

Expert Group Meeting on Evaluation of Population Census data in the Arab Countries

Evaluation of Census data – GCC examples

Nancy McBeth
GCC-Stat



حاصل علي شهادة الأيزو 27001
في أمن المعلومات

2015 – 2020 GCC Statistical Strategy

- Assembly and Production of Statistics
- Harmonisation of statistics across GCC consistent with contemporary international standards
- Increase Statistical Capacity in GCC countries

Building a sustainable GCC statistical system and partnership between GCC-Stat and the National Statistical Offices

14
**Harmonised
Projects**

Including

- Labour Statistics
- 2020 Harmonised Register based Census



Introduction

GCC-Stat Regional Workshop on Evaluation Preparations for Census Data, 2019

included examples of Evaluation of previous census data

- Population Cohort Analysis - Kuwait
- Age Sex Structure- Kuwait
- Census and Vitals Data - Bahrain

GCC Countries – rely on Demographic and other analysis – as no Post Enumeration surveys



Population Cohort Analysis - Kuwait



Kuwait Census Cohort Analysis

- **Kuwait Census Age/ Sex data** ¹
 - 1995
 - 2005
 - 2011

Citizens and Non-citizens
- **Analysis - Kuwaiti Citizens Only**
 - No allowance for Deaths or Migration

1 Kuwait Central Bureau of Statistics, Annual Statistical Abstract, 2014



Kuwait Citizens 1995 -2011



Birth cohort	1995			2005			2011		
	Age Group	Male	Female	Age Group	Male	Female	Age Group	Male	Female
							0-4	74876	71425
				0-4	59349	55874	5-9	67745	65569
				5-9	60713	56447	10-14	64670	61286
1990-1994	0-4	55281	52075	10-14	56307	52961	15-19	60618	58477
1985-1989	5-9	49883	48300	15-19	49908	48294	20-24	53029	51268
1980-1984	10-14	42751	41257	20-24	40363	39596	25-29	43074	42993
1975-1979	15-19	35916	35256	25-29	31071	33425	30-34	35531	37220
1970-1974	20-24	30692	29879	30-34	27294	30291	35-39	31674	34245
1965-1969	25-29	25893	25415	35-39	24481	27564	40-44	28540	31113
1960-1964	30-34	20997	21503	40-44	20827	23616	45-49	24444	26689
1955-1959	35-39	15758	18620	45-49	15727	19912	50-54	17958	21358
1950-1954	40-44	12039	14896	50-54	11827	15144	55-59	13365	16525
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1944 and earlier	50+	27720	27421	60+	14726	11541	65+	16812	19211



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Kuwait Sex/Age Structure



Kuwait Age Sex Structure

- **Kuwait Census Age/ Sex data** ¹

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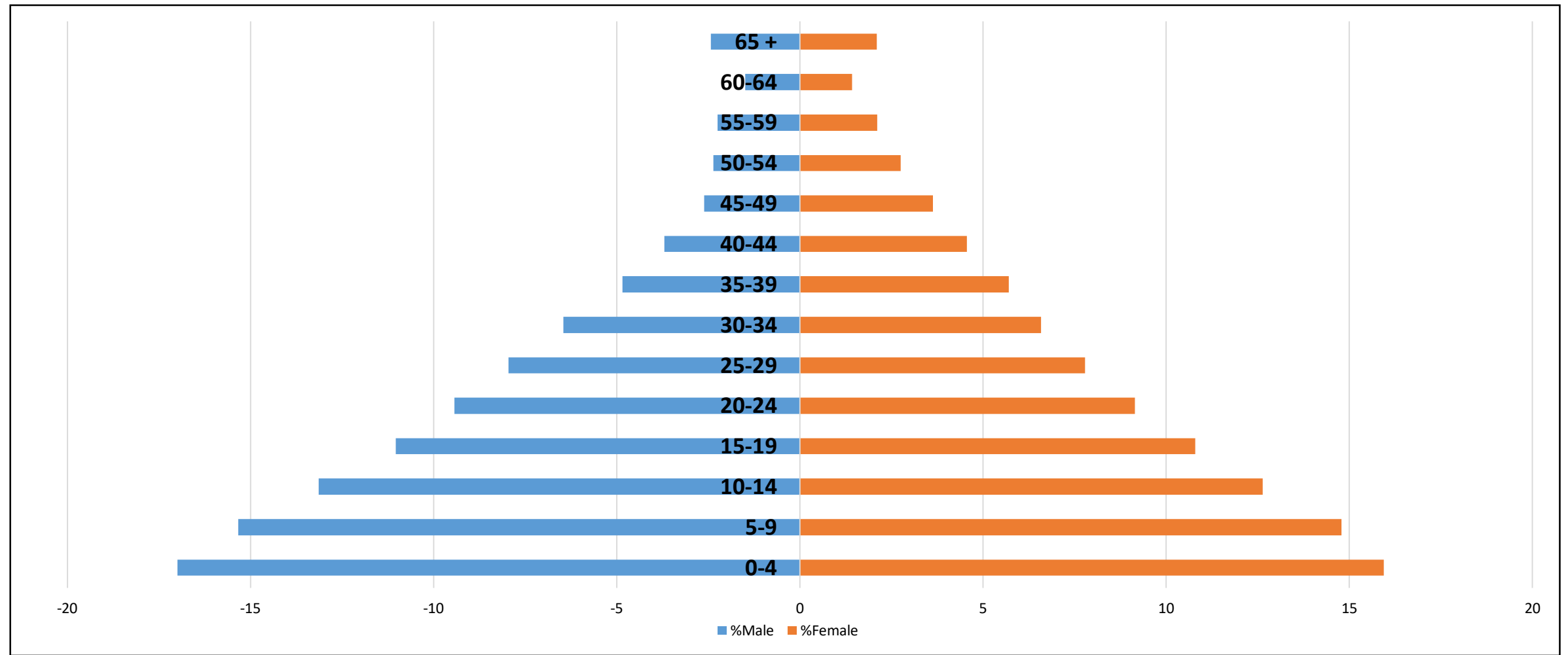
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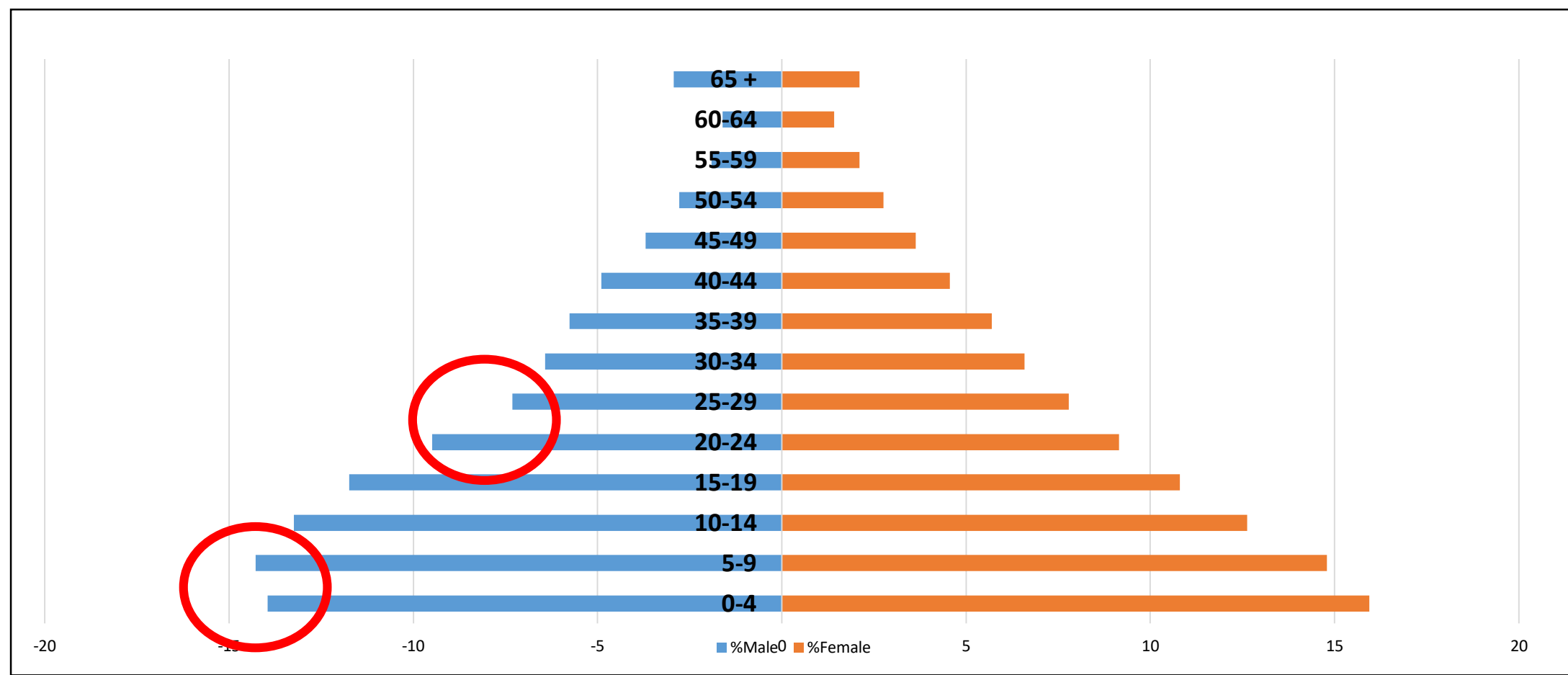


Kuwait 1995 Age-Sex Pyramid



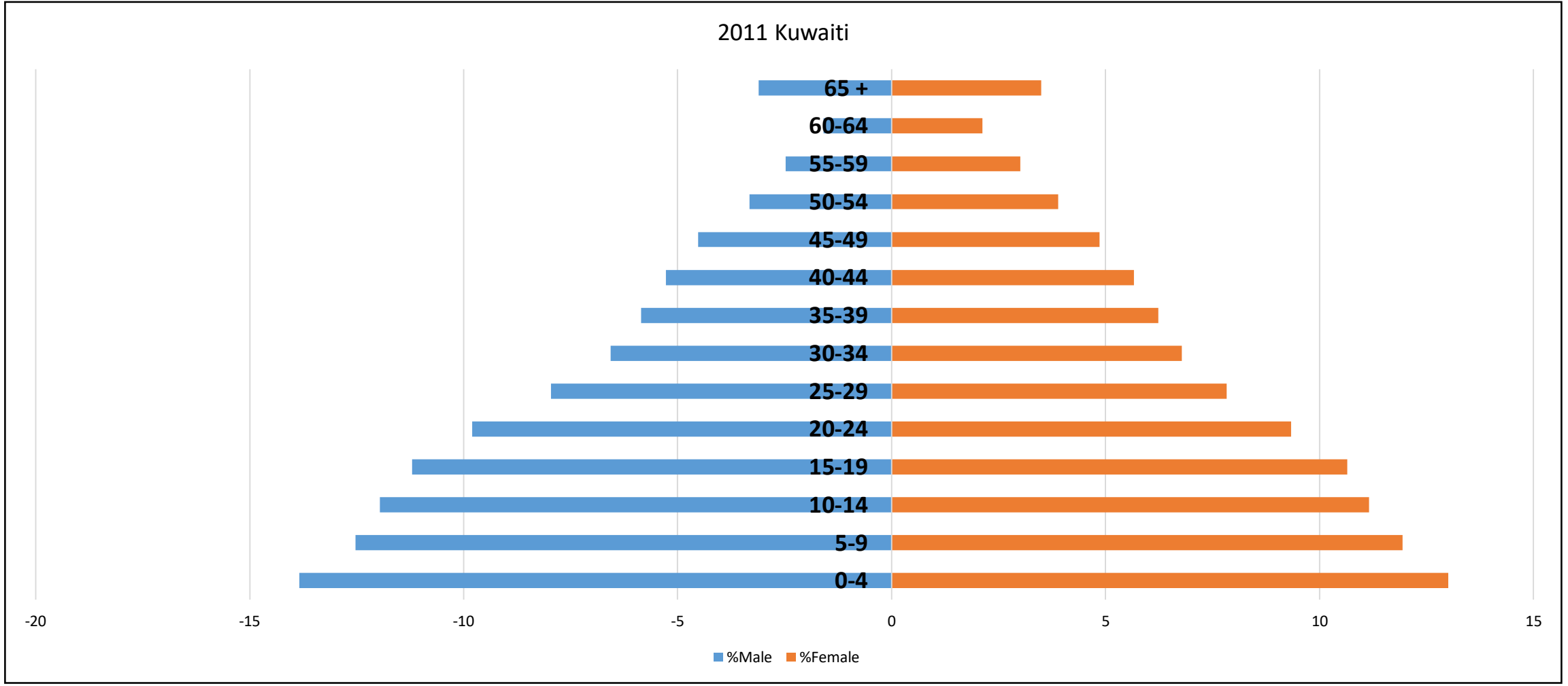


Kuwaiti 2005 Age –Sex Pyramid

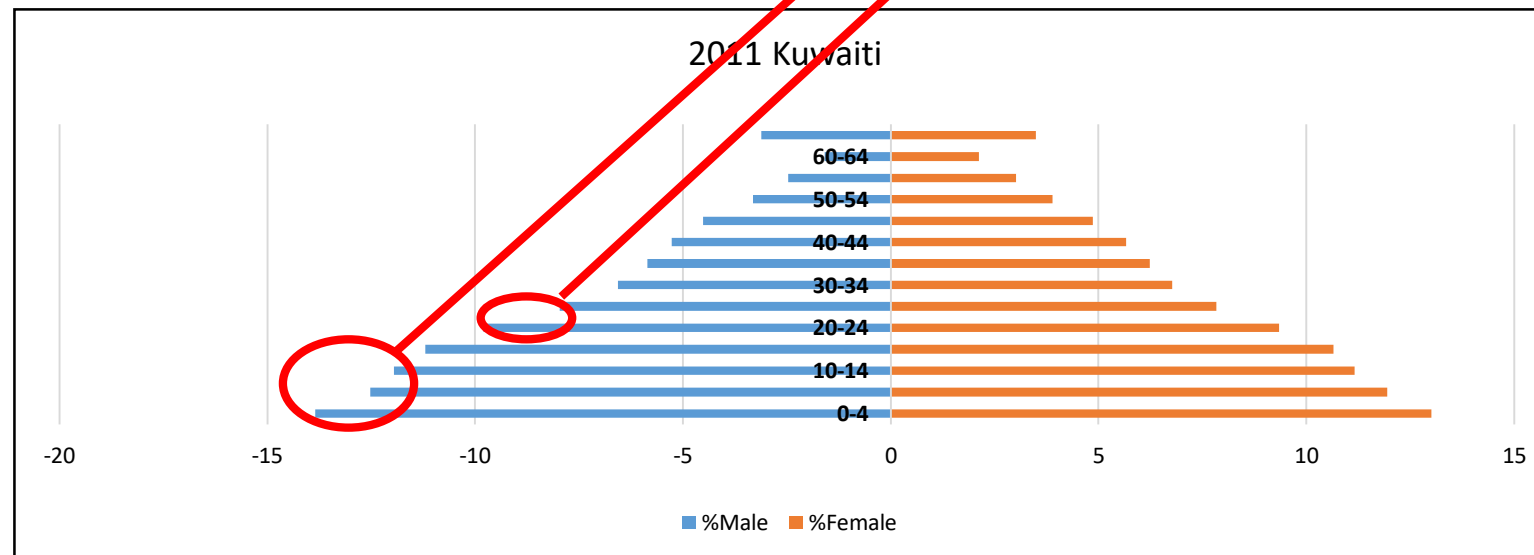
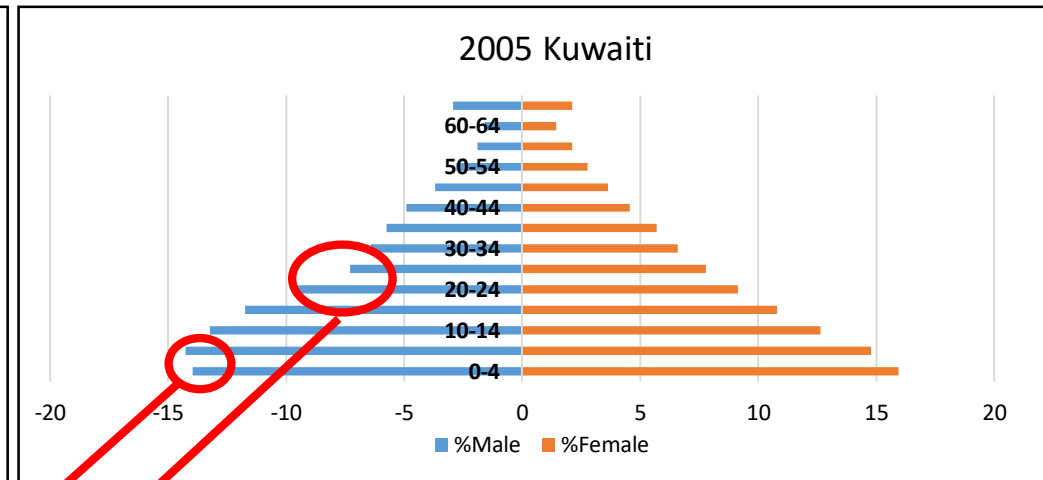
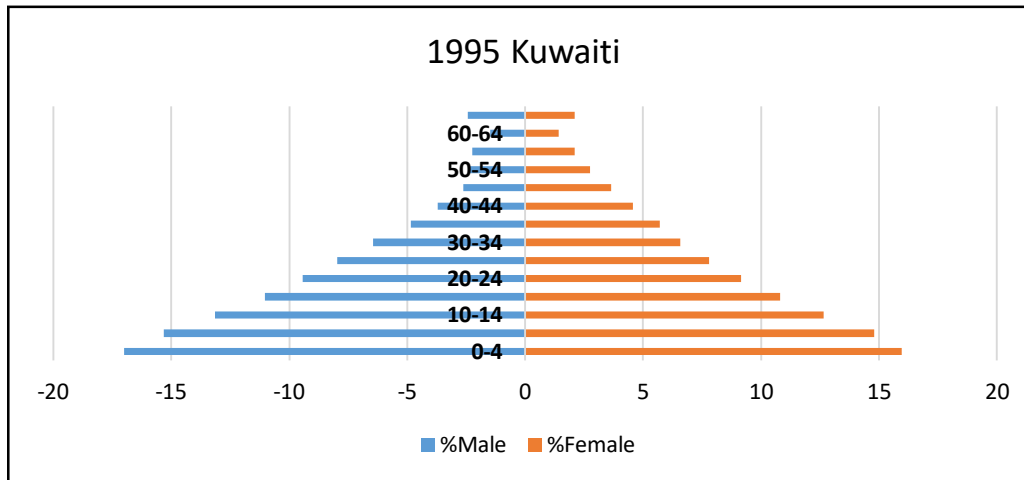




Kuwaiti 2011 Age –Sex Pyramid



Kuwait Age- Sex Structure 1995 – 2011



- Possible quality problems
 - Undercount of male Kuwaiti (0-5) in 2005
 - Possible undercount male Kuwaiti (20-24) in 2005, 2011
 - Increase in female Kuwaiti (25- 44) between 1995- 2005, 2005 - 2011
- Differences between 1995 and 2011 not explained by demographic factors
 - Social factors (eg Citizenship for Bidoons, Citizenship for non-Kuwaiti brides) may explain
 - But maybe there are others.. BUT CURRENTLY **limited METADATA**



Comparing Census and Vitals Data - Bahrain, 2001



Comparing Population aged Census Population aged less than one year, and Vital Statistics



Population under 1 year of age - 2001 Census
Birth and Deaths - 2000, 2001²

Citizens and Non-citizens

Hypothesis: Count of children with age less than one year, should be similar to Births recorded in Vital Statistics, allowing for Infant Deaths

Definitions

Infant Deaths – Deaths under 1 year of age

2. Sources <http://www.data.gov.bh/en/ResourceCenter>
2001 Census - Census 2001 Part One
Vitals – Birth and Deaths 2009



Babies in Bahrain, 2001

	2001 Census Children less than 1 year		
	Bahraini	Non-Bahraini	Total
Male	4,767	1,191	5,958
Female	4420	1,033	5,453
Total	9,187	2,224	11,411

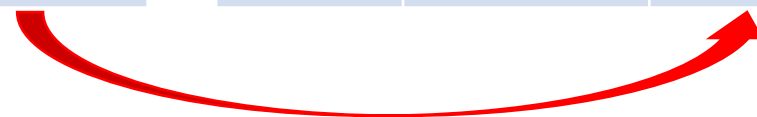
Vital Statistics Births – Infant Deaths					
2000			2001		
Bahraini	Non-Bahraini	Total	Bahraini	Non-Bahraini	Total
5,522	1,449	7,038	5,329	1,534	6,863
5,343	1,516	6,792	5,028	1,460	6,488
10,865	2,965	13,830	10,357	2,994	13,351



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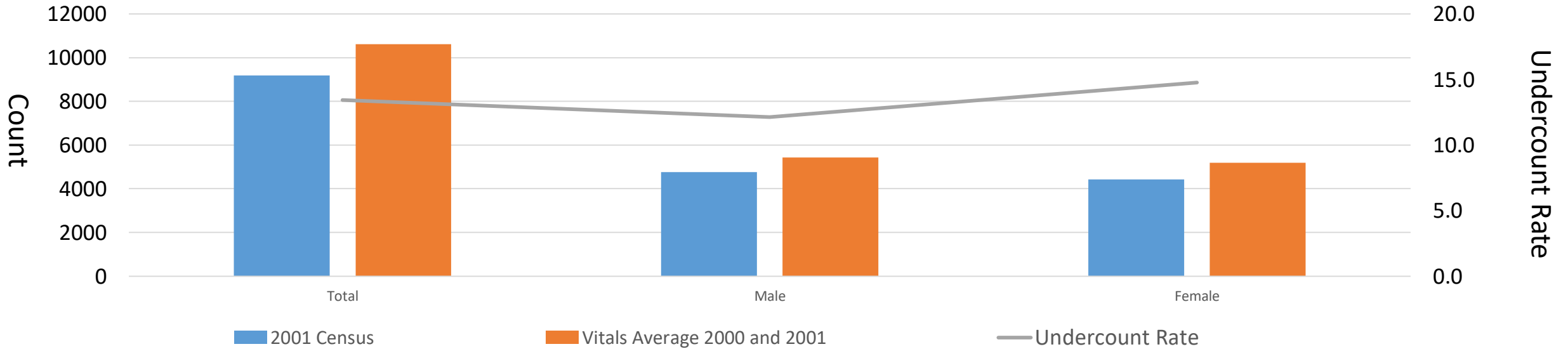




Bahraini babies, 2001

$$\text{Undercount} = (\text{Vitals Average} - \text{Census count}) / \text{Vitals Average}$$

Undercount among Bahraini babies, 2001 Census



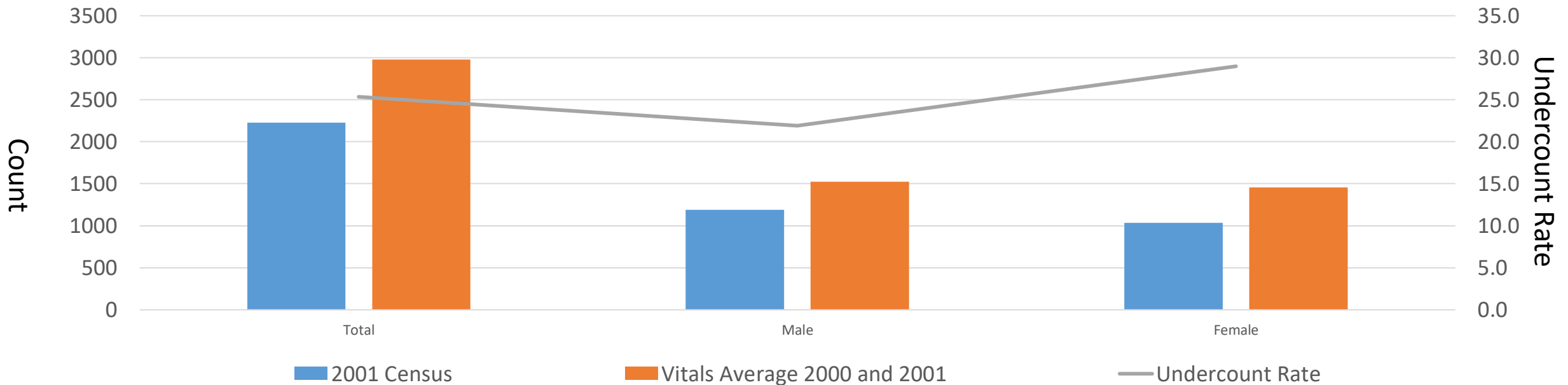
Overall Undercount - around 13 % - with 15 % for girl babies, 12 % for boy babies



Non- Bahraini babies 2001

$$\text{Undercount} = (\text{Vitals Average} - \text{Census count}) / \text{Vitals Average}$$

Undercount among non-Bahraini babies, 2001 Census



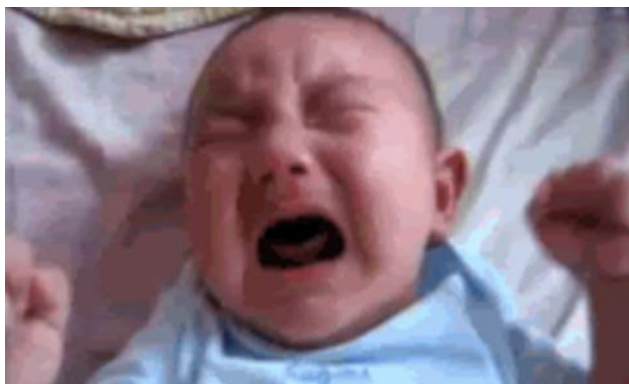
Overall undercount - 25% overall. 29% for girl babies, 22% for boy babies

Summary of Undercount Rates, Bahrain 2001



	Bahraini (Citizens)	Non-Bahraini
Overall	13%	25%
Girl Babies	15%	29%
Boy Babies	12%	22%

Undercount = (Vitals Average – Census count)/Vitals Average



Babies in Census

Traditional area of undercount in
Census easily missed /easily
forgotten

Reasons for differences - ??

- Different eligibility rules between Census and
Vitals

E.g. Babies recorded in Vitals not living in Bahrain
at Census time.

(Bahraini parents, living outside of Bahrain; non-
Bahraini mothers and babies who returned to
home country after birth)

Census Methodology

De Facto Census in 2011

Limited Metadata

Examples from GCC-Stat Regional Workshop on Evaluation Preparations for Census Data, 2019 designed to help GCC countries in preparation for 2020 Census

Analysis based on published data

Not criticism of any country – aim to is to find lessons for all

Undercount and Quality measures reliant on Demographic Analysis.

Examples highlight

- importance of Metadata
- Need to understand quality of previous data – when doing comparisons



4 8 18 9
5 5 7 7
1 2 5 6 9 4
6 6 9 4
7 7
3 4



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