reduction: 210,000
- ***Unexplained Increase over ICBS Records:*** The 1997 PCBS census included an additional 113,000 rise above the last ICBS figures for the Territories. Yet, PA Central Election Commission reports for adults voting in 2005 substantiated the ICBS population records from the mid-1990s. Reduction: 113,000

The PCBS Model's projections with respect to births and immigration were not met in any year between 1997 and 2004.

- ***Fewer Births:*** According to reports current through January 2005, the PA Ministry of Health recorded fewer annual births between 1997 and 2003 than the PCBS had predicted for each of those years. These lower birth figures are consistent with PA Ministry of Education figures for students entering school six years later. Reduction: 238,000
- ***Alterations of Recorded Birth Data:*** In its more recent reports, the PA Ministry of Health retroactively raised the number of births it had reported prior to the release of the 1997 PCBS census. Using data at originally reported levels lowers the number of births even further. Reduction: 70,000
- ***Net Immigration and Emigration Error:*** Instead of the large immigration originally forecast by the PCBS, the Territories experienced a steady net emigration abroad. The PCBS predicted 236,000 would move into the Territories between 1997 and 2003. Instead, 74,000 left. Reduction: 310,000
- ***Migration to Israel:*** Many residents of the Territories moved to pre-1967 Israel and Jerusalem. No adjustments were made for *unofficial* immigration as there is little data on this group. However,

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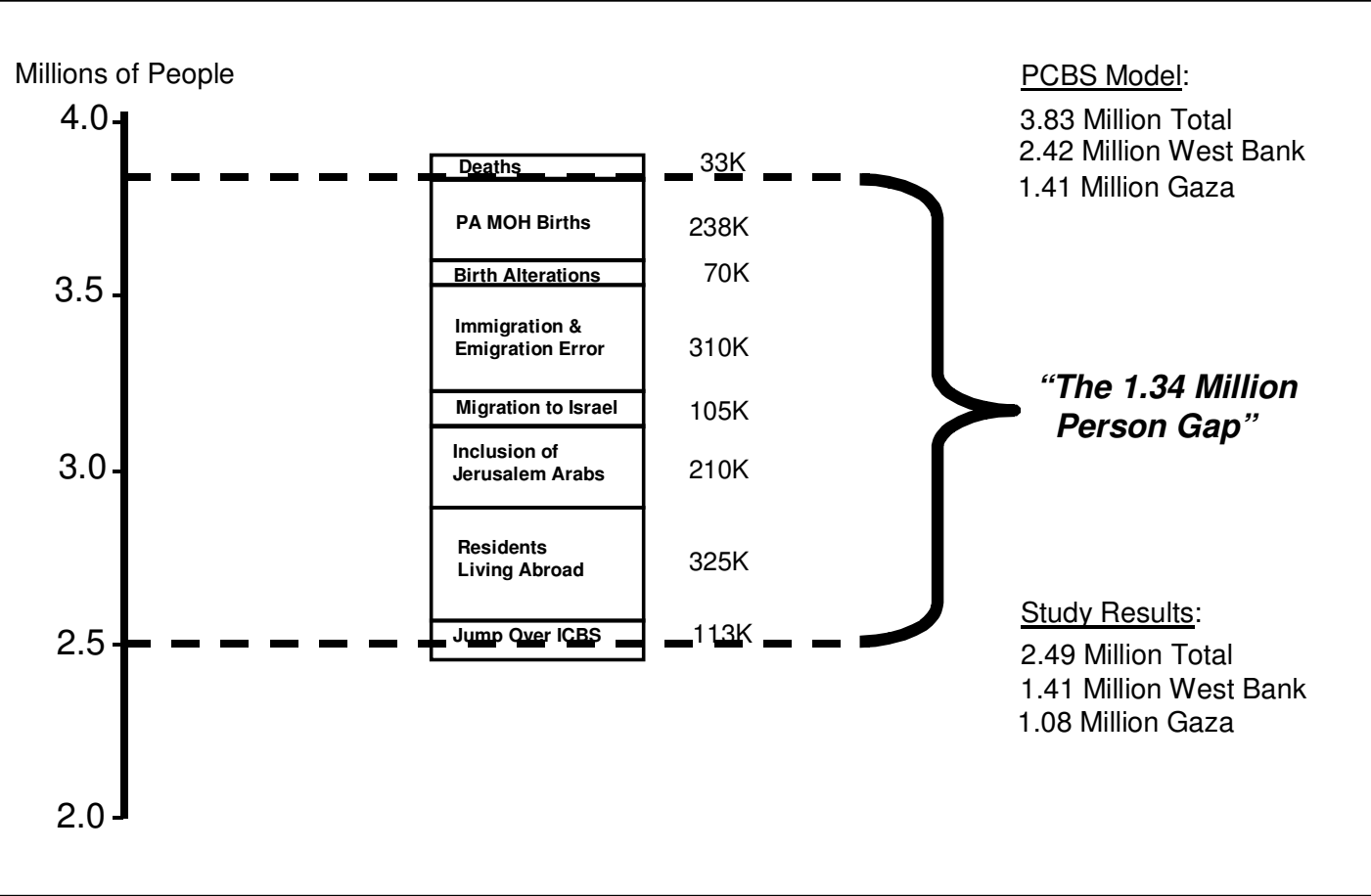
immigrants who legally received Israeli IDs according to Israel Ministry of Interior reports from 1997 to 2003 were removed from the PCBS count. Reduction: 105,000

When adjusting for the PCBS errors, the Arab population in the Territories at mid-year 2004 was calculated at 2.49 million rather than the 3.83 million reported by the PCBS – a gap of 1.34 million persons. As a consequence, the population growth rates were considerably lower than has been assumed. Taken together, these overestimates by the PCBS compounded exponentially to produce a 50% overstatement of the 2004 Arab population in the Territories.

**Figure 1.1** shows the differences between the PCBS Model and the results of this study and the relative importance of each category in forming the gap.

Since the results of this study were released on January 10, 2005, the PCBS has acknowledged some errors in its population model and has begun to lower both its current population estimate and its predictions about its future size.<sup>3</sup> This report also addresses those recent revisions and the PCBS response to this study.

**Figure 1.1** Differences between PCBS Model and this Study's Results by Mid-Year 2004<sup>4</sup>



## Chapter 2: Methodology and Sources

The formula for measuring population is straightforward. After a beginning base population is determined, births and immigration in a given period are added and deaths and emigration are subtracted, producing a new base population at the end of the period. Expressed arithmetically, the formula is:

**Begin Population + Births – Deaths + Immigration – Emigration = End Population**

Measuring any population requires accurate reporting and verification of each of these factors. This study investigated, factor-by-factor, the actual data released by Palestinian and Israeli agencies since 1990. Third party data was used for comparative purposes.

It is important to underline that this study used a *bottom-up* approach. Population calculations were based on a verified beginning population base and carefully researched data on actual annual births, deaths and migration. These results represent a historical analysis of demographic events that have already occurred. The calculation ends with 2004 and does not make projections about future population size or growth rates.

The population results in this study were corroborated with statistical indicators, including election and school enrollment data, and with earlier projections and comparisons against regional and world population trends. *Spectrum Demographic Software* was used to verify that the arithmetic models produced in this study matched conventional demographic patterns in which there is consistency between population size, fertility rates and birth levels.<sup>5</sup>

In contrast, many other demographic studies have employed a *linear* approach in which rough or outdated growth assumptions are applied year after year to a base population to arrive at new population estimates. If the population base and/or the rates are inaccurate, the results become seriously flawed. The errors in growth assumptions compound as they are applied to future years. The resulting models begin to diverge, exponentially, from the actual situation on the ground. Unless those who make such predictions

correct their errors about present population size and growth rates, their assessments about the future are meaningless.

### **Real Data Yields Real Growth Rates**

This study did not use projected or estimated rates to calculate any population figures. Instead, it used data about demographic events that had occurred in previous years to construct a more accurate current population estimate for the Territories. This data was, in turn, used to calculate actual growth rates for the population in the West Bank and in Gaza. This study reports population growth rates released each year by relevant PA agencies for informational and comparative purposes only. These rates are often wrong since they were estimated in earlier years or depend on previous and often incorrect forecasts for population in the Territories.

Annual population growth rates (PGRs) are calculated as the difference between the population base at the start and end of a year. Birthrates and death rates reflect the number of births or deaths per year as a percentage of the total population at the start of a year. Natural growth rates (NGRs) are equal to the annual birth rate less the annual death rate for a particular year. Total fertility rates (TFRs) measure the average number of children a woman is likely to have during her childbearing years if birth rates remain stable.

### **Sources**

The primary sources used in this research were taken from PA agencies actively engaged in recording demographic events in the West Bank and Gaza. Data from each of these agencies was compared for consistency. The PA sources include:

- *Palestinian Central Bureau of Statistics (PCBS)*: The PCBS conducted the 1997 census and issued population projections through 2015.<sup>6</sup>
- *Palestinian Ministry of Health (PA MOH)*: Since 1996, the PA MOH has kept detailed records on births and deaths, including the

district where a birth occurred, the type of delivery, whether it took place at home or in a hospital and other facts.<sup>7</sup>

- ***Palestinian Central Election Commission (CEC)***: The CEC has issued reports on the number of eligible voters, aged 18 and above. The CEC issued these statistics for the parliamentary elections in 1996, the municipal elections scheduled for October 2004 and the presidential elections held in January 2005.<sup>8</sup>
- ***Palestinian Ministry of Education (PA MOE)***: The PA MOE reported the number of children entering school each year and the number enrolled at each grade level. This information was used to test birth data of children born in earlier years.<sup>9</sup>

Several Israeli agencies have critical information about the Arab population in the Territories from 1967 to the mid-1990s when Israel turned over most administrative functions to the PA. Israel continues to maintain border and migration statistics. The Israeli sources include:

- ***Israel Civil Administration for the Territories/Israel Central Bureau of Statistics (ICBS)***: As the civil administrator of the West Bank and Gaza, Israel performed an official census in 1967, kept official population records, issued IDs, kept health, inoculation and school records, and made demographic projections. In 1987, Israel updated the population registry of Gaza after the exchange of all ID cards. In 1989-90, Israel performed a study of the West Bank in which population estimates were compared against independent sources such as the registration of residents, manpower surveys, student records and other measures. The ICBS continued to issue internal reports, which were obtained for this study, estimating the population for both the West Bank and Gaza through the end of 1996. This study relies on the ICBS for all population statistics on Israeli Jewish and Arab citizens residing within areas of Israeli jurisdiction.<sup>10</sup>
- ***Israel Border Police***: Under the Oslo Accords, Israel continued to control the border crossings to Jordan and Egypt and to monitor the

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Palestinian Arabs who used Ben-Gurion Airport to travel in and out of Israel. Consequently, the Israel Border Police has detailed records of exits and entries at all international borders for Israel, the West Bank and Gaza.<sup>11</sup>

- ***Israel's Ministry of the Interior*** maintained ID records for the West Bank and Gaza until the end of Israel's civil administration when they were turned over to the PA. The Ministry currently tracks the ID cards issued to immigrants from the West Bank and Gaza who have legally moved into pre-1967 Israel and Jerusalem. This data is a partial measurement of PA residents who have immigrated into Israel.<sup>12</sup> The agency does not track unofficial, or illegal, migration from the Territories into Israel.

Many international agencies provide insights into various aspects of the PA population. The United Nations Relief Works Agency (UNRWA) keeps detailed records about Palestinian refugees,<sup>13</sup> and the World Bank<sup>14</sup> has sponsored multiple programs that include analysis of the Arab population in the West Bank and Gaza. The *CIA World Factbook*<sup>15</sup> and the UN Population Agency<sup>16</sup> are additional sources of regional and world statistics.



### Chapter 3: The 1997 PCBS Model and Forecast

#### The PCBS Model

On the night of December 9-10, 1997, the PCBS completed its first census and enumerated a population of 2.602 million Arabs living in the West Bank and Gaza. After adjusting for a post-enumeration of 83,000 individuals (i.e. adjusting for data not fully recorded during the census) and adding 210,000 residents living in eastern Jerusalem, the PCBS released a final mid-year 1998 population figure of 2.895 million for Arabs living in the Territories. When it released the final results, the PCBS also published a backdated figure for mid-year 1997 of 2.783 million.<sup>17</sup> The PCBS then used the results of the census as the basis to construct projections about the expected size of the population for each year from 1998 to 2015. In 1998, it summarized this forecast in *Demographic Indicators of Population 1997-2015*. (This document is included as Appendix A.)

By assuming high birthrates, low death rates, and massive immigration rates, the PCBS projected a compound annual population growth rate of 4.75% between 1997 and 2004 for the Territories. The PCBS also forecast that birthrates of 4.27% in 1997 would begin a gradual decline to 3.92% by 2003. Numerically, these birth rates led to growing projections from 119,000 births in 1998 to 143,000 by 2003 as they were applied to a rapidly expanding population base.<sup>18</sup>

The PCBS assumptions about immigration proved to be the most significant factor accelerating growth in its population model. The PCBS projected that immigration would progressively increase, from a level of approximately 14,000 immigrants in 1998 to more than 50,000 per annum beginning in 2001. This assumption led the PCBS to raise its annual population growth rates even while it projected a decline in birth rates. The PCBS projected overall population growth at 4.11% for 1997, with 3.79% from natural growth (4.27% birth rate less 0.48% death rate) and 0.32% from immigration. By 2003, the PCBS anticipated that overall annual growth would rise to 4.94% as immigration expectations jumped dramatically to 1.43% per annum even while natural growth was expected to decline to 3.51% (3.92% birth rate less 0.42% death rate). It has become almost

**Figure 3.1** Population Data Derived from PCBS Model, 1997–2004, (Model current through January 2005)<sup>19</sup>

<i>(Mid-Year)</i>	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004
<b>Population Base for West Bank &amp; Gaza including eastern Jerusalem</b>	<b>2,783,084</b>	<b>2,897,452</b>	<b>3,019,704</b>	<b>3,150,056</b>	<b>3,298,951</b>	<b>3,472,121</b>	<b>3,647,875</b>
Crude Birth Rate	<b>4.27%</b>	<b>4.20%</b>	<b>4.14%</b>	<b>4.07%</b>	<b>4.01%</b>	<b>3.99%</b>	<b>3.92%</b>
Crude Death Rate	<b>0.48%</b>	<b>0.47%</b>	<b>0.45%</b>	<b>0.44%</b>	<b>0.43%</b>	<b>0.43%</b>	<b>0.42%</b>
Natural Growth Rate	<b>3.79%</b>	<b>3.74%</b>	<b>3.68%</b>	<b>3.63%</b>	<b>3.59%</b>	<b>3.56%</b>	<b>3.51%</b>
Migration Rate	0.32%	0.48%	0.63%	1.09%	1.66%	1.50%	1.43%
Population Growth Rate	4.11%	4.22%	4.32%	4.73%	5.25%	5.06%	4.94%
<b>Births in PCBS Model</b>	118,810	121,722	124,865	128,270	132,420	138,433	143,106
<b>Deaths in PCBS Model</b>	-13,303	-13,473	-13,619	-13,797	-14,087	-14,826	-15,175
<b>Migration in PCBS Model</b>	8,861	14,003	19,106	34,422	54,837	52,146	52,108
<b>Ending Residential Base</b>	<b>2,897,452</b>	<b>3,019,704</b>	<b>3,150,056</b>	<b>3,298,951</b>	<b>3,472,121</b>	<b>3,647,875</b>	<b>3,827,914</b>

*Figures in bold are taken directly from the PCBS Model. Figures in normal text are derived from the PCBS Model.*

axiomatic to describe the West Bank and Gaza as regions with the “highest growth rates in the world”.<sup>20</sup> Even though the PCBS projected gradually falling birth rates, it nonetheless forecast extraordinary growth rates built on assumptions of heavy immigration into the West Bank and Gaza. (See the PCBS model, *Demographic Indicators of the Palestinian Territory*, included as Appendix A.) **Figure 3.1** explicitly computes the births, deaths and immigration contained each year in the original PCBS projection.

The PCBS reported a mid-year 2004 population of 3.827 million, exactly the same number forecast in 1998.<sup>21</sup> And, in fact, the PCBS population figures, released each year since 1998, have always been a reiteration of a forecast made shortly after the publication of the 1997 Census results. The PCBS, until after the release of this study on January 10, 2005, never adjusted any of these figures to reflect actual reported demographic events.

### **Factor-by-Factor Analysis of the PCBS Model**

In this section, the accuracy of the PCBS model is examined. First, the census base itself is investigated, including the definitions adopted by the PCBS and their implications. In addition, the population base is compared with measurements from the ICBS and other Palestinian agencies. Second, the births, deaths and immigration forecast by the PCBS is compared with records of actual events that occurred in each of the seven years beginning in 1997 and ending in 2003. This factor-by-factor analysis provides the data required to calculate an accurate population figure for the West Bank and Gaza for each year since 1997.

#### ***A. The PCBS 1997 Base Population***

**Before Census:** Prior to the PCBS Census in December 1997, Israeli and PA estimates for the Arab residential population in the Territories, excluding eastern Jerusalem, were similar. The last ICBS internal estimate was 2.111 million at the end of 1996.<sup>22</sup> The PA Ministry of Health (MOH) released its own population estimate for 1996 of 2.270 million, only 159,000 higher than the Israeli figure.<sup>23</sup> (See **Figure 3.2.**)

**Figure 3.2** West Bank and Gaza Population Estimates, 1993-1996<sup>24</sup>

<i>(In Thousands)</i>	<i>ICBS</i> <b>1993</b>	<b>ICBS</b> <b>1995</b>	<b>ICBS</b> <b>1996</b>	<b>PA MOH</b> <b>1996</b>
West Bank	1,084	1,199	1,237	1,317
<b>Gaza</b>	748	842	874	953
<b>Total</b>	1,832	2,041	2,111	2,270

**Census Era:** In 1998, the PCBS published the results of its December 1997 Census which enumerated 2.602 million individuals in the West Bank and Gaza. From the census data, the PCBS estimated a mid-year 1998 population of 2.895 million for the West Bank and Gaza and issued a backdated estimate for a mid-year 1997 population of 2.783 million.<sup>25</sup> This mid-year 1997 figure became the starting point for the PCBS population projections. (See **Figure 3.3.**)

**Figure 3.3** Results of PCBS 1997 Census<sup>26</sup>

<i>(In Thousands)</i>	<b>West Bank</b>	<b>Gaza</b>	<b>Total</b>
<b>Population Enumerated in December 1997 Census</b>	1,602	1,000	2,602
<b>Post-Enumeration</b>	63	21	84
<b>Eastern Jerusalem Arabs</b>	210		210
<b>Total Mid-Year 1998</b>	1,875	1,021	2,896
<b>Total Backdated to Mid-Year 1997</b>	1,787	996	2,783

Thus, with the publication of these results, the gap between the PCBS and ICBS figures widened dramatically. In December 1997, the ICBS compiled its last internal report for Arab population in the Territories for year-end 1996 as 2.111 million.<sup>27</sup> When the ICBS year-end figures are brought

forward by six months to a mid-year 1997 estimate of 2.135 million (22,000 in half-year growth based on PA MOH and Israel Border data), the PCBS mid-year 1997 estimate of 2.783 million is a full 648,000 higher than ICBS measurements.

#### *Inclusion of Eastern Jerusalem Arabs*

210,000 of the gap arose from the PCBS decision to include Arabs living in eastern Jerusalem in 1997. While the Oslo Accords restricted the PCBS activities to areas outside the Israeli-defined municipal boundaries of Jerusalem, the PCBS considers eastern Jerusalem part of the West Bank. As a result, the PCBS included the figures for eastern Jerusalem Arabs, as reported in ICBS population surveys, in its own estimates for the West Bank population.<sup>28</sup> Excluding these eastern Jerusalem Arabs, the PCBS mid-year 1997 estimate of 2.573 million exposed a remaining 438,000 gap between ICBS and PCBS population estimates for the West Bank and Gaza. **Figure 3.4** summarizes the gaps that arose between ICBS and PCBS data by mid-year 1997.

Did the Israelis undercount or did the PA over count? The answer lies not in a major counting difference but rather in different definitions of who was considered a *de facto* resident of the Territories.

#### *Inclusion of Non-Residents*

During Israel's Civil Administration of the Territories, there were differences between population calculations based on the registry of ID and birth records maintained by Israel's Ministry of Interior and those based on records from the ICBS which regularly estimated the population of *de facto* residents actually present in the Territories at any given time. According to the Civil Administration Survey of 1989, this discrepancy could be attributed to two factors:

“The Ministry of Interior registers 1.328 million [in the West Bank], while the ICBS estimates that the total is 904,000. The ICBS assumes that there are two causes for the gap: (a) The Ministry of

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Interior does not deduct the 163,000 who reside abroad; (b) Death data for infants and adults are lacking.”<sup>29</sup>

The lower ICBS count was confirmed by the number of ID cards issued to residents in 1989. The number of residents was found to be a full 32% less than the Ministry of Interior records which included former residents and those who had never been removed upon death, and in its 1987 study of the Gaza population, the Civil Administration noted that 8% of the population records maintained by the Ministry of Interior for Gaza, or approximately 50,000, were overseas residents and their offspring.<sup>30</sup>

The PCBS Census included Palestinian-Arabs who were living abroad but misclassified them as *de facto* residents. A census that includes persons normally residing in an area who are temporarily elsewhere at the time of the enumeration is classified as a *de jure* census. A *de facto* census counts only individuals actually present in the area at the time of enumeration.<sup>31</sup> The PCBS stated in its *Census Standards* (included as Appendix C) that it was performing a *de facto* census, but it also explicitly stated that it expanded the definition to include persons who have “lived abroad for more than one year... and have identity cards... irrespective of the purpose of stay abroad”.<sup>32</sup> In other words, anyone who had ever received an ID card from the PA or from Israel during the Civil Administration was included as a *de facto* resident in the census. In a March 1998 news conference, Masur Hassan Abu-Libdeh, head of the PCBS, specified the number of Palestinians living abroad who were included in the census:

“We counted 325,000 people living outside of the Palestinian Lands for more than one year, who carry Palestinian ID cards and can return at any time.”<sup>33</sup>

This 325,000 count of residents living abroad represented 13% of the total mid-year 1997 population count of 2.573 million issued by the PCBS for the West Bank and Gaza, not including eastern Jerusalem.

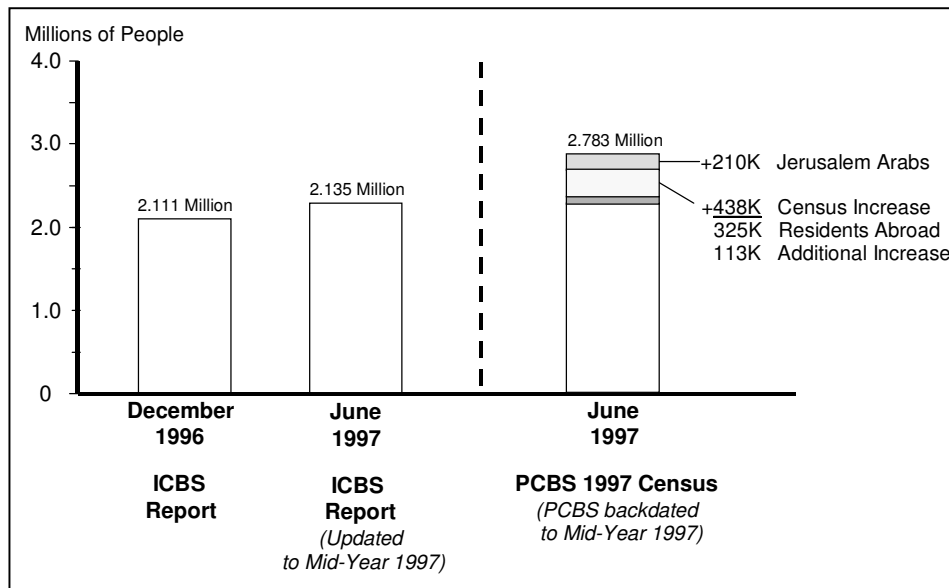
The practice of including residents living abroad is common at other PA agencies as well. In an October 14, 2004 press release, the PA Central Election Commission (CEC) specifically noted “approximately 200,000

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eligible voters [those 18 years old and older] live abroad”.<sup>34</sup> The 200,000 comprised 13% of the 1.5 million total eligible voters, the same percentage found in analysis of the 1997 PCBS data. The CEC report therefore indicates a *de facto* adult residential population in the Territories of 1.3 million persons. These figures were consistent with the election data released by the CEC on January 8, 2005, one day before the PA Presidential Elections.<sup>35</sup> (See Appendix F for CEC Reports)

In 1993, the World Bank corroborated these figures when it reported that 350,000 of the Palestinian population (adults *and* children) lived abroad. It further noted that 199,000 of this group had kept their IDs current while the remainder had not.<sup>36</sup>

**Figure 3.4** Gaps between ICBS and PCBS Population Estimates for West Bank and Gaza, 1996–1997<sup>37</sup>



*Remaining Difference between PCBS and ICBS*

After removing the 325,000 acknowledged by the PCBS in 1998 as residents living abroad from the 438,000 gap identified between mid-year 1997 PCBS and ICBS estimates, the two agencies were only 113,000 persons apart.

The CEC data reflecting a 1.3 million *de facto* adult resident population in the West Bank and Gaza in 2004 provided an opportunity to evaluate population base claims made by different agencies in earlier years. For example, the number of individuals aged 11 and older in 1997 should predict the number of eligible voters who will be 18 and older seven years later in 2004 after adjustments are made for deaths and migration.<sup>38</sup> Consequently, an accurate population pyramid (or age distribution model) from 1997 should match the current voter rolls.

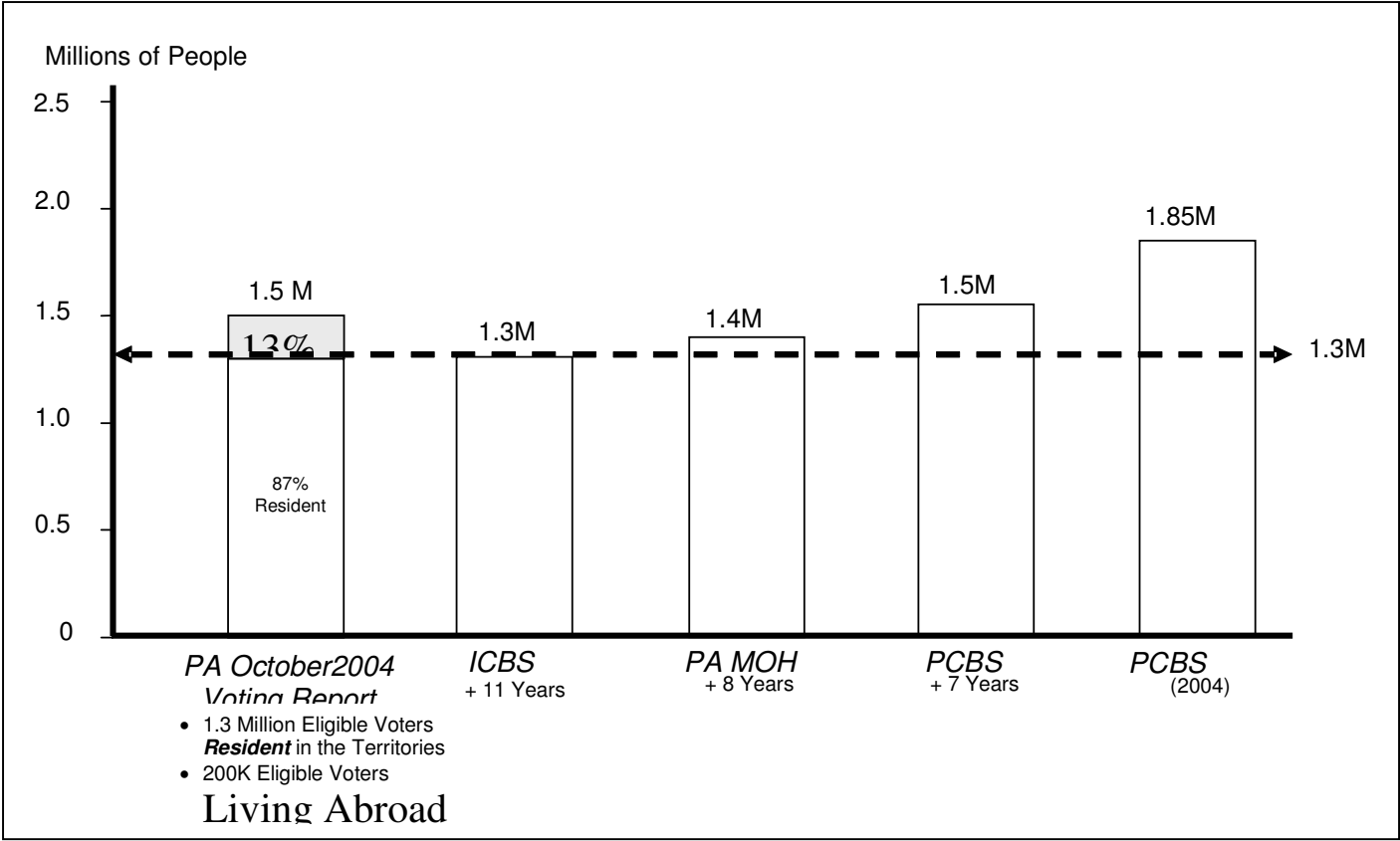
The CEC data was used to test both the current PCBS adult population claims and the number of adults implicitly predicted by earlier population pyramids from the 1990s after they were adjusted for deaths and migration<sup>39</sup>:

- 1) The PCBS census base and forecast, including *projected* deaths and immigration, predicted 1.85 million adults in the Territories by 2004.
- 2) The PCBS census base and associated population pyramid, with *actual* death and migration data, predicted a population of 1.5 million adults by 2004.
- 3) The PA MOH 1996 population pyramid predicted a population of 1.4 million adults by 2004.
- 4) The ICBS 1993 population pyramid predicted a population of 1.3 million adults by 2004.<sup>40</sup>

As shown in **Figure 3.5**, the CEC data invalidated the original PCBS forecast, which had projected 1.85 million voting-age adults in the Territories by 2004. The CEC information on total eligible voters confirmed that the 1.5 million adults for 2004 anticipated by the 1997 PCBS census



**Figure 3.5** Central Election Commission Eligible Adult Voters vs. Adults Predicted by Various Population Models for 2004



included individuals who were living abroad. The same CEC data was only 100,000 persons below the adult population for 2004 as derived from the 1996 PA MOH pyramid. The population pyramid developed by the ICBS in 1993 contained the only population age distribution compatible with the 1.3 million residents found on current CEC voter rolls.<sup>41</sup>

In the 1980s and 1990s, the ICBS conducted periodic assessments of its population data since so much time had passed since its 1967 census. In 1996, it published the following affirmation of its population reports through 1993<sup>42</sup>:

“Since a long period of time has passed since the above census (1967), and because over the course of 26 years there was no additional census to update the data base, we must relate to the data with caution.” Later on the same page, it continued: “There were efforts to evaluate the population estimates by comparing them to other independent sources, such as the registration of residents in Gaza after the exchange of identity cards, man-power surveys, number of students, etc. These comparisons showed that the differences between the sources are small and non-substantive.”

The Gaza population evaluation was quite specific: “Comparing the updated population estimates at the end of 1989 with the updated population registry after the exchange of ID cards (in the 2<sup>nd</sup> half of 1988) showed that the difference in the population estimates and the number of registered residents (after removing those living abroad) with respect to all the residents of Gaza is 2.4%.”

The corroboration with the CEC voter rolls and the internal evaluations by the ICBS, affirmed the credibility of the last ICBS estimates for year-end 1996 as an accurate count of *de facto* residents in the West Bank and Gaza. Consequently, the ICBS year-end 1996 figure of 2.111 million became the starting point in this study for updated population calculations in the Territories.

In summary, the 648,000 discrepancy between PCBS and ICBS population estimates for 1997 can be explained as follows: 210,000 for inclusion of

## THE MILLION PERSON GAP

eastern Jerusalem Arabs by the PCBS, 325,000 for residents living abroad as acknowledged in 1998 by the PCBS upon release of its census results, and a remaining 113,000 discrepancy between ICBS and PCBS estimates. This study found data from the CEC and from earlier ICBS assessments, which corroborated the last population figures from the ICBS as accurate. The final 113,000 difference can remain an area for further study, but this smaller disagreement does not change the main conclusion: the inclusion of eastern Jerusalem Arabs and Palestinians living abroad was the original error that moved the PCBS model away from Israel's estimates of residential population in the Territories. This augmentation, in turn, increased the population base used to forecast future births.

*Summary: Difference between PCBS and ICBS for 1997 Population Base*

*210,000 eastern Jerusalem Arabs included in PCBS  
West Bank count*

*325,000 residents living abroad included in PCBS Census*

*113,000 additional increase over ICBS figures*

*438,000*

*TOTAL 648,000 difference between PCBS and ICBS reports*

### ***B. The PCBS Birth Assumptions: 1997-2003***

Available documents provided three different sets of birth data between 1997 and 2003, which are discussed below:

Set #1: PCBS 1997 Projection

Set #2: PA Ministry of Health Reports (as updated through  
January 2005)

Set #3: PA Ministry of Health Reports (adjusted to pre-1997  
Census levels)

In Set #1, the PCBS projected that the number of births in the Territories would total almost 908,000 for the seven-year period from 1997 to 2003.<sup>43</sup> Yet, the actual number of births documented by the PA Ministry of Health

for the same period was significantly lower at 699,000, or 238,000 fewer births than had been forecast by the PCBS.<sup>44</sup> This birth data forms Set #2. The size of the discrepancy accelerated over time. Whereas the PCBS predicted there would be over 143,000 births in 2003, the PA MOH reported only 102,000 births, which pointed to a PCBS forecast 40% beyond actual results.

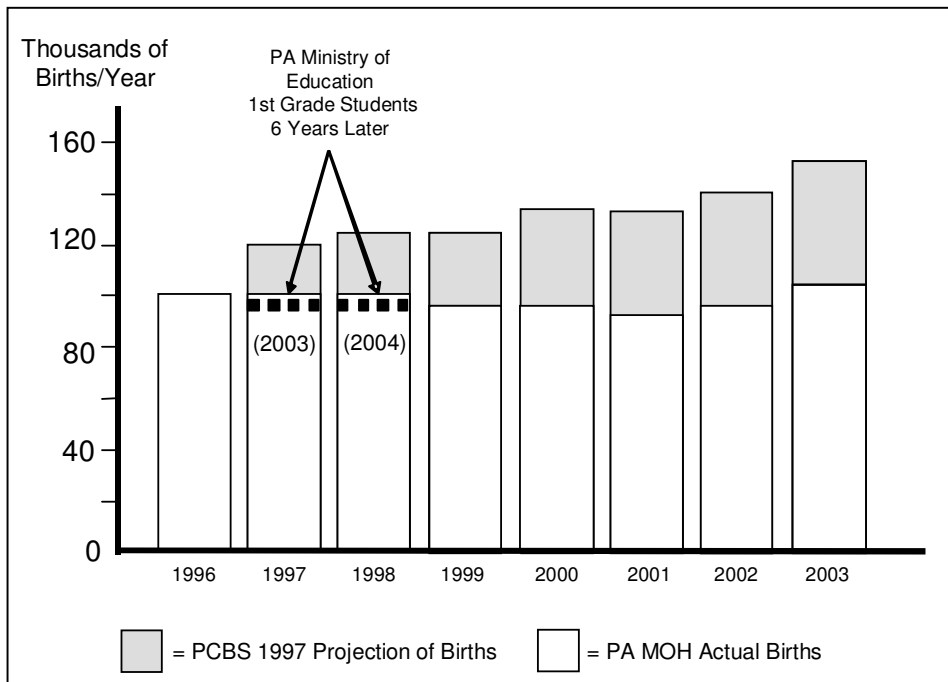
As noted, most of the reported difference in birth figures arose because the PA MOH reported actual births for the West Bank and Gaza, excluding eastern Jerusalem, whereas the PCBS had projected birth figures on a significantly higher non-residential population base.<sup>45</sup> A second reason for the difference, according to figures reported by the PA MOH between 1996 and 2003, was that natural growth rates (birth rate minus death rate) began to drop off slightly faster than the declines projected by the PCBS.<sup>46</sup>

The credibility of the PA MOH birth statistics was substantiated by the number of children entering school as reported by the Palestinian Ministry of Education (PA MOE). According to a 1995 report by the International Institute for Applied Systems Analysis (IIASA), over 90% of the 6 to 11 year-old age group attended school.<sup>47</sup> Therefore, the number of children born in 1997 and 1998 should closely approximate the number of children entering school six years later in 2003 and 2004. The PA MOE records indicate that the PCBS projected birth figures are dramatically higher than the actual number of schoolchildren in the corresponding age cohort, which in turn is slightly lower than the number of births recorded by the MOH.<sup>48</sup> The consistency of PA MOH and PA MOE figures, as shown in **Figure 3.6**, together invalidate the birth projections made by the PCBS in 1997.

The latest PA MOH birth figures (which are current through January 2005) deserve further examination as well because the agency has retroactively restated several key statistics. In its annual reports, *Health Status in Palestine*, issued from 1996 through 2001, the MOH recorded a significant declining trend in natural growth rates (birth rate minus death rate) from 3.7% in 1996 to 2.6% in 2001.<sup>49</sup> However, in its 2002 release, which included information about these earlier years, the MOH restated upward the natural growth rates previously reported for each year between 1997 and 2001. These restated rates republished the natural growth assumptions

forecast by the PCBS in 1998.<sup>50</sup> In its 2003 report, the MOH recorded a lower rate of 2.4% for 2003<sup>51</sup>, which was back in line with the originally reported trend.

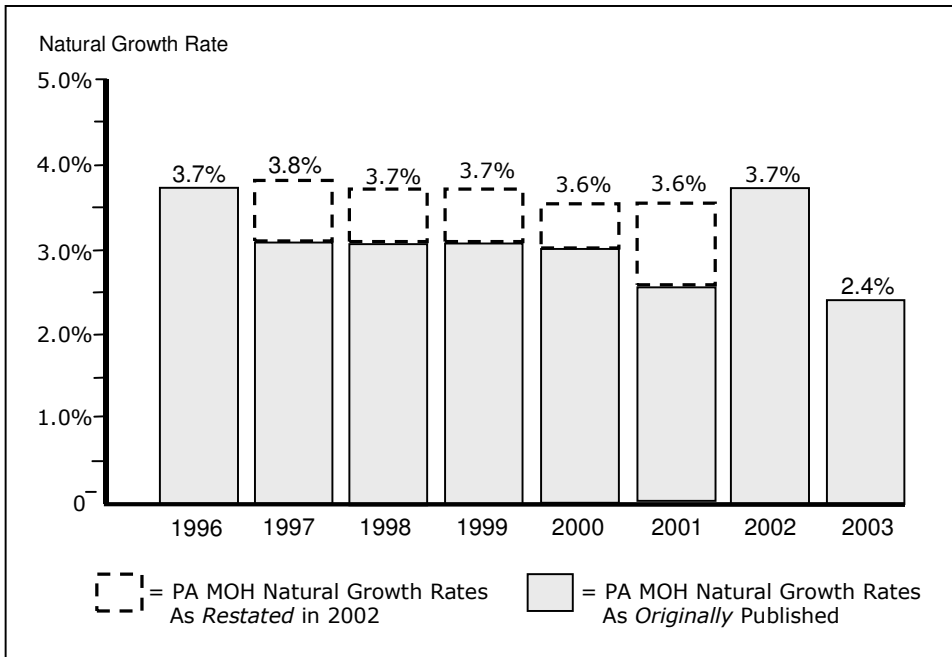
**Figure 3.6** Births *projected* by PCBS vs. Births *recorded* by PA MOH and PA MOE data on 1<sup>st</sup> Grade Students<sup>52</sup>



The restatements are part of a practice found in the PA MOH reports: while the raw birth data was compiled in meticulous detail on the number of births occurring each year in hospitals, in homes and by district; the final total population figures in the reports were directly sourced from the latest PCBS population reports and credited as such. The PA MOH year-by-year data on births has never supported the population gains reported by the PCBS. For example, the final population in the 2003 MOH report was 4.9% higher than the final population in the 2002 MOH report despite the fact that the MOH noted a natural growth rate of only 2.4% for 2003 as cited above.<sup>53</sup>

In 1999, the MOH also began to revise upward the *absolute* number of births it had originally reported separately for each year between 1996 and 1998 by an average of 11%.<sup>54</sup> This change followed on the heels of the 1997 PCBS census release that increased the number of residents in the Territories by roughly 14% to include many Palestinian Arabs living overseas.<sup>55</sup> This parallel increase raises the question of whether the PCBS decision to count overseas non-residents and their children permeated other PA agencies, including the MOH. If so, the slightly lower level of births originally reported by the MOH forms the basis of a third data set for examination. The originally recorded births between 1996 and 1998, and the births from 1999 to 2003 when adjusted to match these pre-census levels, total 599,000. This figure is 70,000 less than the 669,000 births as restated by the PA MOH in its later reports.<sup>56</sup> This data, totaling 599,000 births, forms Set #3.

**Figure 3.7** Restated Natural Growth Rates in PA MOH Reports<sup>57</sup>



Set #1, the PCBS projection, significantly overestimated the number of births that occurred in the Territories between 1997 and 2003, primarily because the birth rate assumptions were applied to an expanded non-residential population base that included overseas residents and Arabs living in Jerusalem.<sup>58</sup> Confirmation by both the PA Ministry of Health and the PA Ministry of Education support the figures described in Set #2 and show the number of births in the West Bank and Gaza was at least 238,000 lower than the PCBS forecast.<sup>59</sup> However, Set #3, births matching the original pre-census levels published by the PA MOH, offer the best match with the birth rates used by the PCBS in its 1997 projection and the Total Fertility Rates (TFRs) reported by the PCBS in its 2000 and 2004 Household Surveys. (*These analyses are presented in Chapter 5*). As a result of all of the factors discussed, Set #3 was selected as the data group included in the final population model constructed for this study.<sup>60</sup>

The 70,000 difference in births between Sets #2 and #3 is separated in this report for the sake of clarity, so that researchers can document the range of measurements - original and revised - published by the PA MOH. This smaller gap remains an area for further study while more direct confirmation is obtained. However, either set shows a dramatically lower result than the PCBS forecast.

It should also be noted that, in any case, the PA MOH births merit further examination. In its 1999 report, the MOH retroactively issued birth statistics for 1990 to 1995, a period that pre-dated its existence as a PA agency.<sup>61</sup> This retroactive release offered an opportunity to compare PA MOH statistics against birth data collected by Israel for the period when it was still in charge of the Civil Administration of the Territories.<sup>62</sup> From 1990 through 1993, Israel had recorded 32% fewer births in the West Bank and 10% fewer births in Gaza than the later MOH reports.<sup>63</sup> As Israel frequently cross-checked<sup>64</sup> its birth data against school and inoculation records, the consistent discrepancy suggests that further reductions in the PA MOH data may be in order. (Fuller detail on birth data discussed in this Chapter is included in Appendix D.)

**Figure 3.8** Summary of Three Birth Data Sets: 1997-2003<sup>65</sup>

		1997	1998	1999	2000	2001	2002	2003	Total
<b>Set #1:</b>	<b>PCBS 1997 Model &amp; Projection</b>	118,810	121,722	124,865	128,270	132,420	138,433	143,106	907,626
<b>Set #2:</b>	<b>PA MOH Reports (current as of January 2005)</b>	96,265	97,733	94,258	92,518	92,483	94,406	101,647	669,310
<b>Set #3:</b>	<b>PA MOH Births (as originally reported)</b>	84,409	88,708						
<b>Set #3: (cont.)</b>	<b>PA MOH Births (adjusted to pre-Census levels)</b>			84,376	82,916	82,915	84,863	91,124	599,311



*Summary for 1997–2003 period shows:*

- *238,000 fewer actual births reported by PA MOH than PCBS forecast*
- *70,000 further reduction in births when using PA MOH births at original levels recorded prior to the 1997 PCBS census*

### ***C. The PCBS Death Assumptions: 1997–2003***

While the PCBS forecast 98,280 deaths between 1997 and 2003, the PA MOH reported only 65,767 deaths during that period, or 32,000 fewer than predicted.<sup>66</sup> As with births, the PCBS overestimated deaths because the assumed death rate was applied to an expanded, non-residential population base.

In general, the PA MOH mortality data yields a low death rate more typical of advanced industrial societies,<sup>67</sup> but this study did not audit the MOH mortality figures since they were the least significant factor in determining the size of the population in the Territories during the period under examination.

It should be noted that there is some controversy about the recording of deaths. In the past, Israeli demographers expressed concern that Palestinian Arabs did not report all deaths to the authorities. A 1993 ICBS report noted, “Death reporting in Judea, Samaria and Gaza is incomplete... mostly as far as infants and post-65 women are concerned...It is impossible to provide a statistical projection of death patterns....” The ICBS report also noted, “If one accepts the reports for Palestinian deaths at face value, the Palestinians have a higher life expectancy than in the United States”.<sup>68</sup> Nevertheless, this study used death figures as recorded by the PA MOH.

*Summary for 1997–2003 period shows:*

- *32,000 fewer deaths reported by the MOH than the PCBS forecast*

***D. The PCBS Immigration Assumptions: 1997-2003***

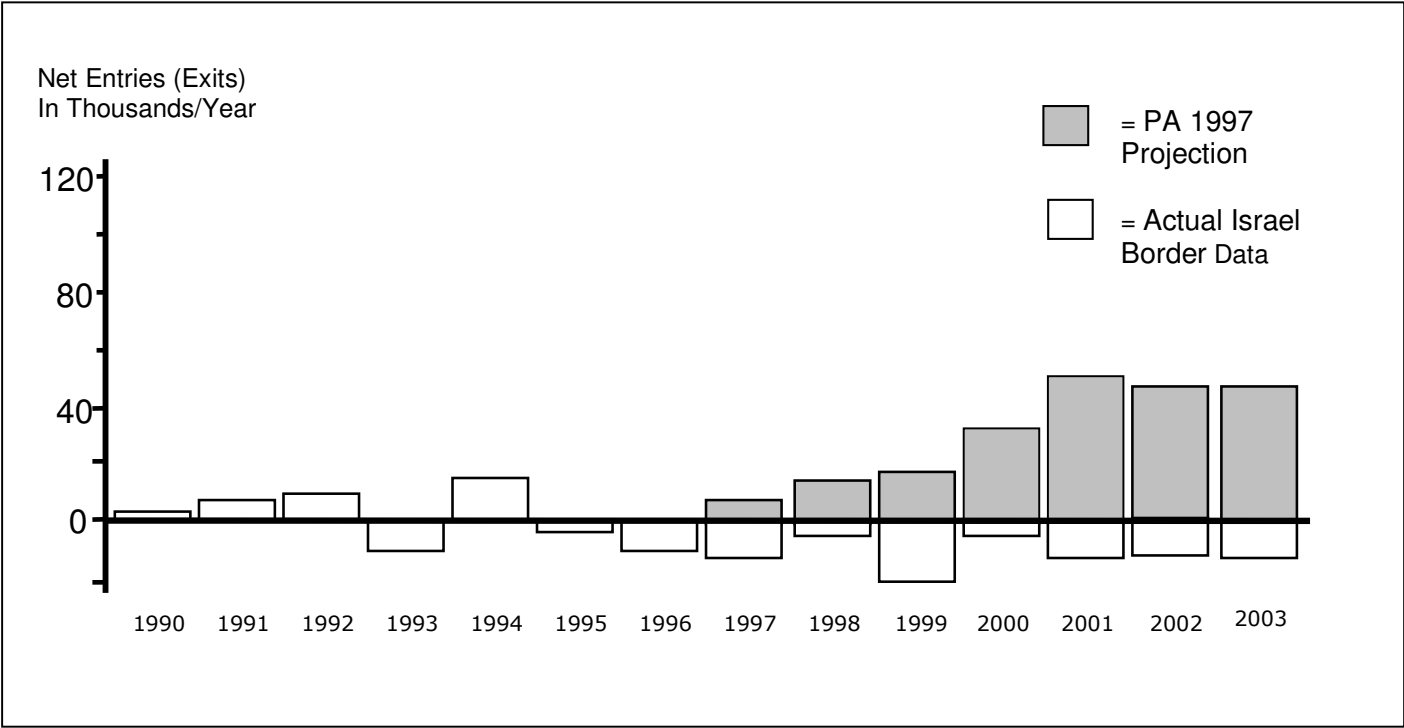
The PCBS Model showed progressively higher immigration for each year between 1997 and 2003. In fact, actual entry and exit data is recorded by Israel's Border Police, which documents Palestinians who leave for Jordan and Egypt at Israel's international border crossings and for other countries through Ben-Gurion Airport. The Border Police data for this period revealed that the PA actually experienced an average net emigration of 10,000 to 20,000 Palestinians each year from the West Bank and Gaza.<sup>69</sup> This figure becomes statistically significant when it is combined with the number of immigrants whom the PCBS had projected would arrive in the Territories, but did not.

As demonstrated in **Figure 3.9**, the PCBS immigration assumptions began to escalate dramatically and by 2001, reached a sustained level of 50,000 persons per year. Combining the 10,000 to 20,000 annual émigrés with immigrants who never arrived means that 60,000 to 70,000 people must be deducted each year from the PCBS Model between 2001 and 2004. When considering the more modest immigration assumptions from earlier years as well, the total overestimate by the PCBS totaled 310,000 persons between 1997 and 2003.<sup>70</sup> (See Appendix E.)

These statistics conform to a long-term trend of consistent Palestinian emigration from the West Bank and Gaza. Since 1990, there have been exceptions to this rule in only two periods.<sup>71</sup> After the Gulf War of 1991, there was a modest immigration of 25,000 Palestinians into the Territories. A greater number of those leaving the Gulf countries went to Jordan instead. Similarly, after the Oslo Accords, there was a one-year positive balance in 1994 when the PA leadership, soldiers and their families entered the Territories. Since 1995, new immigrants who moved to the Territories were offset by a greater number of emigrants who left.

In March of 2005, the PCBS altered its population forecast for the first time since it was issued in 1998 by reducing all immigration assumptions to zero between the years 2001 and 2015.<sup>72</sup> By removing its assumptions about immigrants and their offspring, the PCBS lowered its population estimate for mid-year 2004 by 178,000 persons and reduced the 2015 projection by

**Figure 3.9** Immigration Projected by PCBS vs. Actual Israel Border Data for West Bank and Gaza Arabs<sup>73</sup>



almost three-quarters of a million people. However, the PCBS has still not adjusted its immigration data for the years 1997 to 2000 and has not incorporated in its model the emigration that took place each year since the publication of their census. Correcting these omissions would reduce the PCBS 2004 estimate by another 131,000 persons.

The Israel Border Police data used in this section recorded a net emigration of Palestinian residents to countries abroad.<sup>74</sup> Other reports suggest that overall emigration may be even higher than this data reflects, particularly since the eruption of hostilities in September 2000 when the Territories became not just an unattractive destination point but also a source of emigration. *Ha'aretz* reported on the "secret exodus" from the PA in 2001 with "a dramatic rise of hundreds of percent in the number of Palestinians who want to leave the Territories and move to a Western country".<sup>75</sup> FAFO, the Norwegian demographic research institute, reported that the net migration from the West Bank and Gaza between September 2000 and December 2002 totaled 100,000 people, composed primarily of middle-class families, PA employees and Christians.<sup>76</sup> In 2002, journalist Khaled Abu-Toameh reported that

Approximately 80,000 Palestinians have left the West Bank and Gaza Strip since the beginning of the year, a rise of 50 percent compared to last year, a senior Palestinian Authority official said yesterday. The official, who asked not to be named, told the *Jerusalem Post* another 50,000 Palestinians are now trying to leave through the Jordan River bridges and the Rafah crossing.<sup>77</sup>

While the Israel Border Police records official immigration, the anecdotal evidence points to greater emigration than is officially recorded at Israel's international borders. The additional flow can be explained by Palestinian migration into pre-1967 Israel and Jerusalem.

*Summary for 1997–2003 period shows:*

- *310,000 net negative migration difference between Israel Border Police data and PCBS Forecast. The PCBS acknowledged 178,000 of this difference in March 2005.*

### **E. The Neglected Factor - Migration to Israel: 1997-2003**

Many West Bank and Gaza Arabs have moved into pre-1967 Israel and Jerusalem. Prior to Israel's construction of a partial fence separating Israeli and Palestinian West Bank population centers, there were no physical barriers between them. West Bankers could unofficially cross over the pre-1967 armistice lines, commonly known as the 'green-line' that divided Israel from the Territories.

Immigrants from the Territories moving into pre-1967 Israel and Jerusalem fall into three groups:

- 1) Immigrants who move unofficially into Israel without proper documentation
- 2) Jerusalem Arabs with Israeli ID cards who had moved into the West Bank but have returned to areas within Israel's jurisdiction.<sup>78</sup> These individuals were counted in both the PCBS survey for the Territories and the ICBS survey for Israel.
- 3) Immigrants who have obtained Israeli citizenship or residency rights through family reunification programs.

These individuals should be deducted from the PCBS population counts when they move into Israel. While the data available for unofficial migrants and for those with Israeli ID cards who have relocated back to pre-1967 Israel is incomplete, legal migration in the framework of family reunification programs is well documented. In 2003, Israel's Minister of the Interior Population Administration Division reported that 129,434 Arabs had received Israeli identity cards under the family reunification program between 1993 and 2003, while another 21,303 Arabs were in the pipeline with their Israeli identity cards pending at the end of 2003.<sup>79</sup> The overwhelming majority of these 151,000 people (129,434 + 21,303) were immigrants from the West Bank and Gaza.

It should be noted that there is an inconsistency between different Israeli agencies regarding the exact number of Arab immigrants to Israel. While the Population Registry of the Interior Ministry reported the 150,000 number described above, the ICBS reported that only 25,000 Arabs have joined Israel's population since the early 1990s.<sup>80</sup> Furthermore, the ICBS did not record any large-scale emigration away from Israel that might explain such a small overall net migration into the Israeli-Arab sector from 1993–2003.<sup>81</sup> The ICBS and Israel Ministry of Interior records simply do not agree. This investigation unexpectedly uncovered this difference between Israeli agencies that are in the best position to analyze migration into Israel. This discrepancy remains an unsolved mystery.

This study, which was concerned with auditing the PCBS model, included the documented evidence of legal migration since any West Bank or Gaza resident added to the Israel population registry would have to be removed from the PCBS count. Thus, the portion of the family reunifications that occurred between 1997 and 2003, or 105,000 of the total 150,000 recorded since 1993,<sup>82</sup> should be deducted from analyses of the Territories' population since 1997. Since the publication of the PCBS Model in 1998, the PCBS has never adjusted for any movement of Palestinians into pre-1967 Israel.

Some estimates place net migration from the PA into Israel as high as 300,000 people.<sup>83</sup> If such figures are confirmed, further deductions will be required from the PCBS estimate while further additions will be required to ICBS counts for Israel.

*Summary for 1997–2003 period shows:*

- *105K new Palestinian immigrants legally immigrate into Israel from the Territories*
- *Additional movements into Israel, both for returning residents and for illegal immigrants from the Territories require additional study and will reduce West Bank and Gaza population counts.*

#### Chapter 4: Arab Population in the West Bank and Gaza in 2004

Meaningful discussion about the size of the Arab population in the Territories requires an open model with detail on each demographic factor so that areas of agreement and disagreement can be clearly analyzed and understood. The arithmetic calculation in the study is built for transparency: the starting point, each step taken along the way, and the ending point are clearly identified.

The analysis of demographic factors in Chapter 3 provides the data required to determine a more accurate population count for Arab residents in the West Bank and Gaza. The *de facto* residential Arab population in the West Bank and Gaza was 2.47 million at the beginning of 2004: 1.40 million in the West Bank and 1.07 million in Gaza.

This study's results of the Arab population in the West Bank and Gaza, displayed below as **Figure 4.1**, begin with the ICBS residential year-end 1996 population base, draw on PA MOH reported births (pre-census level) and deaths and Israel Border Police data for net emigration abroad, and adjust for Israeli Ministry of Interior data on immigration into Israel from the Territories.<sup>84</sup>

By mid-year 2004, the gap between the actual population size as determined in this study and the population figures published by the PCBS for the West Bank and Gaza had grown to over 1.34 million.<sup>85</sup> These differences are summarized by category in **Figure 4.2**. The differences between the PCBS forecast and this study's results are presented in modules so that researchers can assess each component separately. Researchers can iteratively adjust their own calculations, depending on which conclusions they accept or reject. Several of these components could be adjusted upwards or downwards if warranted by further investigation. In particular, migration into pre-1967 Israel, whether unofficial or official, should be explored in all its aspects by Israeli agencies.

Figure 4.1 Study Results for Arab Population in the West Bank and Gaza, 1997-2003<sup>86</sup>

	1997	1998	1999	2000	2001	2002	2003
<b>West Bank</b>							
<b>Begin Year</b>	1,237,543	1,258,331	1,291,455	1,305,168	1,332,890	1,354,892	1,373,814
<b>Births</b>	46,882	51,648	48,458	46,656	46,344	45,214	51,010
<b>Deaths</b>	5,236	4,890	5,303	5,488	5,329	6,408	5,786
<b>Net Migration Abroad</b>	-9,358	-2,135	-17,942	-1,945	-7,514	-8,384	-8,880
<b>Migration to Israel</b>	-11,500	-11,500	-11,500	-11,500	-11,500	-11,500	-11,500
<b>End Year</b>	1,258,331	1,291,455	1,305,168	1,332,890	1,354,892	1,373,814	1,398,658
<b>Gaza</b>							
<b>Begin Year</b>	873,582	900,916	929,935	953,023	981,306	1,008,087	1,037,225
<b>Births</b>	37,527	37,060	35,919	36,260	36,571	39,648	40,114
<b>Deaths</b>	3,673	3,650	3,685	3,630	3,894	4,397	4,398
<b>Net Migration Abroad</b>	-3,019	-891	-5,646	-847	-2,396	-2,613	-2,784
<b>Migration to Israel</b>	-3,500	-3,500	-3,500	-3,500	-3,500	-3,500	-3,500
<b>End Year</b>	900,916	929,935	953,023	981,306	1,008,087	1,037,225	1,066,657
<b>Total</b>							
<b>Begin Year</b>	2,111,125	2,159,248	2,221,390	2,258,190	2,314,196	2,362,978	2,411,039
<b>Births</b>	84,409	88,708	84,376	82,916	82,915	84,863	91,124
<b>Deaths</b>	8,909	8,540	8,988	9,118	9,223	10,805	10,184
<b>Net Migration Abroad</b>	-12,377	-3,026	-23,588	-2,792	-9,910	-10,997	-11,664
<b>Migration to Israel</b>	-15,000	-15,000	-15,000	-15,000	-15,000	-15,000	-15,000
<b>End Year</b>	2,159,248	2,221,390	2,258,190	2,314,196	2,362,978	2,411,039	2,465,315



**Figure 4.2** Comparison between PCBS Model and Study Results, 1997–2004<sup>87</sup>

	<b>PCBS Forecast</b>	<b>Study Results</b>	<b>Total Difference</b>
<b>1997 Mid-Year Population Base</b> <i>Residents Living Abroad</i> <b>PCBS Additional Jump over ICBS</b> <i>(at Mid-Year 1997)</i>	2,572,875	2,135,187	<u>437, 688</u> <i>325,000</i> <i>112,688</i>
<b>Eastern Jerusalem Arabs</b> <i>(at Mid-Year 1997)</i>	210,209	0	210,209
<b>PCBS Forecast vs. PA MOH Births</b> <i>(1997-2003)</i>	907,626	669,310	238,316
<b>PA MOH Restated vs. Original Level Births</b> <i>(Birth Alterations)</i> <i>(1997-2003)</i>	0	-69,999	69,999
<b>PCBS Forecast vs. PA MOH Deaths</b> <i>(1997-2003)</i>	-98,280	-65,767	-32,513
<b>Immigration/Emigration</b> <i>(1997-2003)</i>	235,484	-74,354	309,838
<b>Migration to Israel</b> <i>(1997-2003)</i>	0	-105,000	105,000
<b>2004 Mid-Year Population</b>	3,827,914	2,489,377	1,338,537
<b>Half-Year Adjustment</b>	-90,019	-24,062	-65,957
<b>2004 Begin-Year Population</b>	3,737,895	2,465,315	1,272,580

*PCBS Forecasts are for mid-year. Models in this study use begin-year data. For comparative purposes models were also constructed from mid-year 1997.*

## MIDEAST SECURITY AND POLICY STUDIES

The PCBS Model continued to forecast population growth of 180,000 persons between mid-year 2004 and mid-year 2005.<sup>88</sup> This study documented a current natural growth of only 81,000 persons in 2003 and an even lower number of only 54,000 persons when migration from areas controlled by the PA was taken into account.<sup>89</sup> Therefore, with each year that passes, the gap between the original PCBS Model, which still serves as the basis of most population forecasts for the area, and the actual population can be expected to grow.<sup>90</sup>

## Chapter 5: Evaluation of Results

This study's findings make it possible to compute population statistics for the West Bank and Gaza as they occurred, not as they were projected by the PCBS. Key data was tested for internal consistency. For example, did recorded birth figures yield a plausible birth rate when measured on a *de facto* residential population base? The results were used to update assumptions about demography in the West Bank and Gaza and to analyze the implications of recent trends.

**Total Population Growth Rates:** In 1997, the PCBS projected that its overall annual population growth rate (PGR) would be 4.4% for the West Bank and 5.2% for Gaza between 1997 and 2003.<sup>91</sup> In fact, the high growth rates forecast in the PCBS Model were not realized. The study measured a West Bank annual population growth rate of 1.8% and a 2.9% rate for Gaza over the same period. Between the narrower time frame of 2000 and 2003, annual growth was slightly lower at 1.6% for the West Bank and 2.8% for Gaza. The growth rates for each year from 1997 through 2003 and their components are displayed in **Figure 5.1**.

In comparison, the United Nations Works and Rehabilitation Agency (UNRWA) reported an annual growth rate in the registered refugee population of 2.6% for the West Bank and 3.3% for Gaza for the five years between 2000 and 2005.<sup>92</sup> This subset of the refugee population, which typically grows faster than the general population, grew slightly faster than the growth rates found in this study and fell markedly below the rates forecast by the PCBS. Furthermore, UNRWA stated in its 2005 report that "the historically high growth rates of more than 3.5 per cent among the Palestine refugees over the past two decades slowed to 2.5 per cent."<sup>93</sup> This study's results are compatible with UNRWA's analysis.

**Calculation of Birth Rates:** Birth rates, also displayed in **Figure 5.1**, ranged between 4.1% and 3.3% for the West Bank, and 4.3% and 3.7% for Gaza. The birth rates yielded by this study were similar to the gradually declining birth rates forecast by the PCBS in 1997.<sup>94</sup> While the *absolute* number of births recorded by the PA MOH was substantially below the



Figure 5.1 Study Results with West Bank and Gaza Growth Rates<sup>95</sup>

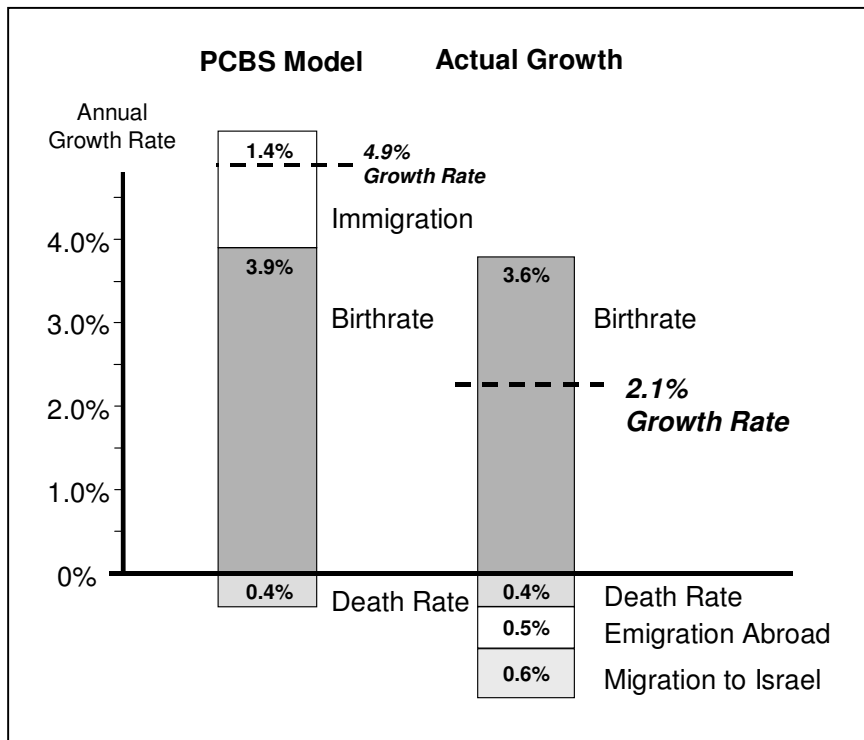
	1997	1998	1999	2000	2001	2002	2003
<b>West Bank</b>							
<b>Begin Year</b>	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Births</b>	3.8%	4.1%	3.8%	3.6%	3.5%	3.3%	3.7%
<b>Deaths</b>	0.4%	0.4%	0.4%	0.4%	0.4%	0.5%	0.4%
<b>Net Migration Abroad</b>	-0.8%	-0.2%	-1.4%	-0.1%	-0.6%	-0.6%	-0.6%
<b>Migration to Israel</b>	-0.9%	-0.9%	-0.9%	-0.9%	-0.9%	-0.8%	-0.8%
<b>End Year</b>	101.7%	102.6%	101.1%	102.1%	101.7%	101.4%	101.8%
<b>Gaza</b>							
<b>Begin Year</b>	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Births</b>	4.3%	4.1%	3.9%	3.8%	3.7%	3.9%	3.9%
<b>Deaths</b>	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
<b>Net Migration Abroad</b>	-0.3%	-0.1%	-0.6%	-0.1%	-0.2%	-0.3%	-0.3%
<b>Migration to Israel</b>	-0.4%	-0.4%	-0.4%	-0.4%	-0.4%	-0.3%	-0.3%
<b>End Year</b>	103.1%	103.2%	102.5%	103.0%	102.7%	102.9%	102.8%
<b>Total</b>							
<b>Begin Year</b>	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Births</b>	4.0%	4.1%	3.8%	3.7%	3.6%	3.6%	3.8%
<b>Deaths</b>	0.4%	0.4%	0.4%	0.4%	0.4%	0.5%	0.4%
<b>Net Migration Abroad</b>	-0.6%	-0.1%	-1.1%	-0.1%	-0.4%	-0.5%	-0.5%
<b>Migration to Israel</b>	-0.7%	-0.7%	-0.7%	-0.7%	-0.6%	-0.6%	-0.6%
<b>End Year</b>	102.3%	102.9%	101.7%	102.5%	102.1%	102.0%	102.3%



PCBS forecast, it is important to underscore that the PCBS did not overestimate birth rates in its 1997 projection. Rather, its birth projections collapsed because it applied growth rates to an inflated, non-residential base.<sup>96</sup>

The most critical factor that reduced actual growth to levels well below PCBS expectations was migration. The PCBS' assumption of mass immigration to the West Bank and Gaza proved inaccurate, and in reality, was replaced by a total net emigration.<sup>97</sup> The dramatic impact of migration on the overall growth rate in the Territories can best be seen graphically in **Figure 5.2**.

**Figure 5.2** Impact of Migration: PCBS Projection vs. Actual Growth in 2003 in West Bank and Gaza<sup>98</sup>



***Calculation of Total Fertility Rates (TFRs):*** The Total Fertility Rate is the average number of children a woman can be expected to have over her childbearing lifetime if birth levels remain stable over time. The births included in the study's results yielded TFRs ranging from 5.8 to 4.7 for the West Bank and from 6.6 down to 5.6 for Gaza.<sup>99</sup> The PCBS also published updated fertility statistics in its Household Surveys in 2000 and 2004. For 2004, the PCBS reported a 5.2 TFR for the West Bank and 6.6 for Gaza.<sup>100</sup> On June 8, 2005, they apparently revisited their 2004 statistics and presented an average TFR of 4.6 for the combined Territories.<sup>101</sup>

The PA Ministry of Health reported lower population growth rates than those found in this study. It indicated that natural growth rates (birth rates minus death rates) had dropped from 3.7% in 1996 to 2.4% in 2003.<sup>102</sup> The PA MOH also reported a significant decline in TFRs, from 5.58 in 1998 to 3.89 in 2003.<sup>103</sup> These TFR rates may have been underestimated since they were calculated on the inflated population base taken directly from the original PCBS forecast.<sup>104</sup> In other words, the PA MOH recorded birth activity that occurred only in the West Bank and Gaza, but calculated TFR rates on an expanded base that included non-residents.<sup>105</sup> (UNRWA also found lower TFR rates in its 2000 survey, reporting TFRs of 4.1 for the West Bank and 4.4 for Gaza by 2000.)<sup>106</sup>

The birth figures included in this study's calculations, as originally released by the PA MOH and described as Set #3 in Chapter 3, yield TFR rates at the upper end of recent PCBS Household Survey estimates. This fact further validates the PA MOH birth records since higher birth figures would raise TFR rates above any plausible, realistic or predicted level. In fact, the case can be made that even the birth levels used in this study might have to be reduced further. Finally, all sets of birth data, whether from the projection of the PCBS, the results computed in this Study, or statistics released by the PA Ministry of Health, show a gradual decline in birth rates and fertility rates in the West Bank and Gaza.





**Figure 5.3** Total Fertility Rates for West Bank and Gaza: 1997–2004<sup>107</sup>

	1997	1998	1999	2000	2001	2002	2003	2004
<u>Study Results West Bank</u>	5.45	5.85	5.40	5.10	4.95	4.70	5.20	
<b>Study Results Gaza</b>	6.60	6.35	5.90	5.80	5.60	5.85	5.70	
<b>PCBS Household Survey 2004 West Bank</b>								5.2
<b>PCBS Household Survey 2004 Gaza</b>								6.6
<b>PCBS Household Survey 2004 Combined Rate</b> <i>(PCBS Press Release October 28, 2004)</i>								5.2
<b>PCBS Household Surveys 2000 &amp; 2004 Combined Rate</b> <i>(PCBS Presentation, June 8, 2005, Technion)</i>				4.9				4.6
<b>PA MOH West Bank</b>			4.1	4.0	3.7	3.6	3.4	
<b>PA MOH Gaza</b>			5.0	4.9	4.7	4.8	4.7	
<b>PA MOH Combined</b>			4.41	4.34	4.05	4.05	3.89	



### **Jordanian and Israeli Arabs Growth Rates: Possible Benchmarks for the West Bank**

The gap between the PCBS forecast and the study's calculation of West Bank population was particularly large. It is instructive to analyze how the West Bank population would have grown since 1967 had it experienced the same natural growth rates (birth less death rates) as neighboring Arab societies. To perform this analysis, this study considered natural growth patterns in Jordan and in the Israeli-Arab population.

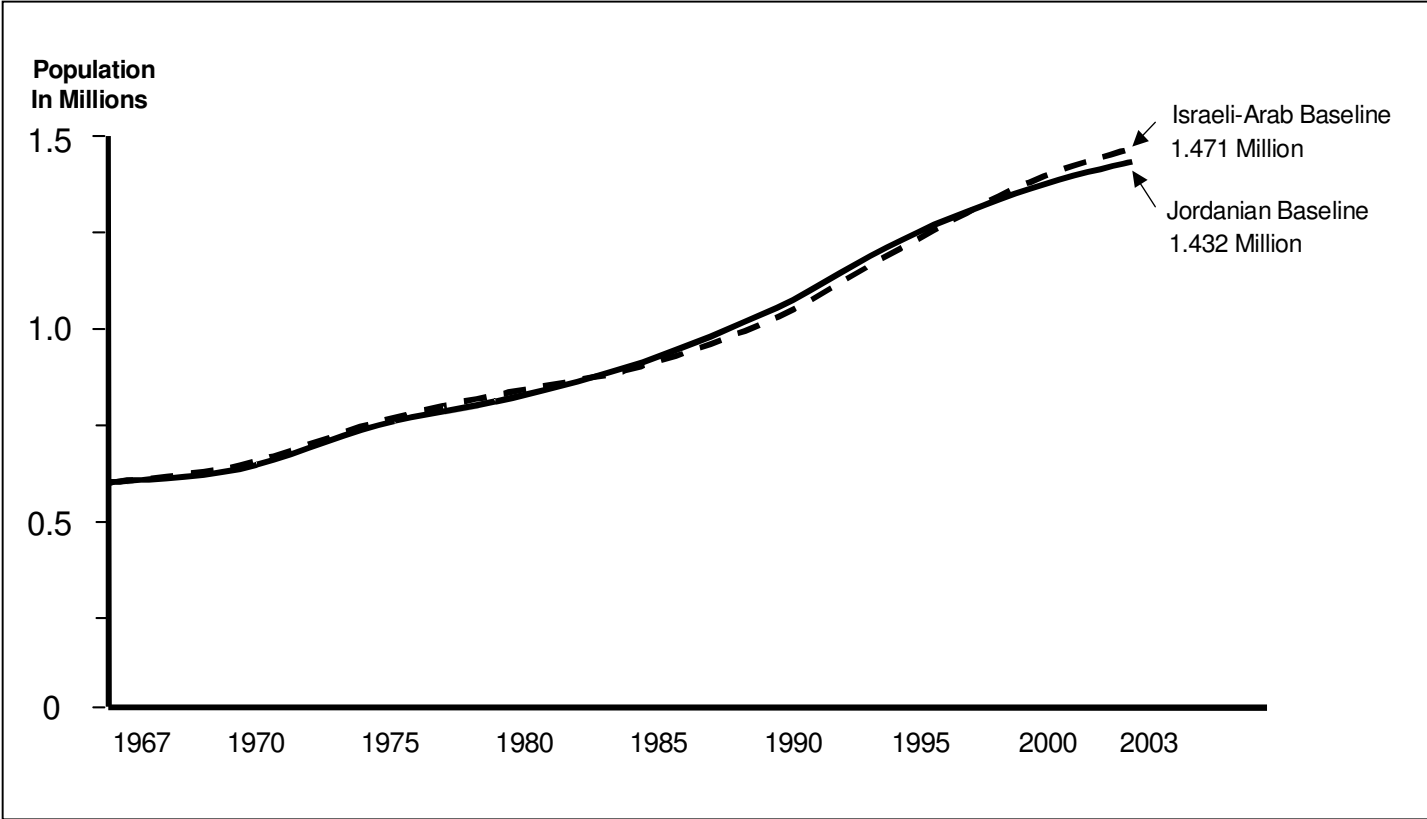
Jordan provides a natural comparison since it shares many characteristics with the West Bank, controlled the area between 1948 and 1967, and still maintains many close links with the population. Applying Jordan's natural growth rate to the West Bank population recorded by census after the 1967 War (and also accounting for annual immigration and emigration since that time) produces a 2004 population estimate of 1.43 million for the West Bank, a figure entirely consistent with the study's estimate of 1.40 million.<sup>108</sup>

The Israeli-Arab community provides a second reference point. The application of Israeli-Arab natural growth rates in place of Jordanian rates produced virtually the same result: 1.47 million.<sup>109</sup> The only difference was that the Israeli-Arab rates were lower than the Jordanian rates in the years immediately after 1967, but exceeded the Jordanian rate (and those in the region) in later years. Overall, the results were the same for the whole 36-year period.

These benchmarks underscore the fact that whatever the natural growth assumptions, the PCBS estimate for the West Bank depended on the inclusion of overseas residents and on predictions of high immigration. (The calculations are presented in their entirety in Appendix H.)



Figure 5.4 Jordanian & Israeli Arab Growth Rates Applied to West Bank, 1967–2004





### **Update of Demographic Statistics**

The population data for West Bank and Gaza Arabs, combined with ICBS data on Israeli Jews and Arabs, provides an updated analysis of Jewish/Arab population dynamics west of the Jordan River from 1967 until the beginning of 2004:

- Over the last 38 years, the Palestinian population in the Territories has remained stable at one-quarter of the total population west of the Jordan River. While the West Bank share fell slightly, Gaza's share increased.
- Israeli-Arabs accounted for 14% of the total 2004 population, up from a 10 1/2% share in 1967.
- Jews represent 59% of the total population, having declined from a 64% majority measured in 1967. Excluding Gaza, the Jewish percentage is 67% in Israel and the West Bank.

Relative growth of different population groups west of the Jordan River is much closer than previously understood. From 1997 through the end of 2003, The Jewish population grew at an annual rate of 2.1% while the rate for the West Bank Arab population was 1.8%. For the Gaza Arab population the rate was 2.9%, while Israeli-Arabs experienced the highest annual growth at a rate of 3.3%.

Migration was a significant factor bringing growth rates closer to each other. The migration of Palestinians from the West Bank and Gaza to Israel fueled the high Israeli-Arab growth rate while it depressed West Bank and Gaza growth rates. This migration, and not a lower natural growth, reduced the overall West Bank growth rate to a level below that of the Israeli-Jewish population.



**Figure 5.5** Israel, West Bank & Gaza: Population by Segment, 1967–2003<sup>110</sup>

<i>In Thousands (At Year End)</i>	<b>1967</b>	<b>%</b>	<b>1985</b>	<b>%</b>	<b>1990</b>	<b>%</b>	<b>1995</b>	<b>%</b>	<b>2000</b>	<b>%</b>	<b>2003</b>	<b>%</b>
Jews	2,384	64.1%	3,517	62.8%	3,947	61.5%	4,522	59.6%	4,955	57.1%	5,165	56.1%
Jewish	0	0.0%	0	0.0%	0	0.0%	85	1.1%	225	2.6%	281	3.1%
Affiliated/ Immigrants												
<b>Total Israeli Jews</b>	<b>2,384</b>	<b>64.1%</b>	<b>3,517</b>	<b>62.8%</b>	<b>3,947</b>	<b>61.5%</b>	<b>4,607</b>	<b>60.7%</b>	<b>5,181</b>	<b>59.7%</b>	<b>5,447</b>	<b>59.1%</b>
Druze	32	0.9%	72	1.3%	83	1.3%	92	1.2%	104	1.2%	111	1.2%
Christian	71	1.9%	99	1.8%	115	1.8%	101	1.3%	111	1.3%	116	1.3%
Arabs												
Moslem Arabs	290	7.8%	578	10.3%	678	10.6%	811	10.7%	970	11.2%	1,073	11.6%
<b>Total Israeli Arabs</b>	<b>393</b>	<b>10.6%</b>	<b>749</b>	<b>13.4%</b>	<b>875</b>	<b>13.6%</b>	<b>1,005</b>	<b>13.2%</b>	<b>1,185</b>	<b>13.7%</b>	<b>1,299</b>	<b>14.1%</b>
<i>Total Israeli Population</i>	<b>2,776</b>	<b>74.7%</b>	<b>4,266</b>	<b>76.2%</b>	<b>4,822</b>	<b>75.2%</b>	<b>5,612</b>	<b>74.0%</b>	<b>6,366</b>	<b>73.3%</b>	<b>6,746</b>	<b>73.2%</b>
Arabs in West Bank	586	15.8%	805	14.4%	950	14.8%	1,151	15.2%	1,333	15.4%	1,399	15.2%
Arabs in Gaza	356	9.6%	526	9.4%	643	10.0%	821	10.8%	981	11.3%	1,067	11.6%
<b>Arabs in West Bank/Gaza</b>	<b>942</b>	<b>25.3%</b>	<b>1,331</b>	<b>23.8%</b>	<b>1,593</b>	<b>24.8%</b>	<b>1,973</b>	<b>26.0%</b>	<b>2,314</b>	<b>26.7%</b>	<b>2,466</b>	<b>26.8%</b>
<b>Total</b>	<b>3,718</b>	<b>100.0%</b>	<b>5,597</b>	<b>100.0%</b>	<b>6,415</b>	<b>100.0%</b>	<b>7,585</b>	<b>100.0%</b>	<b>8,680</b>	<b>100.0%</b>	<b>9,212</b>	<b>100.0%</b>

## **Chapter 6: The PCBS Response and Revision**

In March 2005, the PCBS circulated the first revision of its population model since its release in 1998. PCBS director Luay Shabaneh presented the new model as part of a direct response to this study on June 8, 2005, at a workshop sponsored by Technion's Neaman Institute for Advanced Studies of Science and Technology.<sup>111</sup> The authors of this study delivered a presentation prior to his response.

This revised PCBS Model began to correct the significant migration error in its 1997 forecast and reduced its 2004 population estimates accordingly. The PCBS subtracted 178,000 in unrealized immigration through mid-year 2004. This reduction lowered the population base, which in turn lowered the calculation of natural growth (births less deaths) in the model by another 12,000. The original PCBS mid-2004 population claim of 3.83 million dropped by 190,000 (178,000 migration change + 12,000 fewer from natural growth) to a revised mid-2004 estimate of 3.64 million (3.4 million without eastern Jerusalem).

The revised PCBS Model and the population data derived from it permit the factor-by-factor analysis displayed in **Figure 6.1**. (The revised PCBS Model is included as Appendix B.) This analysis, along with Mr. Shabaneh's explanations, reveals persistent problems in the PCBS estimates of its population.

### **Population Base**

Mr. Shabaneh denied that Palestinian Arabs living abroad were included in the 1997 PCBS Census<sup>112</sup> despite the explanations of the PCBS at the time. Yet, in his presentation, Mr. Shabaneh relied on the PA Population Registry, which includes non-residents, to justify his current population claims.

The population register delivered to the PNA from Israel in the third quarter 2004 was updated until June 2004 and

**Figure 6.1** Population Data Derived from *Revised PCBS Model, 1997–2004*<sup>113</sup> (*Revised in March 2005*)

<i>(Mid-Year)</i>	<b>1997-1998</b>	<b>1998-1999</b>	<b>1999-2000</b>	<b>2000-2001</b>	<b>2001-2002</b>	<b>2002-2003</b>	<b>2003-2004</b>
<b>Population Base for West Bank &amp; Gaza incl. Eastern Jerusalem</b>	<b>2,783,084</b>	<b>2,897,113</b>	<b>3,019,158</b>	<b>3,149,447</b>	<b>3,275,389</b>	<b>3,394,046</b>	<b>3,514,868</b>
<b>Crude Birth Rate</b>	<b>4.27%</b>	<b>4.21%</b>	<b>4.14%</b>	<b>4.09%</b>	<b>4.02%</b>	<b>3.96%</b>	<b>3.88%</b>
<b>Crude Death Rate</b>	<b>0.49%</b>	<b>0.48%</b>	<b>0.46%</b>	<b>0.45%</b>	<b>0.44%</b>	<b>0.43%</b>	<b>0.42%</b>
<b>Natural Growth Rate</b>	<b>3.78%</b>	<b>3.73%</b>	<b>3.68%</b>	<b>3.64%</b>	<b>3.58%</b>	<b>3.53%</b>	<b>3.46%</b>
<b>Migration Rate</b>	0.32%	0.48%	0.64%	0.36%	0.00%	0.00%	0.00%
<b>Population Growth Rate</b>	4.10%	4.21%	4.32%	4.00%	3.62%	3.56%	3.49%
<b>Births in PCBS Model</b>	118,838	121,968	124,993	128,812	131,671	134,404	136,377
<b>Deaths in PCBS Model</b>	-13,637	-13,906	-13,888	-14,173	-14,412	-14,594	-14,762
<b>Migration in PCBS Model</b>	8,828	13,983	19,184	11,302	0	0	0
<b>Ending Residential Base</b>	<b>2,897,113</b>	<b>3,019,158</b>	<b>3,149,447</b>	<b>3,275,389</b>	<b>3,394,046</b>	<b>3,514,868</b>	<b>3,637,529</b>

*Figures in Bold are taken directly from the Revised PCBS Model. Figures in Normal Text are derived from the Revised PCBS Model. As PCBS Publishes rates, absolute figures are subject to slight rounding errors of 1,000-2,000.*

included 3.43 million records. This number included those who have an ID and living abroad (sic), who have the right to return immediately as they are defined Palestinian residents according to the DOP of 1993, but also does not include Palestinians holding Jerusalem ID.<sup>114</sup>

Mr. Shabaneh's claim that the 1997 census did not include non-residents contradicts his inclusion of them in 2004. It is impossible for non-residents to become part of the population count in 2004 unless they were added at some time since 1997 or already present in 1997. The PCBS forecast, which only changes with net births, deaths and immigration, shows no classification change to its population base since 1997.

Mr. Shabaneh went on to further defend the inclusion of non-residents by observing that if Palestinian Arabs living abroad are excluded from the PCBS population tally, then Israeli Jews who live abroad should be deducted from Israel's population. Indeed, ICBS policy is to remove such individuals after they have been away from the country for more than one year.<sup>115</sup> In any case, groups living abroad should not be classified as *de facto* residents.<sup>116</sup> If they return, then they should be included in the PCBS residential population statistics, but not until that time.

### **Jerusalem**

Mr. Shabaneh acknowledged that the PCBS includes ICBS figures for Arabs living in eastern Jerusalem in its West Bank population count.<sup>117</sup> While the Oslo Accords restrict PCBS activity in this area, Mr. Shabaneh defended their inclusion and suggested that the ICBS should remove this group from its own surveys. Whichever agency counts this group, researchers must be careful to avoid double counting Jerusalem Arabs when they use both ICBS and PCBS data to analyze the population west of the Jordan River.

## Births

Since a key contention of this study is that the actual birth data recorded by the PA Ministry of Health was more accurate than the 1997 PCBS birth projections, the majority of the PCBS June 8, 2005 presentation was a critique of its sister agency, the PA Ministry of Health.<sup>118</sup> Mr. Shabaneh argued that both the number of births and the fertility statistics derived from the PA MOH were based on incomplete birth data. The PCBS critique inadvertently exposed flaws in its own methodology and confirmed many of the main points made in this study.

- The PCBS faulted the PA MOH for computing fertility rates on an inflated population that included non-residents. The presentation noted that the number of women is based on a “population register where this includes women their [sic] usual residence is abroad”.<sup>119</sup> The PCBS, therefore, acknowledged one of the key points found in this study: the PCBS published population figures for the West Bank and Gaza, which include a substantial number of Palestinian Arabs living abroad, have served as an incorrect basis for calculations by all agencies that rely on them.
- The PCBS presented the most recent statistics on registered births in the Territories, dating back to 1997, to demonstrate that the PA MOH suffered from systematic under-coverage of birth data in both its original and restated reports.<sup>120</sup> (This study summarized the 1997 to 2003 birth data as ranging between 599,000 at original levels to 669,000 for restatements by the MOH through January 2005.) As proof of this understatement, the PCBS presented a population registry updated to February 28, 2005 that reported 705,000 births for the 1997 to 2003 period, a figure only 36,000 more than the restated number of PA MOH births noted in Chapter 3. Leaving aside the question of whether MOH recorded births are correct or not, the PCBS exposed the even greater discrepancy between the population registry’s 705,000 reported births - the highest level measured by any PA agency

- and the 897,000 births that the PCBS reported in its newly revised population model. The difference of 192,000 births highlights the substantial error between the PCBS forecasting methods and documented demographic events.<sup>121</sup>

How could such a large discrepancy in births arise? The PCBS model computes 897,000 births by applying assumed birth rates each year to the inflated population base that included non-residents and eastern Jerusalem Arabs. When these same birth rates are applied to a residents-only population base, it yields 708,000 births<sup>122</sup> for 1997 through 2003 (see Appendix G for calculations), almost an exact match with the number in the birth registry cited by the PCBS on June 8, 2005. The PCBS' decision to expand the *de facto* population base continues to skew its current forecast. **Figure 6.2** illustrates the different birth levels described in this and earlier chapters.

### **Migration**

The discrepancy found in this study between actual migration patterns and projected immigration was corroborated by the PCBS. As noted above, in March of 2005, it reduced all immigration assumptions to zero between the years 2001 and 2015. Even this small reduction of 178,000 persons by mid-year 2004 and the reduction of three-quarters of a million through 2015 highlight the significant impact of unchecked assumptions that grow into considerable errors. The PCBS confirmed these changes on June 8.

However, the PCBS has not yet removed the immigration included in its model for the years 1997 to 2000, nor has it removed emigrants from its calculations. Mr. Shabaneh confirmed that the PCBS did not have the emigration data from the Israel Border Police and that when it became available, it would be included in the PCBS model.<sup>123</sup> Correcting these omissions would reduce the PCBS 2004 estimate by another 131,000 persons. The PCBS presentation did not address the emigration from the West Bank and Gaza into pre-1967 Israel.

**Figure 6.2** Summary of Birth Data Sets with recent updates from the June 8, 2005 PCBS Presentation<sup>124</sup>

	1997	1998	1999	2000	2001	2002	2003	TOTAL
<b>Birth Sets Analyzed in Chapter 3</b>								
Set #1: PCBS Original 1997 Model	118,810	121,722	124,865	128,270	132,420	138,433	143,106	<b>907,626</b>
Set #2: PA MOH Reports (Current through January 2005)	92,265	97,733	94,258	92,518	92,483	94,406	101,647	<b>669,310</b>
Set #3: PA MOH Births (As Originally Reported)	84,409	88,708						
PA MOH Births (Adjusted to Pre-Census Levels)			84,376	82,916	82,915	84,863	91,124	<b>599,311</b>
<b>New Figures from PCBS June 8, 2005 Presentation</b>								
Set #4: PCBS Revised Model (Spring 2005)	118,838	121,968	124,993	128,812	131,671	134,404	136,377	<b>897,063</b>
Set #5: PA Registered Births (Presented by PCBS June 8)	98,215	101,087	99,447	102,463	100,019	102,461	102,071	<b>705,763</b>
Set #6: PCBS Model Rates Applied to Residents Only Base	96,056	97,590	99,520	100,654	102,714	105,287	106,854	<b>708,673</b>





### PA Central Election Commission Reports

The PCBS June 8 presentation included a ‘cross-check’ calculation with data from the PA Central Election Commission to justify its population forecast. The PCBS claimed there were 1.2 million registered voters on December 31, 2004. Estimating that 70–75% of the population was registered to vote, the PCBS calculated a total adult population of 1.7 million. By assuming that 50% of its population was below 18 years of age, the PCBS finally concluded a total population of 3.4 million.<sup>cxxv</sup>

As discussed in Chapter 3, the figures from the CEC are an important data point for evaluating current population claims. However, the factors used in the PCBS calculation do not match the data released by the CEC before and after year-end 2004. It is worthwhile to revisit the CEC data in detail.

On January 8, 2005, one day before the PA presidential elections, the CEC reported 1.623 million *eligible* voters in the Territories including 120,000 Arabs in eastern Jerusalem. Subtracting the eastern Jerusalem Arabs from the CEC count leaves 1.503 million eligible adult voters in the West Bank and Gaza (1.1 million of that group had registered with the CEC).<sup>cxxvi</sup> Furthermore, in its October 14, 2004 press release on the upcoming municipal elections, the CEC confirmed this same figure of 1.5 million eligible voters in the West Bank and Gaza excluding eastern Jerusalem, of whom 1.0 million had registered to vote by this earlier date. In this release, the CEC added the critical fact that “approximately 200,000 eligible voters are living abroad and have not been able to engage in the registration process”.<sup>cxxvii</sup> After subtracting the eligible voters living abroad, the CEC data points to a figure of 1.3 million adults who actually live in the Territories.<sup>cxxviii</sup>

Using the PCBS assumption of a 50/50 split between adults and children, the CEC figure would at most justify a 2.6 million residential population in the West Bank and Gaza as of January 2005. Their methodology made no attempt to remove individuals who had migrated into pre-1967 Israel and Jerusalem. Alternatively, using the

UNRWA registered refugee data that shows 39.7% of the population below 18 in the West Bank and 48.3% below 18 in Gaza, the 1.3 million adult residents would indicate a total population in the Territories of 2.34 million people.<sup>cxix</sup> (The primary documents from the CEC and all mathematical calculations based on them are presented in their entirety in Appendix F.)

### **Areas for Further Revision in the PCBS Forecast**

By changing some migration assumptions, the PCBS has begun to correct the forecasts contained in its 1998 population model. With these changes, the overstatement of population has been reduced from 1.34 million to 1.15 million as of mid-year 2004.

Actual border data and migration from the Territories into pre-1967 Israel, which the PCBS has not yet accounted for, will require further reductions. The PCBS should also remove non-residents from its model and account for its inclusion of eastern Jerusalem Arabs.

The incorporation of these groups has had a significant impact on the PCBS natural growth computations and this impact must be clearly delineated. If the PCBS removes these groups from its population base, its birth projections will fall into line with figures recorded by other PA agencies, including the agencies that the PCBS itself cited on June 8th.

The PCBS June 8, 2005 presentation underscored the lack of documentary support for its current population claims. Nonetheless, the PCBS offered several key data points and observations that bring into focus the changes that will be required to bring PCBS figures down to more realistic levels.

## Chapter 7: Conclusions

This study concludes that the Arab population at the beginning of 2004 was 2.47 million: 1.40 million in the West Bank and 1.07 million in Gaza. These figures are dramatically below the population estimates released by the PCBS.

There were two distinct categories of error in the construction and use of the PCBS Model. The first category was *errors from the outset* in the original 1997 census and projections. From the outset, the PCBS included both non-residents in its base population and eastern Jerusalem Arabs already counted in ICBS surveys. Next, the PCBS applied particularly high growth rates to this population base. The high growth rates depended on assumptions of large-scale immigration to the Territories. The combination of these original errors resulted in a significant overestimate of current and future resident population size.

The second category of inaccuracies could be described as *errors over time*. The PCBS never adjusted its original model or its yearly population reports to account for annual data on demographic events recorded by other PA and Israeli agencies that directly and consistently invalidated the figures it released. These reports provided evidence of declining birth rates and indicated that the Territories were experiencing net emigration and substantial official and unofficial immigration into pre-1967 Israel and Jerusalem.

It is surprising that there have been no formal examinations of the PCBS population data. The PCBS continued to release its forecasts as its official population count even though no other reports or field data supported those forecasts. Even when the PCBS defended its figures in June 2005, it did not provide primary evidence to support its claims. Instead, it justified its inclusion of non-residents with political arguments. It did not resolve the discrepancies in birth figures but rather highlighted the gap between its birth forecasts and official records. It acknowledged that it had no accurate border data and ignored the evidence of people leaving the Territories for Israel.

Instead of using the data from various PA agencies, the PCBS challenged the agencies that did not corroborate its own estimates or used their data to make rough, albeit inaccurate, analyses to support PCBS claims as it did with the voter data from the CEC.

When, as in the case with the PA, there are so many different sets of figures, it is tempting to assume that a more realistic population count could be determined by averaging the various estimates. However, the PCBS figures are so out of line with the demographic reality on the ground that that this exercise would not lead to greater accuracy. Estimates become more accurate only by visiting data of actual activity and ultimately by a census that follows conventional definitions for *de facto* and *de jure* counts. People who might return at some future time are not in the same demographic category as either *de facto* residents who must be physically present during the census or as *de jure* residents who are permanent residents but are temporarily away from the area. The PCBS practice of mixing these categories has caused distortion in their own figures and in the figures of those who use their reports.

The best way to get an accurate population estimate is to use primary sources that document demographic activity. This study used data on population base, births, deaths and migration from widely available public sources. There is much data available from population registries, border records, voting records, school records and hospital records. In addition, pre-1967 ICBS records continue to show they have considerable validity. All these records should be thoroughly examined. The alternative, relying on rough estimates of growth rates without corroborating them, is a sure recipe for further error.

Other evidence and developments should also be examined, particularly since they suggest that the Arab population in the Territories may be even lower than the number calculated in this study. If Arab immigration into pre-1967 Israel, along with its associated births, were fully documented, the Arab population count would be considerably lower in the West Bank and Gaza and considerably higher in Israel. The reality is that the 'green-line' has

been a very porous boundary, particularly between the West Bank and Israel. Migration that occurs before the final construction of Israel's separation barrier should also be carefully evaluated, particularly in the Jerusalem area where numerous Arab residents with and without Israeli ID cards are moving to areas on the Israeli side of the fence. Furthermore, data from UNRWA indicates that the registered Palestinian refugee population in the West Bank and Gaza is significantly older than shown by the age pyramids released by the PCBS. UNRWA also has documented a rapid deceleration in growth and growth rates which are lower than those reported by the PCBS. These sources should be fully considered in future estimates.

This study leads to several general conclusions about population dynamics in the region. Israeli concerns about demographic pressure from the West Bank and Gaza have evidently been exaggerated. The demographic threat to Israeli society has not quantitatively changed since 1967. All population groups experienced large-scale growth. The determinant factor that brought their relative growth rates closer together was migration, particularly Jewish immigration into Israel. The emigration of Arabs from the West Bank and Gaza depressed the West Bank Arab and Gaza growth rates while the portion of emigrants who moved into pre-1967 Israel fueled the high Israeli-Arab growth rate. It was this emigration that reduced the overall West Bank growth rate to a level below Jewish growth rates.

Although this study does not make forecasts, it offers important cautions and insights for those who create demographic projections for the West Bank and Gaza. Given the magnitude of the errors in the PCBS Model - its 2004 population was inflated by over 50% - demographers and state agencies would be wise to correct figures for the current population and growth rates before continuing to make any forecasts about future population size. Forecasters who used concepts of 'demographic momentum' need to carefully verify the size of the next childbearing generation and the growth rates expected in that population or their errors will compound as the projections are carried out into the future.

Future population models should be transparent with clearly defined starting, intermediate and ending points, so that researchers can assess the data and the assumptions used to make the calculations. Data sources should be explicitly documented since today many estimates use the information released by the PCBS without noting the source.

Finally, demographers forecasting the future must systematically consider a full range of population scenarios. The future demographic balance in the region may depend on what happens with the Jewish majority, which has maintained its demographic weight through *rising* birth rates and immigration, while the Arab population has experienced *high but declining* birth rates and emigration. Demographers must construct scenarios that assume these trends will continue as well as scenarios that assume there will be declining Jewish growth rates and stable or rising Arab growth rates. In the past, many researchers just presumed that Arab and Jewish growth rates would always move in tandem, up together or down together. But there are clearly other realistic possibilities. In order to be comprehensive, forecasts should consider the full range of potential developments, including changes in migration patterns at international borders or through free passage zones between Gaza and the West Bank.

Before the results of this study were released in January 2005, the PCBS figures were accepted throughout the world without question. After this study was made public, PCBS announcements began to change. The PCBS acknowledged a deceleration of assumed growth rates and lowered its population figures for 2004 and its projections through to 2015. Other researchers and demographers also began to reexamine and lower their own figures. These new estimates placed the Arab population between 2.5 and 2.9 million people. Nonetheless, many pundits and government agencies continue to refer to “4 million Palestinians” living in the Territories.

It is important for Israelis, Palestinians and world agencies to arrive at more accurate PA population figures. The PCBS figures have driven critical decisions in Israel, are the basis for American and

## THE MILLION PERSON GAP

international foreign aid to the PA and influence infrastructure planning including water and land use. Many of these decisions and policies require reexamination in light of these lower population figures for the West Bank and Gaza.

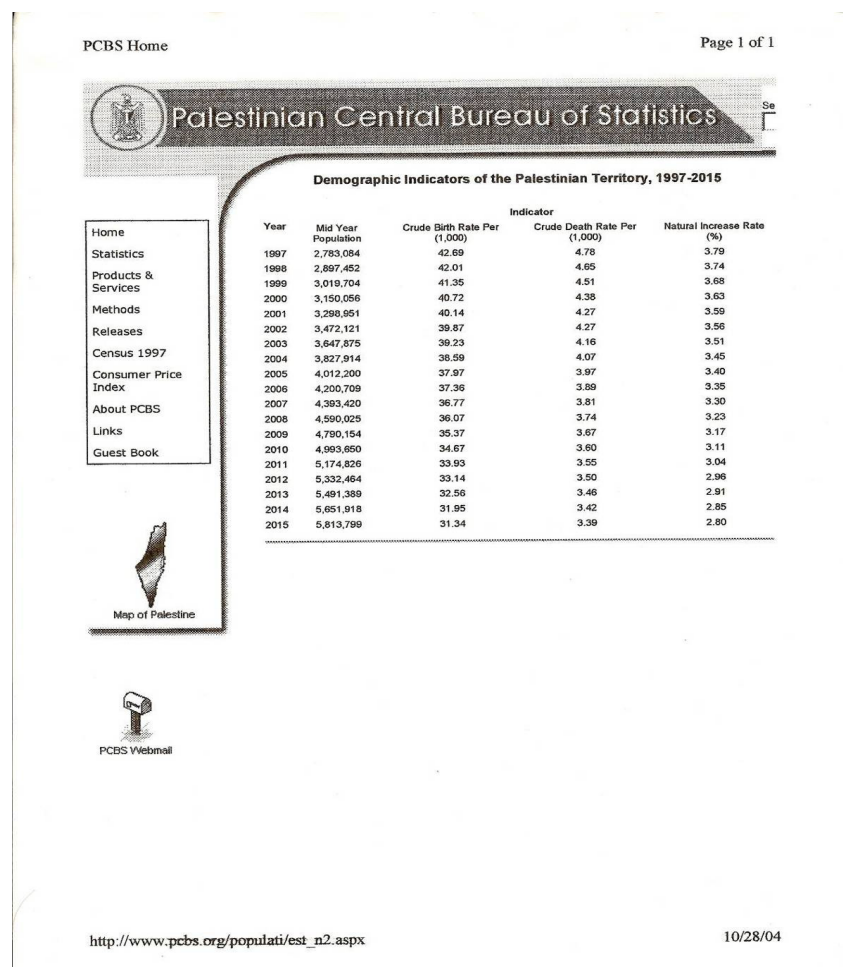
This study's goal was to collect data for the Arab population in the West Bank and Gaza and to analyze PCBS figures for accuracy. It concluded that the widely accepted PCBS claims were invalid and did not reflect the realities on the ground. This study will hopefully serve as a starting point for others to collect and investigate primary source materials where, upon examination, researchers will likely find even stronger evidence of the Million Person Gap.

## Appendix A

### The Original PCBS Model

#### Demographic Indicators of the Palestinian Territory, 1997-2015

(Released in 1998)



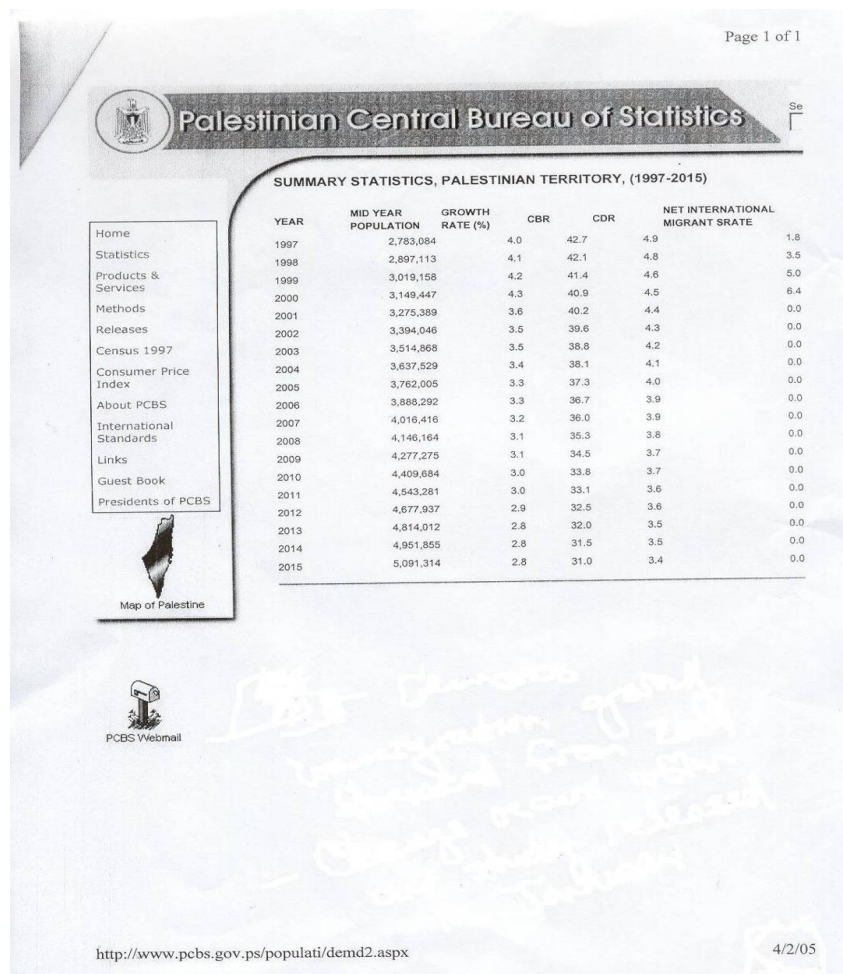
**Source:** Palestine Central Bureau of Statistics, *Demographic Indicators of the Palestinian Territory, 1997-2015*, [www.pcbs.org/populati/est\\_n2.aspx](http://www.pcbs.org/populati/est_n2.aspx), accessed on August 21, 2004.





## Appendix B

### The Revised PCBS Model Summary Statistics, Palestinian Territory, 1997-2015 (Revised March 2005)



**Source:** Palestine Central Bureau of Statistics, *Summary Statistics, Palestinian Territory 1997-2015*, [www.pcbs.gov.ps/populati/demd2.aspx](http://www.pcbs.gov.ps/populati/demd2.aspx), accessed on April 2, 2005.

## Appendix C

### PCBS 1997 Census Standards

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Palestinian Central Bureau of Statistics

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#### Census Coverage

A comprehensive population enumeration always depends on the essence and the nature of the census. In general, population censuses cover all persons residing within the limits of a certain country, at a specific time. A population census is based on the following:

1. De-facto Approach: Based on the enumeration of individuals according to their existence in the area of enumeration at census moment, regardless of their usual place of residence.
2. De-jure Approach: Based on the enumeration of individuals according to their usual place of residence, regardless of their presence at the census moment.

For The first ever Palestinian census, the de-facto approach was adopted with some exceptions. The census count included the following categories:

**A – The Categories underwent complete data collection.**

1. All persons present in the Palestinian territories on the census reference date, irrespective of nationality, purpose of stay and place of residence in the Palestinian territories.
2. All temporarily living abroad (for one year prior to the night of the reference date) and who have a usual place of residence in the Palestinian territories. Those persons are enumerated as parts of their households.
3. All Palestinians studying abroad irrespective of the study period and the period of stay abroad along with all Palestinian detainees in the Israeli jails regardless of the detention period.

**B – Palestinian abroad:** Categories underwent data collection on their numbers and sex only This category includes Palestinians who live abroad for more than one year and who have a usual place of residence in the Palestinian territories and have identity cards (except for students and detainees enumerated in the previous category) irrespective of the purpose of stay abroad.

Map of Palestine

PCBS Webmail

[http://www.pcbs.org/phc\\_97/phc\\_covr.aspx](http://www.pcbs.org/phc_97/phc_covr.aspx)
10/14/04

**Source:** Hassan Abu-Libdeh, *Census Coverage*, Palestine Central Bureau of Statistics, Released on November 30, 1998, Final Results Section.

Appendix D (Page 1 of 3)

Summary of Birth and School Entry Data, 1990–2003

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
PCBS Projected Births in 1997								118,810	121,722	124,865	128,270	132,420	138,433	143,106
PA MOH Births (Current as of January 2005)							101,053	96,265	97,733	94,258	92,518	92,483	94,406	101,647
PA MOH Births (Retroactively Released)	95,064	100,174	100,185	104,808	104,684	103,513								
PA MOH Births (As Originally Reported/ Before Census Level)							91,033	84,409	88,708					
PA MOH Births (Aligned to Before Census Level)										84,376	82,916	82,915	84,863	91,124
Israel Recorded Births	69,786	77,777	77,869	82,099										
2003/4 PA MOE School Enrollment				Grade 5 108,031	Grade 4 96,968	Grade 3 101,817	Grade 2 96,821	Grade 1 94,473						
2004/5 PA MOE School Enrollment				Grade 6 106,984	Grade 5 97,065	Grade 4 102,713	Grade 3 97,663	Grade 2 92,377	Grade 1 95,892					

## Appendix D (Page 2 of 3)

## PA Ministry of Health Births

At Original and Restated Levels (*Study Analysis*), 1996-1998

	1996	1997	1998	Total	
PA MOH West Bank Births (Restated after 1998)	60,664	56,913	58,780	176,357	100%
PA MOH West Bank Births (As Originally Reported)	52,863	46,882	51,648	151,393	86%
PA MOH Gaza Births (Restated after 1998)	40,389	39,352	38,953	118,694	100%
PA MOH Gaza Births (As Originally Reported)	38,170	37,527	37,060	112,757	95%

## PA Ministry of Health Births

Adjusted to Pre-Census Levels (*Study Calculation*), 1999–2003

	1999	2000	2001	2002	2003
PA MOH West Bank Births (Current as of January 2005)	56,448	54,349	53,986	52,670	59,421
PA MOH Births x 86% (Aligned to Before Census Levels)	48,458	46,656	46,344	45,214	51,010
PA MOH Gaza Births (Current as of January 2005)	37,810	38,169	38,497	41,736	42,226
PA MOH Births x 95% (Aligned to Before Census Levels)	35,919	36,260	36,571	39,648	40,114

**Appendix D (Page 3 of 3)*****PA Ministry Of Health Retroactive Births vs. ICBS Births******(Study Analysis), 1990-1993***

	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>Total</b>	
<b>PA MOH West Bank Births (Retroactively Released)</b>	56,244	58,992	58,719	61,688	<b>235,643</b>	100%
<b>ICBS West Bank Births</b>	35,500	40,759	40,270	42,663	<b>159,192</b>	68%
<b>PA MOH Gaza Births (Retroactively Released)</b>	38,820	41,182	41,466	43,120	<b>164,588</b>	100%
<b>ICBS Gaza Births</b>	34,286	37,018	37,599	39,436	<b>148,339</b>	90%

**Source:** PCBS, *Demographic Indicators*; PA MOH, *Annual Reports 1999–2003*; PA MOH, *Annual Reports 1996-98*; ICBS, *The Population in Judea, Samaria and Gaza, By Age and Sex, 1985-1993*; PA Ministry of Education & Higher Education, *Statistics About General Education in Palestine*, Report 2003-2004 and Report 2004-2005.

## Appendix D

### Summary of International Migration Data, 1990-2006

	1990	1991	1992	1993	1994	1995	1996
<b>Actual Net Entries (Exits)</b>	4,000	9,000	12,000	(12,000)	15,737	(2,335)	(11,612)

### Summary of International Migration Data, 1997–2003

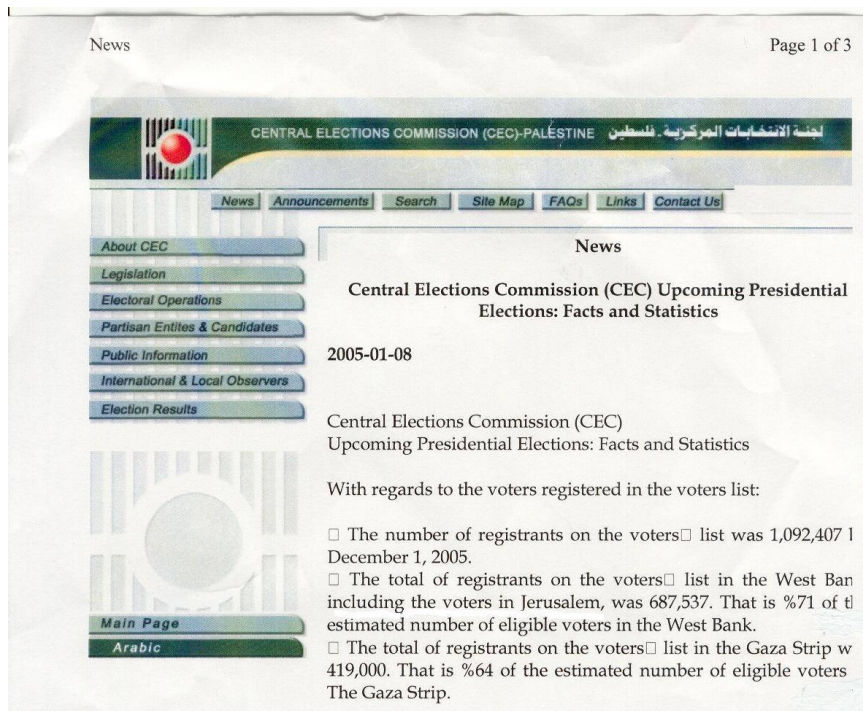
	1997	1998	1999	2000	2001	2002	2003	97-2003 Total
<b>PCBS Model Projection</b>	8,861	14,003	19,106	34,422	54,837	52,146	52,108	<b>235,483</b>
<b>Actual Net Entries (Exits)</b>	(12,377)	(3,026)	(23,588)	(2,792)	(9,910)	(10,997)	(11,664)	<b>(74,354)</b>
<b>Net Difference between Actual and Projection</b>	(21,238)	(17,029)	(42,694)	(37,214)	(64,747)	(63,143)	(63,772)	<b>(309,837)</b>

**Source:** Palestine Central Bureau of Statistics, *Demographic Indicators of the Palestinian Territory, 1997–2015*; **Israel Border Data: 1990–1993:** ICBS, *Demographic Characteristics of the Arab Population in Judea, Samaria and Gaza, 1968-1993*, No.1025, July 1996; **1994:** ICBS, *Annual Statistics Yearbook 1996*; **1995-2003:** Israel Border Police Computer Division. Categories measured: IDs beginning in 9 (Gaza), 4 (West Bank) and 8 (eastern Jerusalem), New Registrants + Residents Returning – Residents Leaving, Border Crossings to Jordan, to Egypt and through Ben-Gurion Airport. Figures obtained by Team Member Brig. Gen (Ret.) David Shahaf from the Israel Border Police.

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**PA Central Election Commission**

**January 8, 2005 Press Release**



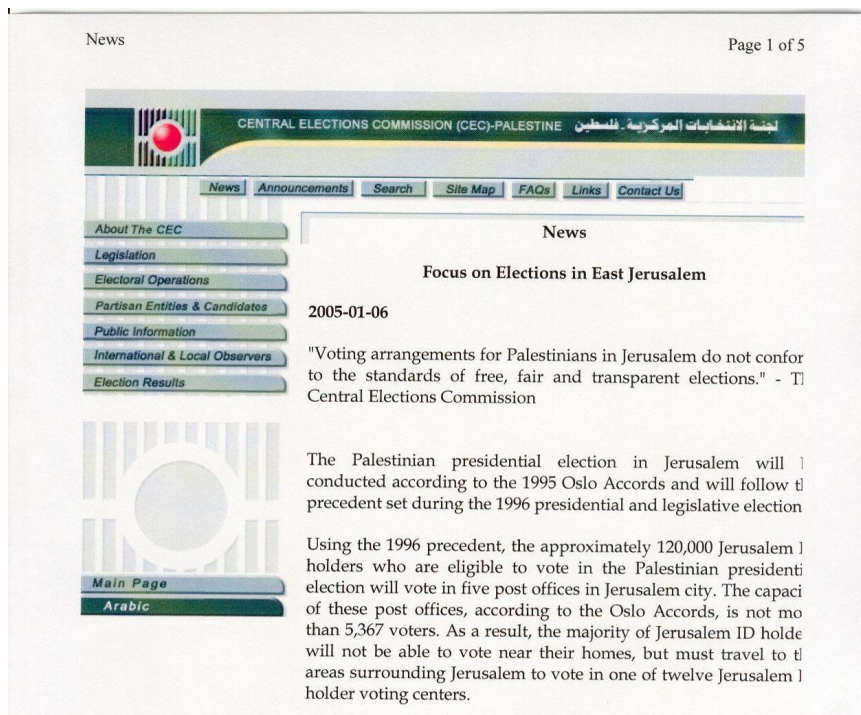
**Source:** Palestine Central Elections Commission, *Central Elections Commission (CEC) Upcoming Presidential Elections: Facts and Statistics*, Press Release, January 8, 2005.



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PA Central Election Commission

January 6, 2005 Press Release



Source: Palestine Central Elections Commission, *Focus on Elections in East Jerusalem*, Press Release, January 6, 2005.

**Appendix F (Page 3 of 5)**

**PA Central Election Commission**

**Excerpts from October 14, 2004 Press Release**

**Central Elections Commission (CEC) Registers Over 67% of Eligible Voters**

The CEC has registered over \*67% of eligible voters, an amount exceeding one million voters. It should be noted however, that approximately 200,000 eligible voters are living abroad and have not been able to engage in the registration process. The registration process, initiated on September 4, 2004, spanned a five week period and came to a close on Wednesday, October 13, 2004. Originally, the expected time-frame of the process was five weeks, however, due to Israeli incursions, invasions, curfews, closures and the implementation of general harassment and intimidation tactics towards the CEC staff, the decision was taken to extend the registration period. The extension was perceived as a necessary step in order to ensure the registration of the maximum number of voters.

***Observers***

The Central Elections Commission (CEC) welcomed the participation of domestic and international entities to observe the electoral process. Several parties, entities, Palestinian institutions and international entities applied to observe the registration process.

The following are the numbers of those that participated in the observation process:

Domestic Observers representing 83 Palestinian Institutions: 2,600  
International Observers representing 3 observation entities: 19  
Political Party Agents representing 10 Palestinian Partisan entities:  
4,103  
Total Number of Observers and Agents: 6,703

***Jerusalem***

The CEC was confronted with several obstacles throughout the registration process. Jerusalem registration centers were invaded by Israeli troops, staff was intimidated and taken to detention centers for questioning, materials were confiscated, and all six of the registration centers were shut down. It should be noted that there are approximately 200,000 eligible voters in the Jerusalem district who were unable to register due to the Israeli shut down of the centers.

***Adjustments for Eligible Voters who were unable to register***

The CEC is facilitating registration for those that were unable to register because they were abroad or unable to register due to within the registration deadline.

*\* This percentage does not include the Jerusalem electoral district due to the Israeli closures of the registration centers in Jerusalem.*

**Source:** PA Central Election Commission, *Central Elections Commission (CEC) Registers over 67% of Eligible Voters*, Press Release, October 14, 2004, <http://www.elections.ps/Press%20Kit%2014-10/Press%20Release%20-%20English.doc>.

**Appendix F (Page 5 of 5)**

**PA Central Election Commission (*Study Calculations*)**

**January 2005 Summary: PA Central Election Commission  
Statistics on Eligible Voters**

<i>CEC January 2005</i>	<b>Registered Voters</b>	<b>Percent Registered</b>	<b>Eligible Voters</b>
<b>West Bank including eastern Jerusalem</b>	687,537	71%	968,362
<b>Eligible Voters in eastern Jerusalem</b>			120,000
<b>West Bank excluding eastern Jerusalem</b>			848,362
<b>Gaza</b>			654,688
<b>West Bank and Gaza Total excluding eastern Jerusalem</b>	419,000	64%	1,503,049

**October 2004 Summary: PA Central Election Commission  
Statistics on Eligible Voters**

<i>CEC October 2004</i>	<b>Registered Voters</b>	<b>Percent Registered</b>	<b>Eligible Voters</b>
<b>West Bank and Gaza Excluding eastern Jerusalem</b>	1,000,000	67%	1,492,537
<b>Number of 'Eligible Voters Living Abroad'</b>			200,000
<b>West Bank and Gaza Total Eligible Voters Living In Territories</b>			1,292,537

## Appendix G

### PCBS Model Birth Rates applied to Residents-Only Population Base: 708,673 Births

<i>(Mid-year to Mid-year)</i>	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004
<b>Population Base</b>	<b>2,783,084</b>						
<b>Less Jerusalem</b>	<b>-208,000</b>						
<b>Less Overseas</b>	<b>-325,000</b>						
<b>Residential Base for West Bank &amp; Gaz</b>	<b>2,250,084</b>	2,323,008	2,406,769	2,471,847	2,558,882	2,640,759	2,723,773
<i>Crude Birth Rate</i>	<b>4.27%</b>	<b>4.20%</b>	<b>4.14%</b>	<b>4.07%</b>	<b>4.01%</b>	<b>3.99%</b>	<b>3.92%</b>
<i>Crude Death Rate</i>	<b>0.48%</b>	<b>0.47%</b>	<b>0.45%</b>	<b>0.44%</b>	<b>0.43%</b>	<b>0.43%</b>	<b>0.42%</b>
<i>Natural Growth Rate</i>	3.79%	3.74%	3.68%	3.63%	3.59%	3.56%	3.51%
<i>Migration Rate</i>	-0.55%	-0.13%	-0.98%	-0.11%	-0.39%	-0.42%	-0.43%
<i>Population Growth Rate</i>	3.24%	3.61%	2.70%	3.52%	3.20%	3.14%	3.08%
<b>Births computed with PCBS Rate</b>	<b>96,056</b>	<b>97,590</b>	<b>99,520</b>	<b>100,654</b>	<b>102,714</b>	<b>105,287</b>	<b>106,854</b>
<b>Deaths computed with PCBS Rate</b>	<b>-10,755</b>	<b>-10,802</b>	<b>-10,855</b>	<b>-10,827</b>	<b>-10,926</b>	<b>-11,276</b>	<b>-11,331</b>
<b>Migration from Israel Border Police</b>	<b>-12,377</b>	<b>-3,026</b>	<b>-23,588</b>	<b>-2,792</b>	<b>-9,910</b>	<b>-10,997</b>	<b>-11,664</b>
<b>Ending Residential Base</b>	2,323,008	2,406,769	2,471,847	2,558,882	2,640,759	2,723,773	2,807,631

*Figures in bold are directly with guidance from PCBS presentation of June 8th, 2005. Figures in normal text are computed directly from these guidelines.*

Source: PCBS, *Summary Statistics, Palestinian Territory 1997-2012*, accessed April 2, 2005, included as Appendix B; PCBS *Palestinian Population Projections*, June 8, 2005. *Summary Statistics* identical to Slide 13 of Presentation.

The calculation demonstrates how births calculated with PCBS birthrates from their latest model on top of a Residents-Only base yields birth figures similar to low PA MOH birth levels and Registered Births presented by the PCBS on June 8, 2005.

**Appendix H (Page 1 of 2)**

**West Bank Population Growth using Jordanian and Israeli Arab Natural Growth Rates**

**Jordanian Growth Applied to West Bank: 1967-2003**

Jordanian Rate	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
<b>Begin</b>		599.0	604.7	622.3	640.4	661.5	683.3	705.9	729.3	742.8	755.6	768.8	782.5	796.6
<b>Growth</b>		3.35%	3.35%	3.35%	3.70%	3.70%	3.70%	3.70%	3.70%	3.54%	3.54%	3.54%	3.54%	3.54%
<b>Migration</b>		-14.4	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-13.5	-13.5	-13.5	-13.5	-13.5	-13.5
<b>End</b>	599.0	604.7	622.3	640.4	661.5	683.3	705.9	729.3	742.8	755.6	768.8	782.5	796.6	811.3
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
<b>Begin</b>	811.3	824.9	847.1	870.0	893.7	918.2	941.7	965.8	990.8	1,016.5	1,051.9	1,089.0	1,129.5	1,152.6
<b>Growth</b>	3.34%	3.34%	3.34%	3.34%	3.34%	3.17%	3.17%	3.17%	3.17%	3.17%	2.86%	2.86%	2.86%	2.86%
<b>Migration</b>	-13.5	-5.4	-5.4	-5.4	-5.4	-5.7	-5.7	-5.7	-5.7	3.2	7.0	9.3	-9.1	12.8
<b>End</b>	824.9	847.1	870.0	893.7	918.2	941.7	965.8	990.8	1,016.5	1,051.9	1,089.0	1,129.5	1,152.6	1,198.4
	1995	1996	1997	1998	1999	2000	2001	2002	2003					
<b>Begin</b>	1,198.4	1,231.0	1,254.6	1,278.2	1,309.7	1,326.2	1,359.1	1,383.8	1,408.3					
<b>Growth</b>	2.86%	2.63%	2.63%	2.63%	2.63%	2.63%	2.37%	2.37%	2.37%					
<b>Migration</b>	-1.7	-8.8	-9.4	-2.1	-17.9	-1.9	-7.5	-8.4	-8.9					
<b>End</b>	1,231.0	1,254.6	1,278.2	1,309.7	1,326.2	1,359.1	1,383.8	1,408.3	1,432.7					

Appendix H (Page 2 of 2)

Israeli Arab Growth Applied to West Bank: 1967-2003

Israeli Arab Rate														
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
<b>Begin</b>		599.0	605.6	624.1	643.3	665.0	687.7	711.1	735.5	749.9	762.6	775.8	789.4	803.5
<b>Growth</b>		3.50%	3.50%	3.50%	3.80%	3.80%	3.80%	3.80%	3.80%	3.50%	3.50%	3.50%	3.50%	3.50%
<b>Migration</b>		-14.4	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-13.5	-13.5	-13.5	-13.5	-13.5	-13.5
<b>End</b>	599.0	605.6	624.1	643.3	665.0	687.7	711.1	735.5	749.9	762.6	775.8	789.4	803.5	818.1
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
<b>Begin</b>	818.1	828.3	847.0	866.2	885.9	906.3	926.9	948.1	969.9	992.3	1,024.3	1,063.1	1,105.3	1,130.5
<b>Growth</b>	2.90%	2.90%	2.90%	2.90%	2.90%	2.90%	2.90%	2.90%	2.90%	2.90%	3.10%	3.10%	3.10%	3.10%
<b>Migration</b>	-13.5	-5.4	-5.4	-5.4	-5.4	-5.7	-5.7	-5.7	-5.7	3.2	7.0	9.3	-9.1	12.8
<b>End</b>	828.3	847.0	866.2	885.9	906.3	926.9	948.1	969.9	992.3	1,024.3	1,063.1	1,105.3	1,130.5	1,178.3
	1995	1996	1997	1998	1999	2000	2001	2002	2003					
<b>Begin</b>	1,178.3	1,213.2	1,242.0	1,271.1	1,308.4	1,331.0	1,370.3	1,403.9	1,437.7					
<b>Growth</b>	3.10%	3.10%	3.10%	3.10%	3.10%	3.10%	3.00%	3.00%	3.00%					
<b>Migration</b>	-1.7	-8.8	-9.4	-2.1	-17.9	-1.9	-7.5	-8.4	-8.9					
<b>End</b>	1,213.2	1,242.0	1,271.1	1,308.4	1,331.0	1,370.3	1,403.9	1,437.7	1,471.9					

**Source:** Migration Statistics: Israel Central Bureau of Statistics, *Demographic Characteristics of the Arab Population in Judea, Samaria and Gaza*, 1968-1993, Publication #1025, July 1996. This document provided the migration for each year from 1967-1993; United Nations Economics and Social Affairs, Population Division, World Population Database, Jordan Country Profile, <http://esa.un.org>, accessed December 2004; Israel Central Bureau of Statistics, Total Population, By Religion and Population Group, Table 2.1, [http://www1.cbs.gov.il/shnaton55/st02\\_01.pdf](http://www1.cbs.gov.il/shnaton55/st02_01.pdf).

## Notes

<sup>1</sup> Palestine Central Bureau of Statistics, *Demographic Indicators of the Palestinian Territory, 1997–2015*, [www.pcbs.org](http://www.pcbs.org), accessed August 21, 2004. Included as Appendix A. This report has been since removed from the PCBS website and replaced with the revised PCBS model included as Appendix B.

<sup>2</sup> The US State Department reported that the PA population was 3.8 million in 2004, excluding East Jerusalem (see 'Israel and the Occupied Territories', *Country Reports on Human Rights Practices*, Bureau of Democracy, Human Rights and Labor, February 28, 2005, at <http://www.state.gov/g/drl/rls/hrrpt/2004/41723.htm#octerr>), while the CIA reported that the mid-year 2004 population was 1.324 million in Gaza and 2.311 million in the West Bank ('Gaza Strip', *CIA World Factbook 2004* and 'West Bank', *CIA World Factbook 2004*). While the US State Department made no effort to remove the eastern Jerusalem double-count, the CIA appears to have made this effort while otherwise accepting PCBS figures as published. The World Bank reported the year-end 2003 population of the West Bank and Gaza as 3.4 million. See World Bank Country Profile at <http://devdata.worldbank.org/external/CPProfile.asp?CCODE=WBG&PTYPE=CP>. Some Israeli demographers and geographers, such as Sergio DellaPergola and Arnon Soffer, claim they do not categorically accept the PCBS figures, and estimate the 2004 PA population is lower than the PCBS reports. DellaPergola estimates 3.4 million (see DellaPergola, 'Battle of Numbers: Jewish Minority by 2020', *Jerusalem Post*, May 16, 2005); Arnon Soffer's estimates have ranged from 3.8 million in Arnon Soffer and Evgenia Bystrov, *Israel Demography: 2004-2020*, Haifa, October 2004, to 2.8 million in Arnon Soffer and Gil Shilo, *Implementation of the Palestinian 'Right of Return'*, National Security College, July 2004 (Hebrew).

<sup>3</sup> Palestine Central Bureau of Statistics, *Summary Statistics, Palestinian Territory 1997-2015*, [www.pcbs.gov.ps](http://www.pcbs.gov.ps), accessed April 2, 2005. Included as Appendix B.

<sup>4</sup> PCBS estimates can be found in Figure 3.1 and in Appendix A. Study results are summarized in Chapter 4.

<sup>5</sup> Spectrum Policy Modeling System Version 2.28, implemented by the Futures Group International. Spectrum results and assumptions are included in the original version of this study: Bennett Zimmerman, Roberta Seid and Michael L. Wise, *Arab Population in the West Bank and Gaza*, January 10, 2005, pp.110-113, [www.pademographics.com](http://www.pademographics.com).

<sup>6</sup> Palestine Central Bureau of Statistics, [www.pcbs.org](http://www.pcbs.org).

<sup>7</sup> Palestine Ministry of Health reports are available at [www.moh.gov.ps](http://www.moh.gov.ps). All MOH annual reports from 1996–2003 have been downloaded and are available on reasonable request from the authors at [www.pademographics.com](http://www.pademographics.com).

<sup>8</sup> Palestine Central Election Commission, [www.elections.ps](http://www.elections.ps).

<sup>9</sup> Palestine Ministry of Education, [www.mohe.gov.ps](http://www.mohe.gov.ps).

<sup>10</sup> Israel Central Bureau of Statistics, [www.cbs.gov.il](http://www.cbs.gov.il).

<sup>11</sup> Internal Reports of the Israel Border Police Computer Division and reports of the Israel Central Bureau of Statistics.

<sup>12</sup> Israel Ministry of the Interior Internal Reports.



<sup>13</sup> UNRWA records are available at <http://www.un.org/unrwa/>.

<sup>14</sup> World Bank, *Developing the Occupied Territories: An Investment in Peace*, Human Resources and Social Policy, Vol.6, Washington DC, 1993.

<sup>15</sup> Central Intelligence Agency, *The World Factbook*, [www.cia.gov/cia/publications/factbook](http://www.cia.gov/cia/publications/factbook).

<sup>16</sup> United Nations Economics and Social Affairs, Population Division, World Population Database, <http://esa.un.org/unpp>.

<sup>17</sup> Palestine Central Bureau of Statistics, *Demographic Indicators of the Palestinian Territory, 1997-2015*; Hassan Abu-Libdeh, *Census Coverage*, Palestine Central Bureau of Statistics, November 30, 1998, Final Results Section, [www.pcbs.org](http://www.pcbs.org), accessed October 14, 2004. Included as Appendix C.

<sup>18</sup> Palestine Central Bureau of Statistics, *Demographic Indicators of the Palestinian Territory, 1997-2015*. Birth figures obtained by multiplying Mid Year Population Column x Crude Birth Rate Column.

<sup>19</sup> Palestine Central Bureau of Statistics, *Demographic Indicators of the Palestinian Territory, 1997-2015*; PCBS supplies Mid Year Population, Crude Birth Rate and Crude Death Rate for each year from 1997 through 2015. Figure 3.1 derives all births, deaths, and migration directly from these PCBS assumptions.

<sup>20</sup> Testimony of Dennis Ross and David Makovsky, *Briefing of the Middle East and Central Asia Subcommittee of the House International Relations Committee, Subject: Israel's Security Fence*, Capitol Hill Hearing, Federal News Service, February 10, 2004; 'Dennis Ross Explains the Geography of Gaza', Interview, *All Things Considered*, August 16, 2005, 'It also, I think, just given the population in Gaza and the birth rate in Gaza, is highest in the world'. Results of Google Search for 'Palestine highest population growth' returned 488,000 hits.

<sup>21</sup> The homepage of the Palestine Central Bureau of Statistics website lists the Mid-Year 2004 population as 3,827,914. This figure was reconfirmed on January 8, 2005, [www.pcbs.org](http://www.pcbs.org) or [www.pcbs.gov.ps](http://www.pcbs.gov.ps).

<sup>22</sup> Julia Zemel, *Final Assessments of Population in Judea, Samaria & Gaza, 1996*, Israel Central Bureau of Statistics, December 22, 1997 (internal report in Hebrew). Report available on reasonable request at [www.pademographics.com](http://www.pademographics.com).

<sup>23</sup> Palestine Ministry of Health, *Health Status in Palestine Annual Report 1996*, [www.moh.gov.ps](http://www.moh.gov.ps), accessed and downloaded August-November 2004. The report has since been removed from the Ministry of Health Website. It is available upon reasonable request at [www.pademographics.com](http://www.pademographics.com).

<sup>24</sup> Israel Central Bureau of Statistics, *Demographic Characteristics of the Arab Population in Judea, Samaria, and Gaza, 1968-1993*, No.1025 (July 1996); Julia Zemel, *Final Assessments of Population in Judea, Samaria & Gaza, 1996*; Palestine Ministry of Health, *Health Status in Palestine Annual Report 1996*. Israel maintained detailed records of the Arab population of the West Bank and Gaza until the formation of the Palestinian Authority. These responsibilities were transferred to the PA in Gaza in May 1994 and in the West Bank gradually, from the end of 1994 until the end of 1995. The ICBS' last official population report was issued for 1993. The ICBS produced internal estimates through the end of 1996. This study was able to obtain these reports for 1995 and 1996.

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<sup>25</sup> Palestine Central Bureau of Statistics, *Demographic Indicators of the Palestinian Territory, 1997–2015*. See Appendix A.

<sup>26</sup> Ibid.; Hassan Abu-Libdeh, *Census Coverage*, Palestinian Bureau of Statistics, November 30, 1998.

<sup>27</sup> Julia Zemel, *Final Assessments of Population in Judea, Samaria & Gaza, 1996*.

<sup>28</sup> Hassan Abu-Libdeh, *Census Coverage*, Final Results Section, Point 1.2. See Appendix C; Palestine Central Bureau of Statistics, *Palestinian Population Projections*, PowerPoint presentation at the Technion (Israel Institute of Technology), June 8, 2005, p.4.

<sup>29</sup> Israel Civil Administration, *The Judea and Samaria Region Until 2005*, Tel Aviv, December 1990, p.6, section 22.1. The survey was executed in 1989/90 (Hebrew).

<sup>30</sup> Israel Civil Administration, *The Gaza Region Until 2000*, Tel Aviv, April 1987, p.21 (Hebrew). The survey was executed in 1987.

<sup>31</sup> United Nations Department of Economic and Social Affairs, *Multilingual Demographic Dictionary*, Population Studies, No.29 (1958), English section. United Nations publication, Sales No. E.58.XIII.4. The total population of a country may comprise either all usual residents of the country (*de jure* population) or all persons present in the country (*de facto* population) at the time of the census. For purposes of international comparisons, the *de facto* definition is recommended.

<sup>32</sup> Hassan Abu-Libdeh, *Census Coverage*, November 30, 1998, Final Results Section, Point 1.2.

<sup>33</sup> See transcript of press conference held in Al-Birah, March 1998. Transcripts available in Arabic and Hebrew upon reasonable request at [www.pademographics.com](http://www.pademographics.com); Palestine Central Bureau of Statistics, *Background and Justifications*, in discussion of 1997 Census, [www.pcbs.org](http://www.pcbs.org), accessed June 2005.

<sup>34</sup> Palestine Central Election Commission, *Central Elections Commission (CEC) Registers Over 67% of Eligible Voters*, Press Release, October 14, 2004, <http://www.elections.ps/Press%20Kit%2014-10/Press%20Release%20-%20English.doc>. See Appendix F.

<sup>35</sup> Palestine Central Election Commission, *Central Elections Commission (CEC) Upcoming Presidential Elections: Facts and Statistics*, Press Release, January 8, 2005, see Appendix F.

<sup>36</sup> World Bank, *Developing the Occupied Territories: An Investment in Peace, Human Resources and Social Policy*, Vol.6 (1993), pp.5-10.

<sup>37</sup> Israel Central Bureau of Statistics published year-end figures. The ICBS December 1996 figure was updated by half a year to 2.135 Million using birth data from PA MOH and migration data from Israel Border Police. The PCBS backdated its December 9-10, 1997 Census data to a Mid-Year 1997 estimate of 2.783 Million. This figure compares differences between the ICBS report by Julia Zemel, *Final Assessments of Population in Judea, Samaria & Gaza, 1996*, and PCBS, *Demographic Indicators of the Palestinian Territory, 1997–2015*, 1998.

<sup>38</sup> Analysis of PA Central Elections Commission data provided in Appendix F.

<sup>39</sup> Bennett Zimmerman, Roberta Seid and Michael L. Wise, *Arab Population in the West Bank and Gaza*, January 10, 2005, Appendix C, pp.104-106,

www.pademographics.com; ICBS 1996 Pyramid, updated 11 Years to 2004, also included at www.pademographics.com.

<sup>40</sup> Israel Central Bureau of Statistics, *Demographic Characteristics of the Arab Population in Judea, Samaria, and Gaza, 1968-1993*; This study updates ICBS figures with PA Ministry of Health birth and death statistics, data from the Israel Border Police Computer Division for foreign migration and the Israel Ministry of Interior for internal migration. Population pyramids, and their updates, available at www.pademographics.com.

<sup>41</sup> Palestine Central Election Commission, *Central Elections Commission (CEC) Registers Over 67% of Eligible Voters*, Press Release, October 14 2004, Included in Appendix F.

<sup>42</sup> Israel Central Bureau of Statistics, *Demographic Characteristics of the Arab Population in Judea, Samaria, and Gaza, 1968-1993*, p.15.

<sup>43</sup> Palestine Central Bureau of Statistics, *Demographic Indicators of the Palestinian Territory, 1997–2015*. PCBS supplies Mid Year Population, Crude Birth Rate and Crude Death Rate for each year from 1997 through 2015. Figure 3.1 derives all births, deaths, and migration directly from these PCBS assumptions.

<sup>44</sup> Palestine Ministry of Health, *Health Status in Palestine Annual Reports*, www.moh.gov.ps, accessed August 2004-January 2005. Each year available, with annexes, from 1996 through 2003. The birth level reported in most recent reports was 669,000.

<sup>45</sup> Comparison of PCBS, *Demographic Indicators* and PA Ministry of Health, *Health Status in Palestine Annual Reports*. Appendix G also shows how births calculated with PCBS birth rates on top of a residents only base yields birth figures of 708,000 births from 1997 through 2003.

<sup>46</sup> Ibid.

<sup>47</sup> International Institute for Applied Systems Analysis (IIASA), *Population and Education Prospects in the Western Mediterranean Region (Jordan, Lebanon, Syria, the West Bank and the Gaza Strip)*, Interim Report, July 1997, IR-97-046, p.29.

<sup>48</sup> PA Ministry of Education & Higher Education, *Statistics About General Education in Palestine*, Report 2003-2004 and Report 2004-2005, www.mohe.gov.ps.

<sup>49</sup> Palestine Ministry of Health, *Health Status in Palestine Annual Reports*. Some earlier reports have been removed from the PA Ministry of Health website. All reports were downloaded and are available on reasonable research request at www.pademographics.com.

<sup>50</sup> Palestine Central Bureau of Statistics, *Demographic Indicators*; PA Ministry of Health, *Health Status in Palestine Annual Report 2002*.

<sup>51</sup> PA Ministry of Health, *Health Status in Palestine Annual Report 2003*.

<sup>52</sup> PCBS, *Demographic Indicators*; PA Ministry of Health, *Health Status in Palestine Annual Reports*; PA Ministry of Education, *Statistics About General Education in Palestine*.

<sup>53</sup> Palestine Ministry of Health, *Health Status in Palestine Annual Reports*. A comparison of each annual report to the population figures contained in the previous annual report shows that the population figures always matched the latest PCBS

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figures although the growth rates reported were always less than the change in population levels (i.e. the PA MOH would report approximate 2.5% growth while the overall population level might change 4-5% from the previous year's report).

<sup>54</sup> Palestine Ministry of Health, *Health Status in Palestine Annual Reports*. Birth levels contained in Annual Reports from 1996–1998 were raised in Annual Reports from 1999 and later years. Comparisons included in Appendix D.

<sup>55</sup> Comparison between PA Ministry of Health, *Health Status in Palestine Annual Report 1996*, Annex 2 and 3 and Palestine Central Bureau of Statistics, *Population by Age Groups in Years, Region, and Sex, 1997 Census*, www.pcbs.org, accessed August 21, 2004.

<sup>56</sup> 1996-1998 Births: Original Birth Levels reported in PA MOH, *Annual Reports 1996-1998*; 1999-2003 Births: Reported Births Levels in PA MOH, *Annual Reports 1999-2003*, Births Aligned to 1996-1998 Levels; See Appendix D for calculations.

<sup>57</sup> PA Ministry of Health growth rates as originally published: PA MOH, *Annual Reports*, 1996 data from 1996 Report, 1997 data from 1997 Report, etc.; restated levels: PA MOH, *Annual Report 2002*.

<sup>58</sup> Figure 3.1 shows PCBS Model Birth Rates applied to expanded population base; Appendix G shows PCBS Model Birth Rates applied to residents only population base.

<sup>59</sup> Latest reports from PA MOH, *Annual Reports* and PA Ministry of Education, *Statistics About General Education*.

<sup>60</sup> Comparison of Figure 5.1 and PCBS, *Demographic Indicators*.

<sup>61</sup> PA Ministry of Health, *Health Status in Palestine Annual Report 1999*.

<sup>62</sup> Israel Central Bureau of Statistics, *The Population in Judea & Samaria & Gaza, By Age and Sex, 1985-1993*, 1993, Tables 1 & 2, www.cbs.gov.il.

<sup>63</sup> Ibid.; PA MOH, *Health Status in Palestine Annual Report 1999*.

<sup>64</sup> Israel Central Bureau of Statistics, *Demographic Characteristics of the Arab Population in Judea, Samaria, and Gaza, 1968-1993*; Julia Zemel, *Final Assessments of Population in Judea, Samaria & Gaza, 1996*; Israel Civil Administration, *The Judea and Samaria Region Until 2005*; Israel Civil Administration, *The Gaza Region Until 2000*.

<sup>65</sup> Set #1: PCBS, *Demographic Indicators*; Set #2: PA MOH, *Annual Reports 1999–2003*; Set #3: PA MOH, *Annual Reports 1996-98* and Analysis in Appendix D.

<sup>66</sup> Palestine Central Bureau of Statistics, *Demographic Indicators of the Palestinian Territory, 1997–2015*. Figure 3.1 derives all births, deaths, and migration directly from these PCBS assumptions and Palestine Ministry of Health, *Health Status in Palestine Annual Reports*.

<sup>67</sup> Comparison of Figure 5.1 and data from Central Intelligence Agency, *The World Factbook 2004*.

<sup>68</sup> Israel Central Bureau of Statistics, *Demographic Characteristics of the Arab Population in Judea, Samaria and Gaza*, Publication #1025, July 1996.

<sup>69</sup> Israel Border Data: 1990–1993: Israel Central Bureau of Statistics, *Demographic Characteristics of the Arab Population in Judea, Samaria and Gaza*; 1994: Israel

Central Bureau of Statistics, *Annual Statistics Yearbook 1996*; 1995-2003: Israel Border Police Computer Division, Categories measured: IDs beginning in 9 (Gaza), 4 (West Bank) and 8 (eastern Jerusalem), New Registrants + Residents Returning – Residents Leaving, Border Crossings to Jordan, to Egypt and through Ben-Gurion Airport, Figures obtained by Israel Research Team Member Brig. Gen (Ret.) David Shahaf from Israel Border Police.

<sup>70</sup> Ibid; PCBS, *Demographic Indicators*; see Appendix E for year-by-year data.

<sup>71</sup> Ibid.

<sup>72</sup> PCBS, *Summary Statistics, Palestinian Territory, 1997–2015* revised/posted in March 2005, [www.pcbs.org](http://www.pcbs.org) or [www.pcbs.gov.ps](http://www.pcbs.gov.ps), accessed April 2, 2005. The Revised PCBS Model is included as Appendix B.

<sup>73</sup> Ibid.

<sup>74</sup> The data used in this study also included Palestinians who were newly registered as returning residents to the Territories such as the Palestinian leadership that arrived after the signing of the Oslo Peace Accords. (Appendix E summarizes the total activity for each year from 1990-2003.) This study was unable to quantify any significant unofficial immigration into the West Bank and Gaza.

<sup>75</sup> Uriya Shavit and Jalal Bana, 'The Secret Exodus – Palestinian Emigration', *Ha'aretz* (Magazine Section), October 5, 2001.

<sup>76</sup> FAFO, Norwegian Demographic Research Institute, November 2002.

<sup>77</sup> Khaled Abu Toameh, '80,000 Palestinians Emigrated from Territories Since Beginning of Year', *The Jerusalem Post*, August 27, 2002.

<sup>78</sup> Khaled Abu Toameh, 'Keep out the PA', *The Jerusalem Post*, September 11, 2004. "Thousands of families have begun moving back to Arab neighborhoods inside the capital's municipal boundaries like Shuafat, Beit Hanina, Wadi al-Joz and Ras al-Amud. Others have set their eyes on the adjacent Jewish neighborhoods off Neeveh Ya'acov, Pisgat Ze'ev, and French Hill."

<sup>79</sup> Israel Ministry of Interior Population Administration, *Presentation: Immigration and Absorption of Foreign Nationals in Israel*, p.9, November 2003.

<sup>80</sup> Israel Central Bureau of Statistics, *Total Population, By Religion and Population Group*, Table 2.1, [http://www1.cbs.gov.il/shnaton55/st02\\_01.pdf](http://www1.cbs.gov.il/shnaton55/st02_01.pdf). Analysis of data from 1993-2003.

<sup>81</sup> Ibid.

<sup>82</sup> Israel Ministry of Interior Population Administration, *Immigration and Absorption of Foreign Nationals in Israel*. Migration split even over each year from 1993–2003. Migration is often a multi-year process through family reunification applications.

<sup>83</sup> Arnon Soffer and Gil Shilo, *Implementation of the Palestinian 'Right of Return'*.

<sup>84</sup> Year-End 1996 Base: Julia Zemel, *Final Assessments of Population in Judea, Samaria & Gaza, 1996*, Israel Central Bureau of Statistics, December 22, 1997. (internal Report in Hebrew); Birth Set #3, see Endnote 57 and Appendix D; Deaths: see Endnote 65; Immigration/Emigration abroad: see Endnote 69; Migration to Israel: see Endnote 79.

<sup>85</sup> See Endnote 3.

<sup>86</sup> Ibid. The availability of ICBS end-year figures for 1996 and clean interim data available for each calendar year through the end of 2003 led to the choice of

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calendar year calculations. However, the study also calculated the results from mid-year 1997 to mid-year 2004 for comparison purposes with the PCBS, which reports mid-year figures. The mid-year 2004 estimates are slightly less precise as they adjusted data six months forward because direct data from January through July 2004 was not always available.

<sup>87</sup> Rationalization of original PCBS forecast, see Figure 3.1 for details, and the final model summarizing the results of this study. See Figure 4.1 for details. The final model in this study was built from begin-year 1997 to begin-year 2004. A mid-year model was also constructed from mid-year 1997 until mid-year 2004. See Endnote 29 for a discussion on the construction of the mid-year 1997 estimate. The PCBS constructs mid-year models. A begin-year 2004 PCBS estimate was calculated as the average of mid-year 2003 and 2004.

<sup>88</sup> PCBS, *Demographic Indicators 1997–2015*, difference between 2005 and 2004. See Appendix A for detailed data on each year from 1997 through 2015.

<sup>89</sup> Population growth recorded in 2003. See final model provided in Figure 4.1 for details. The last year showed 81,000 persons natural growth. Net emigration and internal migration to Israel totaled 27,000 for 2003 netting overall growth of 54,000 for 2003.

<sup>90</sup> When the results of the study were originally released on January 10, 2005, the differences between the PCBS estimates and the study's calculations were over 1.42 million for 2004. By publication, and through conservative choices regarding internal migration, the difference dropped slightly to 1.34 million. By the time this study was released in 2005, the gap had grown to just under 1.5 million persons. References to original PCBS forecast continue unabated, despite the PCBS' recent reductions. Joseph A. D'Agostino, *Israel's Demographic Geopolitics*, Population Research Institute Weekly Briefing, Vol. 7, No.33 (August 25, 2005).

<sup>91</sup> PCBS, *Population by Age Groups in Years, Region, and Sex, 1997 Census*, [www.pcbs.org/phc\\_97/popu.aspx](http://www.pcbs.org/phc_97/popu.aspx), accessed August 21, 2004.

<sup>92</sup> UNRWA, *Report of the Commissioner-General of the United Nations Relief and Works Agency for Palestine Refugees in the Near East, 1 July 2004–30 June 2005*, Table 1, Number of Registered Persons, p.68.

<sup>93</sup> *Ibid.*, p.17.

<sup>94</sup> PCBS, *Demographic Indicators and Population by Age Groups in Years, Region, and Sex, 1997 Census*.

<sup>95</sup> Figure 5.1 uses the data from Figure 4.1 to express the percentage change in all growth factors for each year from 1997–2003.

<sup>96</sup> Figure 3.1 shows PCBS Model birth rates applied to an expanded population base; Appendix G shows PCBS Model birth rates applied to a residents only population base.

<sup>97</sup> PCBS, *Demographic Indicators 1997-2015* and Figure 5.1, Comparison of rates from PCBS Model and rates measured in this study.

<sup>98</sup> *Ibid.*

<sup>99</sup> Presentation by Mr. Luay Shabaneh, Director of the Palestine Central Bureau of Statistics. *Palestinian Population in the West Bank and Gaza – Current Situation*

*and Future Projections*. The associated PowerPoint presentation given to participants at the seminar was entitled *Palestinian Population Projections*, June 8, 2005, Slide 5.

<sup>100</sup> PCBS, *Demographic and Health Survey 2004*, Press Release, October 28, 2004, [www.palestine-pmc.com/details.asp?cat=2&id=749](http://www.palestine-pmc.com/details.asp?cat=2&id=749).

<sup>101</sup> Presentation by Mr. Luay Shabaneh, Director of the Palestine Central Bureau of Statistics. *Palestinian Population in the West Bank and Gaza – Current Situation and Future Projections*. The associated PowerPoint presentation given to participants at the seminar was entitled *Palestinian Population Projections*, June 8, 2005, Slide 5.

<sup>102</sup> Palestine Ministry of Health, *Health Status in Palestine Annual Reports*.

<sup>103</sup> PCBS, *Demographic and Health Survey 2004*, Press Release, October 28, 2004, [www.palestine-pmc.com](http://www.palestine-pmc.com); Palestine Ministry of Health, *Health Status in Palestine Annual Report 2003*, Annex 13, [www.moh.gov.ps](http://www.moh.gov.ps), accessed November 2004.

<sup>104</sup> The Total Fertility Rate (TFR) calculation divides the absolute number of births by the number of childbearing women in a given population cohort. Adding these results up for all age cohorts (all cohorts that correspond to women of childbearing age) results in a TFR, or the expected number of children a woman can be expected to have over her childbearing lifetime if birth rates remain the same. As the PA Ministry of Health inputs population statistics provided directly by the PCBS, it can be expected that their fertility rate calculations will rise once they adjust the childbearing population to actual residents only.

<sup>105</sup> Conversely, if the PA Ministry of Health augmented birth statistics to include registrations of births for those living abroad or in Israel, the TFR calculations would have to be adjusted downward. The study does not use TFR calculations at all, and only uses the absolute birth figures released by the PA Ministry of Health. The TFR rates, high or low, do not impact the population calculations in the study results.

<sup>106</sup> UNRWA, *General of the United Nations Relief and Works Agency for Palestine Refugees in the Near East, 1 July 2004–30 June 2005*, Table 6, Selected health-status indicators for Palestine refugees, p.73.

<sup>107</sup> Endnotes 99–103.

<sup>108</sup> United Nations Economics and Social Affairs, Population Division, *World Population Database, Jordan Country Profile*, <http://esa.un.org/unpp/p2k0data.asp>, accessed December 2004. Benchmark model data provided in Appendix H.

<sup>109</sup> Israel Central Bureau of Statistics, *Total Population, By Religion and Population Group*, Table 2.1, [http://www1.cbs.gov.il/shnaton55/st02\\_01.pdf](http://www1.cbs.gov.il/shnaton55/st02_01.pdf). Benchmark model data provided in Appendix H.

<sup>110</sup> *Ibid.* Also includes final population calculations as summarized in Figures 4.1 Table uses ICBS figures for all groups 1967–1995. After 1995: Israeli Jews and Israeli Arabs from ICBS data. West Bank and Gaza Arabs data relies on the conclusions of this study.

<sup>111</sup> On June 8, 2005 the Technion's Neaman Institute for Advanced Studies of Science and Technology held a seminar, 'Demographic Perspectives of the Israeli-Palestinian Relationship'. The program included a presentation of this study, *Arab Population in the West Bank and Gaza* by Bennett Zimmerman, a presentation by

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Dr. Ahmed Hleihel of the ICBS, *Demographic Trends in Israel*, a presentation by Dr. Yitzhak Ravid, *Israel Demographic Environment*, and a presentation by Mr. Luay Shabaneh, Director of the Palestine Central Bureau of Statistics, *Palestinian Population in the West Bank and Gaza – Current Situation and Future Projections*. The associated PowerPoint presentation given to participants at the seminar was entitled *Palestinian Population Projections*, dated June 8, 2005.

<sup>112</sup> PCBS, *Palestinian Population Projections*, Slide 37.

<sup>113</sup> PCBS, *Summary Statistics, Palestinian Territory 1997-2015*. PCBS supplies Mid Year Population, Crude Birth Rate and Crude Death Rate for each year from 1997 through 2015. Figure 6.1 derives all births, deaths, and migration directly from these PCBS assumptions. As PCBS publishes rates, absolute figures are subject to slight rounding errors of 1,000–2,000.

<sup>114</sup> *Ibid.*, Slide 40.

<sup>115</sup> ICBS, *Statistical Abstract of Israel 2004*, Section 2 Population, National Population Estimates, [www.cbs.gov.il](http://www.cbs.gov.il), Definitions: *De jure* population includes ‘...those who had been out of the country less than one year’. *De facto* population includes ‘...the permanent (de jure) population...staying in Israel or in Jewish localities in Judea, Samaria and the Gaza area on the date of the estimate’.

<sup>116</sup> PCBS, *Palestinian Population Projections*, Slide 40; Mr. Shabaneh defends the practice of including overseas residents as those “who have the right to return immediately as defined by the Oslo Declaration of Principles”; also, see Appendix C for expanded PCBS definition of de facto census to include individuals living abroad.

<sup>117</sup> *Ibid.*, Slide 30.

<sup>118</sup> *Ibid.*, Slides 15–29 of a 48-slide presentation criticize the computation of fertility statistics published by the PA Ministry of Health. Ironically, the latest information on registered births in the PA only highlighted the greater gap between the new data and the birth levels included in the latest PA Forecasts as included in Slide 13.

<sup>119</sup> *Ibid.*, Slide 29.

<sup>120</sup> *Ibid.*, Slides 26 & 27.

<sup>121</sup> PCBS, *Summary Statistics, Palestinian Territory 1997-2015*, [www.pcbs.gov.ps](http://www.pcbs.gov.ps), accessed April 2, 2005. Included as Appendix B. See Figure 6.1 for computation of births in Revised PCBS Model. The computation of births from the latest PCBS population model is simple and non-controversial. The PCBS provides the following figures: Crude Birth Rates, Crude Death Rates, Migration Rates, Mid-Year Population Each Year, Ending Population Each Year. These figures provide enough information for straightforward calculation of births, deaths, and migration figures included in the PCBS model.

<sup>122</sup> *Ibid.*; identical to Slide 13 of PCBS, *Palestinian Population Projections*; Appendix G also shows how births calculated with PCBS birth rates from their latest model on top of a residents only base yields birth figures similar to low PA Ministry of Health birth levels and Registered Births presented by PCBS on June 8, 2005.



<sup>123</sup> PCBS, *Palestinian Population Projections*, Slide 38, 'PCBS welcomes receiving immigration data from the Israeli authorities; borders (sic.) is not under our control, I urge and expect the researchers to make an appeal for Israeli authorities to handover immigration data to PCBS'.

<sup>124</sup> Set #1: PCBS, *Demographic Indicators*; Set #2: PA MOH, *Annual Reports 1999–2003*; Set #3: PA MOH, *Annual Reports 1996-98 and Analysis* in Appendix D; Set #4: PCBS, *Summary Statistics, Palestinian Territory 1997-2015*, Included as Appendix B; Set #5: PCBS, *Palestinian Population Projections*, Slides 26 & 27; Set #6: see Appendix G.

<sup>cxxv</sup> *Ibid.*, Slides 34 & 35.

<sup>cxxvi</sup> Palestine Central Elections Commission, *Central Elections Commission (CEC) Upcoming Presidential Elections: Facts and Statistics*, Press Release, January 8, 2005, Included in Appendix F; Palestine Central Elections Commission, *Focus on Elections in East Jerusalem*, Press Release, January 6, 2005. Included in Appendix F.

<sup>cxxvii</sup> PA Central Elections Commission, *Central Elections Commission (CEC) Registers Over 67% of Eligible Voters*, Press Release, October 14, 2004, <http://www.elections.ps/Press%20Kit%2014-10/Press%20Release%20-%20English.doc>. Included in Appendix F.

<sup>cxxviii</sup> Source data and calculation included in Appendix F.

<sup>cxxix</sup> UNRWA, *General of the United Nations Relief and Works Agency for Palestine Refugees in the Near East*, 1 July 2004–30 June 2005, p.16.