

# Differential Fertility in Australia



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# **The study of differential fertility**

**Seeks to highlight differences in the levels and patterns of fertility between discrete subgroups of a population**

# Differentials examined

- **Marital status and living arrangement**
- **Education**
- **Labour force attachment**
- **Urban-rural residence**
- **Religion**
- **Parent status (partnered or lone parent)**
- **Birthplace**
- **Generation (main migrant groups)**

# Data source and measures

## Source:

**1996 Australian Census data on children ever born alive (CEB) to women aged 15 or older**

## Measures:

- **Mean CEB for five-year age groups**
- **Age-standardized mean CEB (ages 15+)**
- **Age/marital status-standardized mean CEB**

# Standardizations

- **Standard population - total Australian females aged 15+, except for birthplace and generation comparisons, where it is Australia-BORN females aged 15+**
- **Differences in standardized mean CEB reflect differences in the TIMING of fertility as well as in its LEVEL - if two populations have the same completed fertility, but one has its children younger, it will have higher standardized mean CEB**

# Data shortcomings #1

- **Significant numbers of women for whom CEB not stated. Reasons include:**
  - **Yet to commence sexual or childbearing careers - question ignored as irrelevant (perhaps by parent informant)**
  - **Childbearing days in distant past - question ignored as irrelevant**
  - **Question deemed intrusive**
  - **Informant unaware of CEB (e.g. responding on behalf of infirm older woman)**

# Reflecting these factors

- Percentages not stating CEB 1996
  - Age 15 - 16.6%
  - Age 20 - 6.5%
  - Ages 32-49 - <4.0%
  - Age 60 - 6.3%
  - Age 70 - 9.8%
  - Age 80 - 14.6%
  - Age 89 - 20.8%

# Assumption #1

- **That in any five-year age group, the distribution by number of CEB of women who failed to state CEB was identical to that of women who DID state CEB**

## Data shortcomings #2

- **Women are classified as having 0, 1, 2, 3, 4, 5 or 6+ CEB.**
- **How should the '6+' category be treated when calculating mean CEB?**

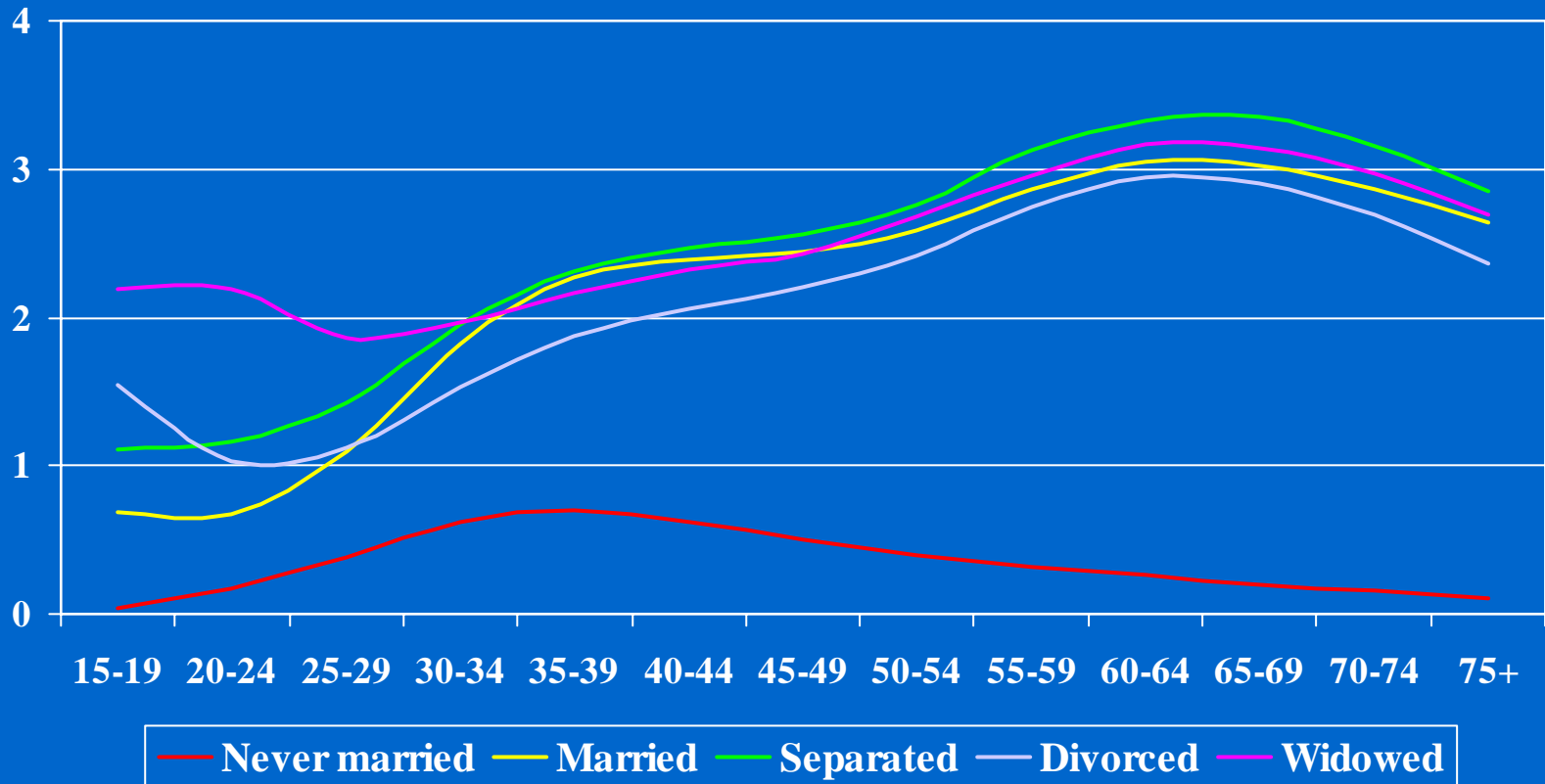
## Assumption #2

- **1986 Census data (more detailed) show women with 6+ CEB averaged 7.16 CEB**
- **This average likely, if anything, to have declined 1986-96**
- **Thus, women with 6+ CEB in 1996 were assumed to have 7 CEB**

# Mean CEB by marital status

	Mean CEB	Standardized mean CEB	Standardized index
Never married	0.258	0.379	21
Married	2.306	2.040	113
Separated	2.359	2.272	126
Divorced	2.185	1.966	109
Widowed	2.823	2.408	133
<b>TOTAL</b>	<b>1.805</b>	<b>1.805</b>	<b>100</b>

# Age-specific mean CEB by marital status



# Mean CEB by marital and de facto status

	Mean CEB	Std mean CEB	Std index
<b>Never married</b>			
De facto	0.713	0.909	50
Not de facto	0.184	0.305	17
<b>Married</b>			
De facto	2.132	2.173	120
Not de facto	2.306	2.039	113
<b>Separated</b>			
De facto	2.196	2.235	124
Not de facto	2.376	2.276	126
<b>Divorced</b>			
De facto	1.992	1.912	106
Not de facto	2.230	1.964	109
<b>Widowed</b>			
De facto	2.631	2.214	123
Not de facto	2.826	2.416	134
<b>TOTAL</b>	<b>1.805</b>	<b>1.805</b>	<b>100</b>

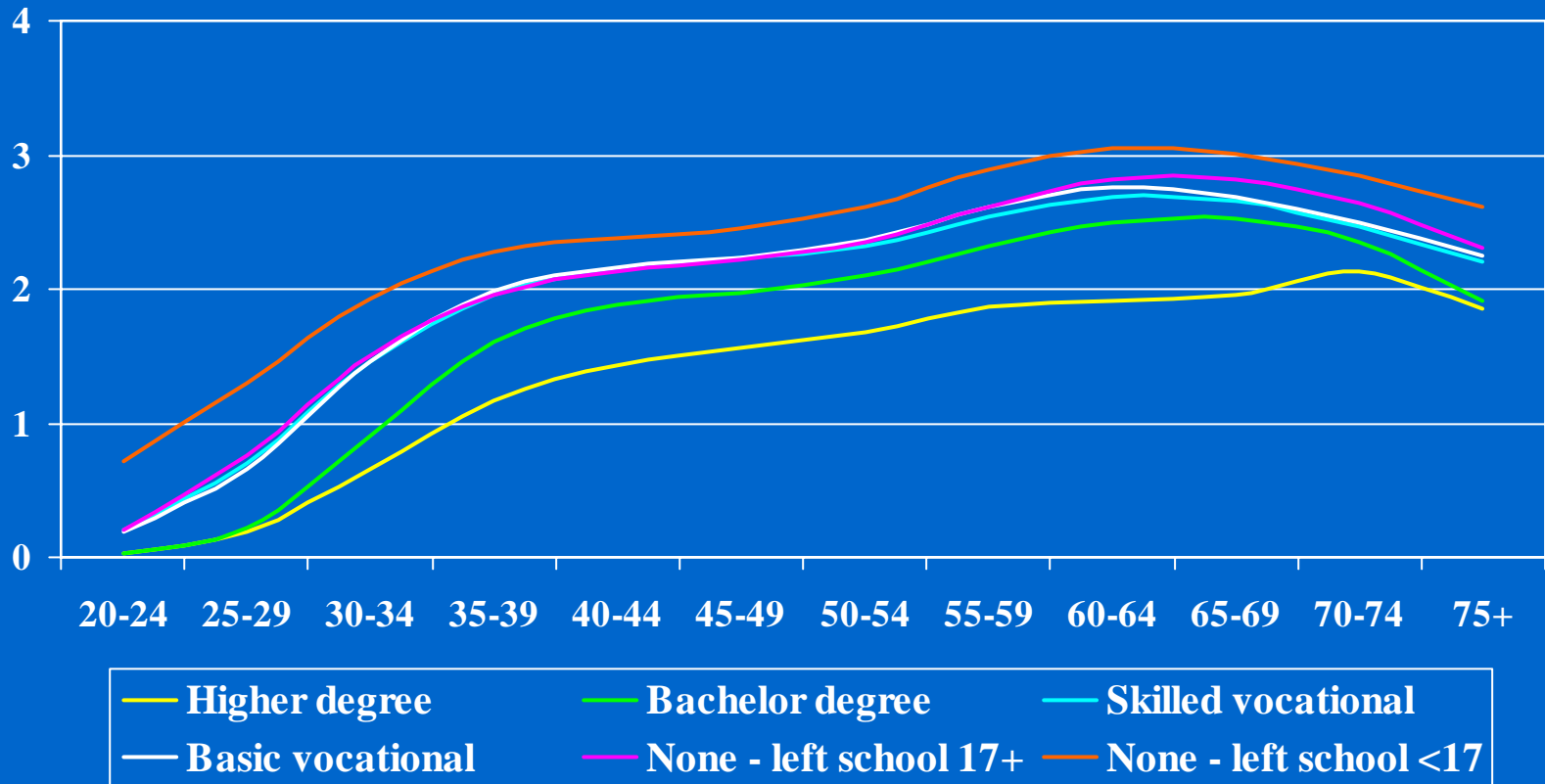
# Mean CEB: younger 'married' women

Age	In de facto union	Not in de facto union
20-24	1.207	0.671
25-29	1.760	1.096
30-34	2.070	1.821

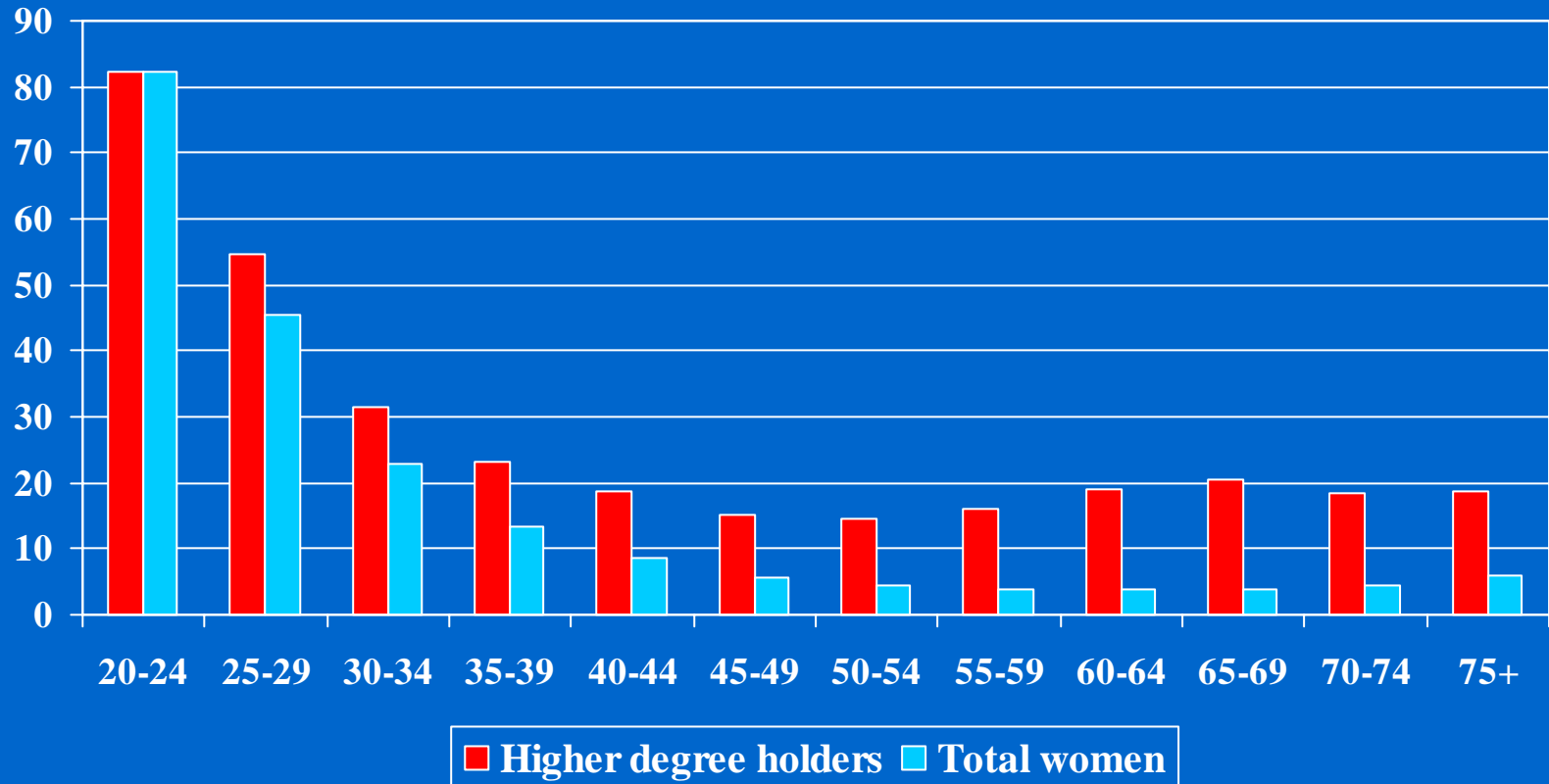
# Mean CEB by education level

Highest post-school qualification	Mean CEB	Age-std mean CEB	Std index	Age/ms-std mean CEB	Std index
Higher degree	1.239	1.224	68	1.372	76
Postgraduate diploma	1.472	1.420	79	1.535	85
Bachelor degree	1.167	1.405	78	1.495	83
Undergraduate diploma	1.863	1.636	91	1.666	92
Associate diploma	1.235	1.536	85	1.622	90
Skilled vocational	1.591	1.676	93	1.643	91
Basic vocational	1.550	1.687	93	1.690	94
Qualification not stated	1.902	1.784	99	1.774	98
None					
Left school aged 17+	1.208	1.714	95	1.721	95
Left school aged <17	2.342	2.033	113	2.003	111
No schooling	3.236	2.421	134	2.470	137
<b>TOTAL</b>	<b>1.805</b>	<b>1.805</b>	<b>100</b>	<b>1.805</b>	<b>100</b>

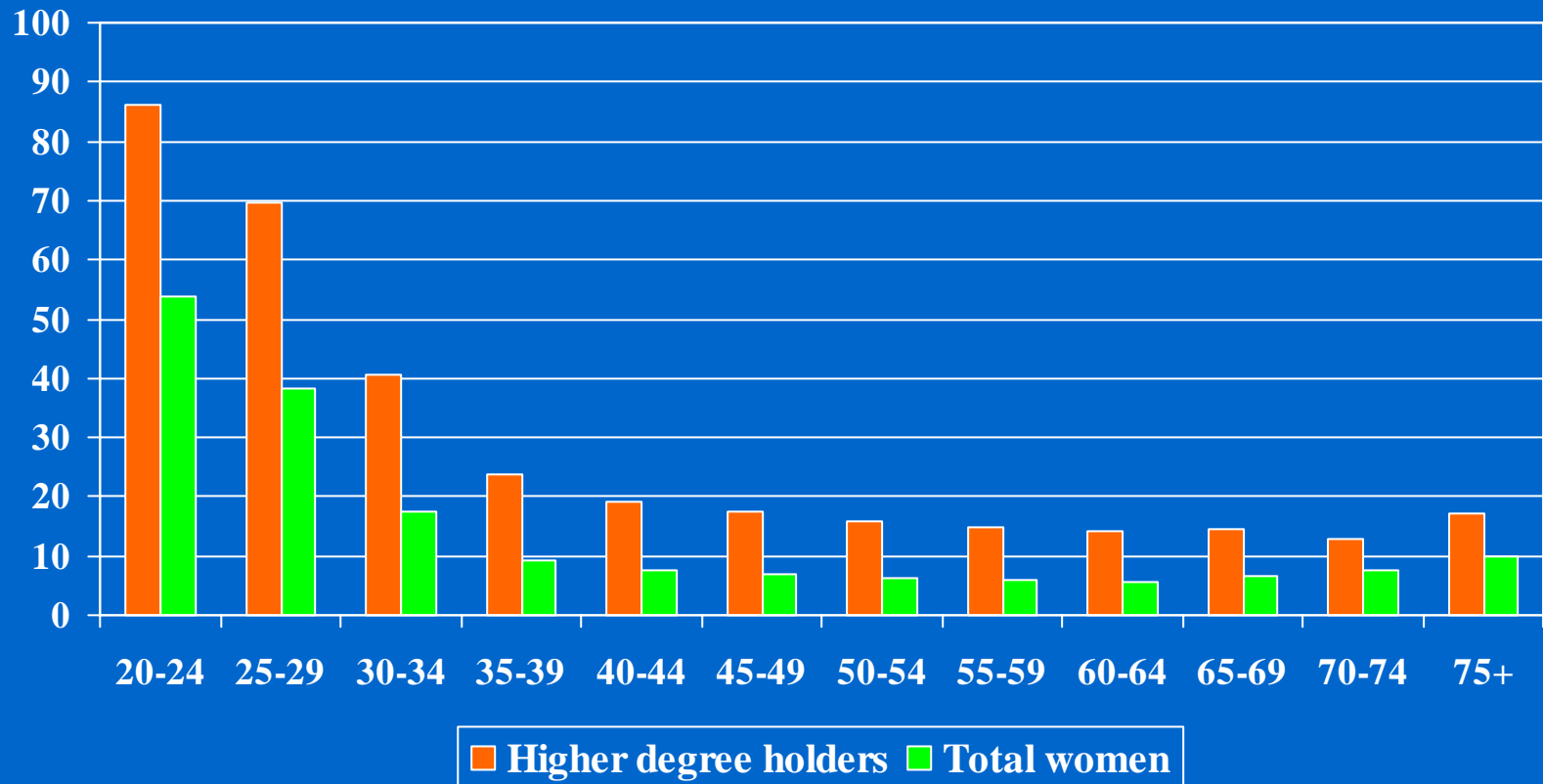
# Age-specific mean CEB by education level



# Age-specific percentages never married



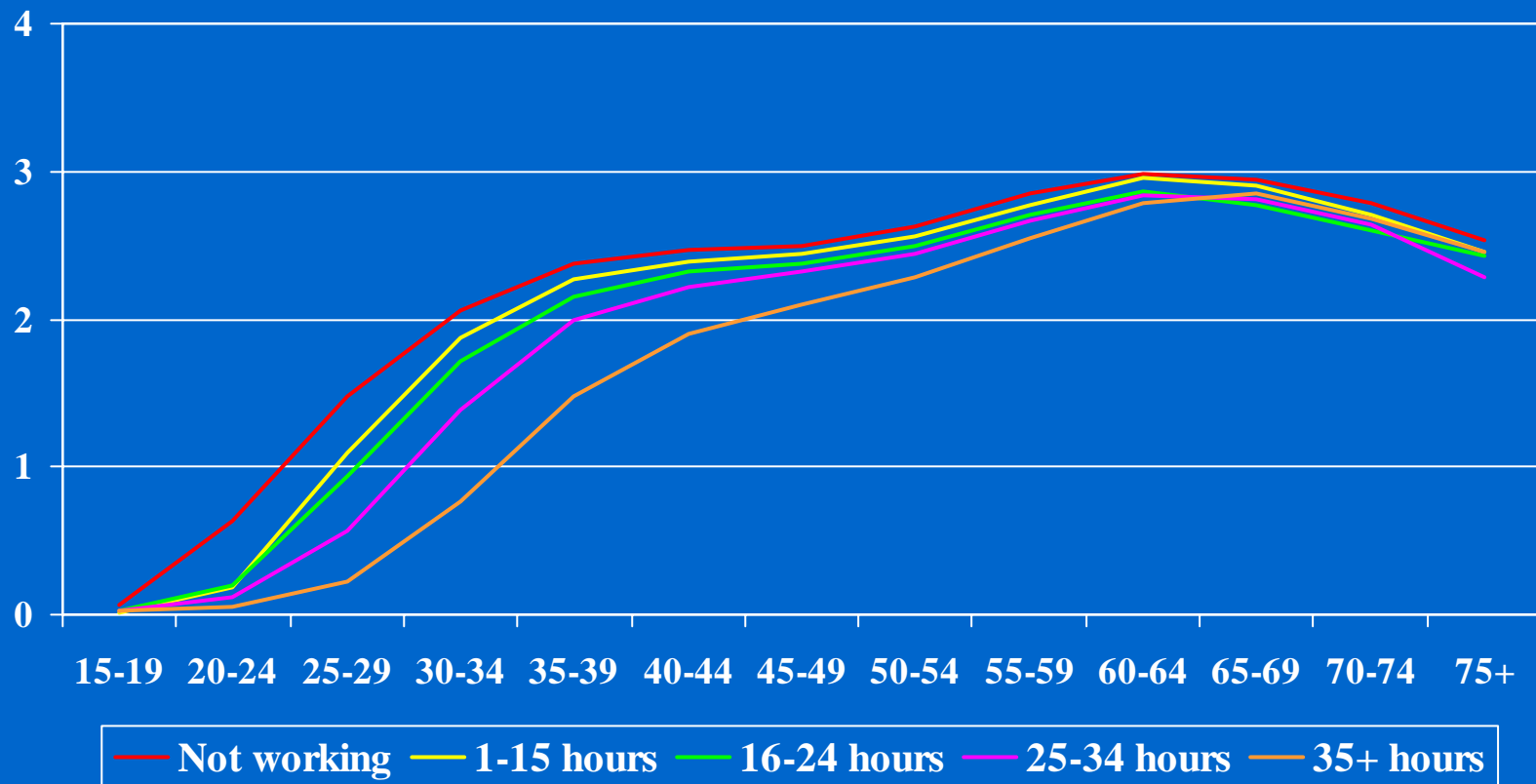
## Married women: age-specific percentages childless



# Mean CEB by labour force commitment

Labour force commitment	Mean CEB	Age-std mean CEB	Std index	Age/ms-std mean CEB	Std index
Not in labour force or unemployed	2.180	2.056	114	2.034	113
Employed 1-15 hours	1.539	1.910	106	1.878	104
Employed 16-24 hours	1.825	1.828	101	1.780	99
Employed 25-34 hours	1.692	1.706	95	1.704	94
Employed 35+ hours	1.203	1.494	83	1.571	87
<b>TOTAL</b>	<b>1.805</b>	<b>1.805</b>	<b>100</b>	<b>1.805</b>	<b>100</b>

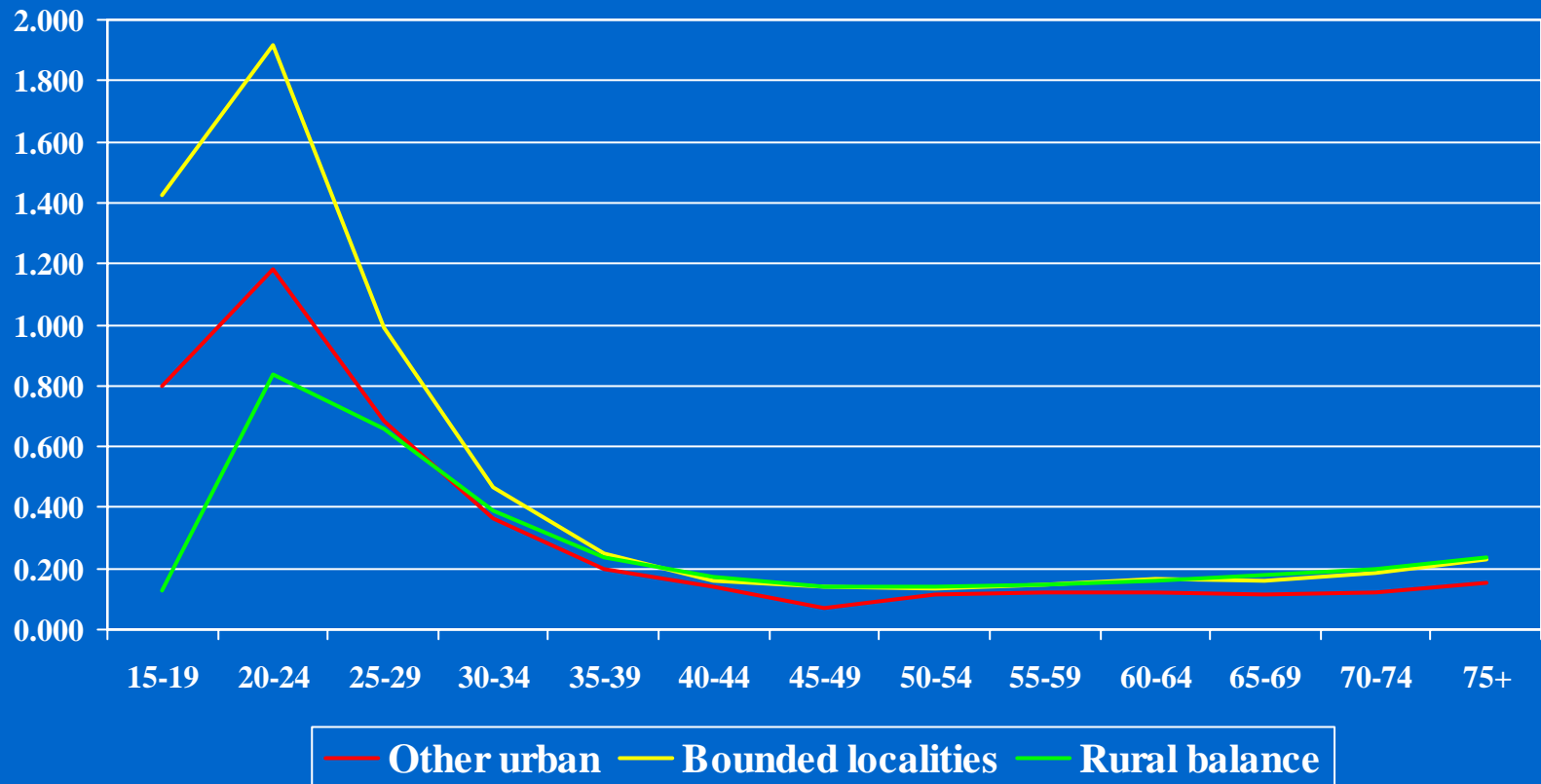
## Age-specific mean CEB by labour force commitment



# Mean CEB by urban-rural residence

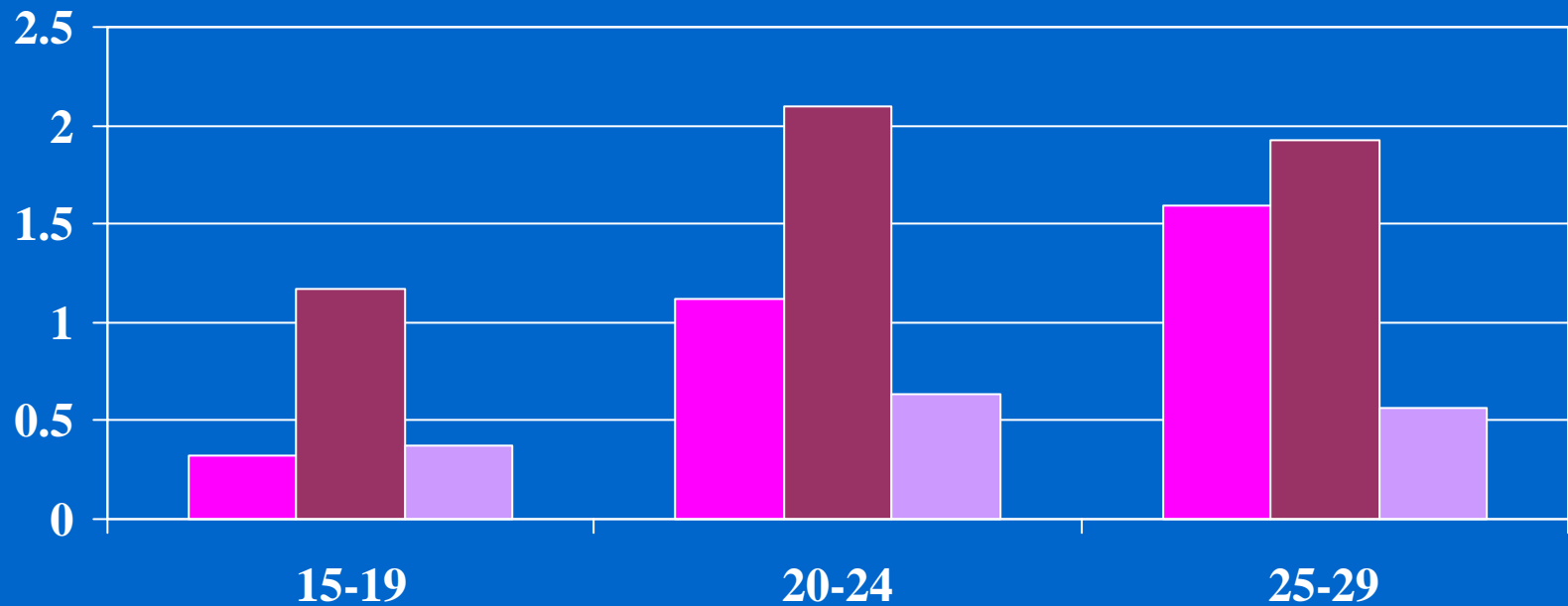
Urban-rural residence	Mean CEB	Age-std mean CEB	Std index	Age/ms-std mean CEB	Std index
Major urban (100,000 or more)	1.662	1.685	93	1.701	94
Other urban (1,000-99,999)	2.027	1.999	111	1.981	110
Bounded localities (200-999)	2.222	2.108	117	2.079	115
Rural balance	2.112	2.057	114	2.004	111
<b>TOTAL</b>	<b>1.805</b>	<b>1.805</b>	<b>100</b>	<b>1.805</b>	<b>100</b>

## Proportionate fertility excesses over major urban areas by age



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## Bounded localities: proportionate fertility excesses over major urban areas ages 15-29



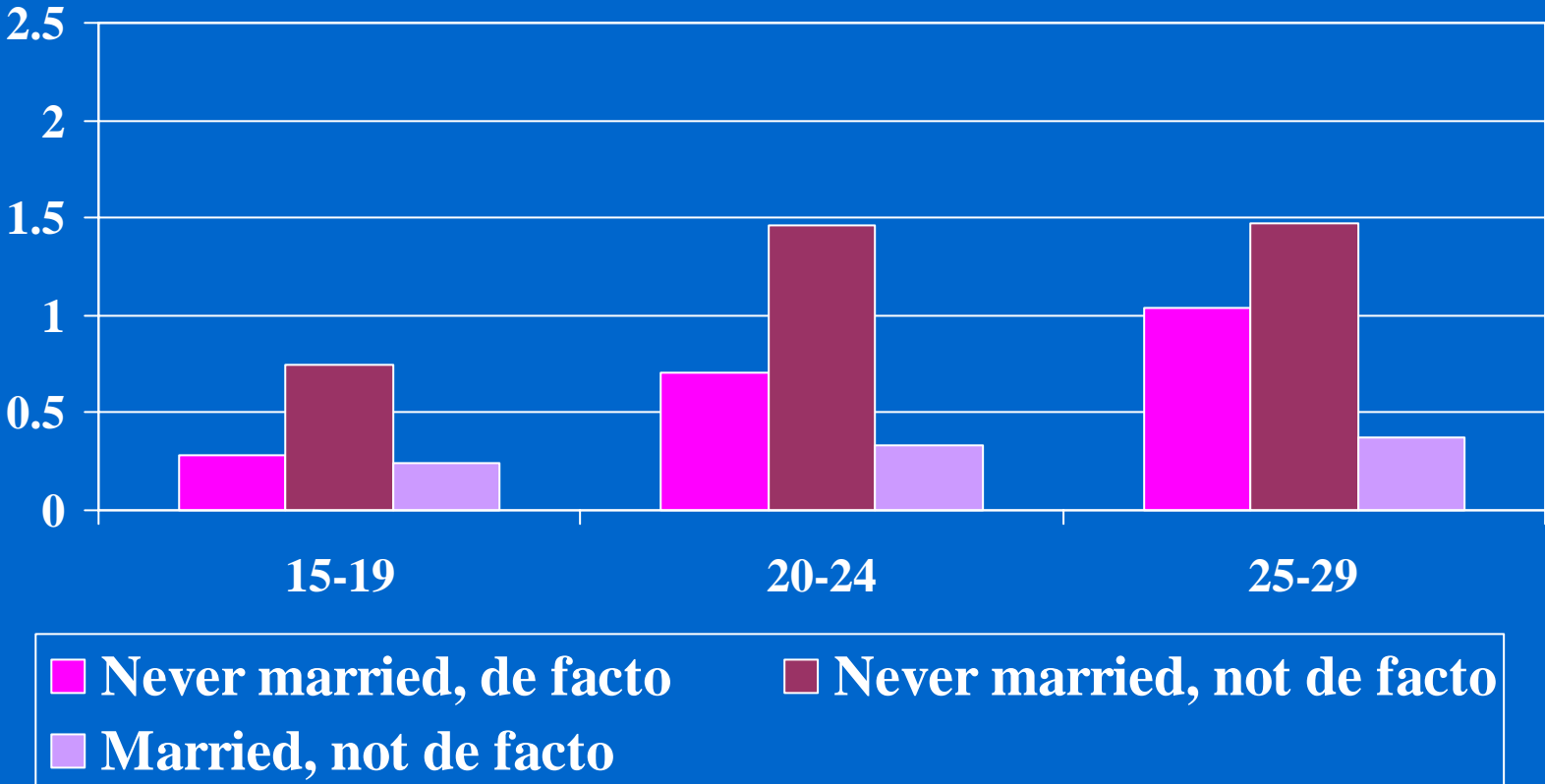
■ Never married, de facto

■ Never married, not de facto

■ Married, not de facto

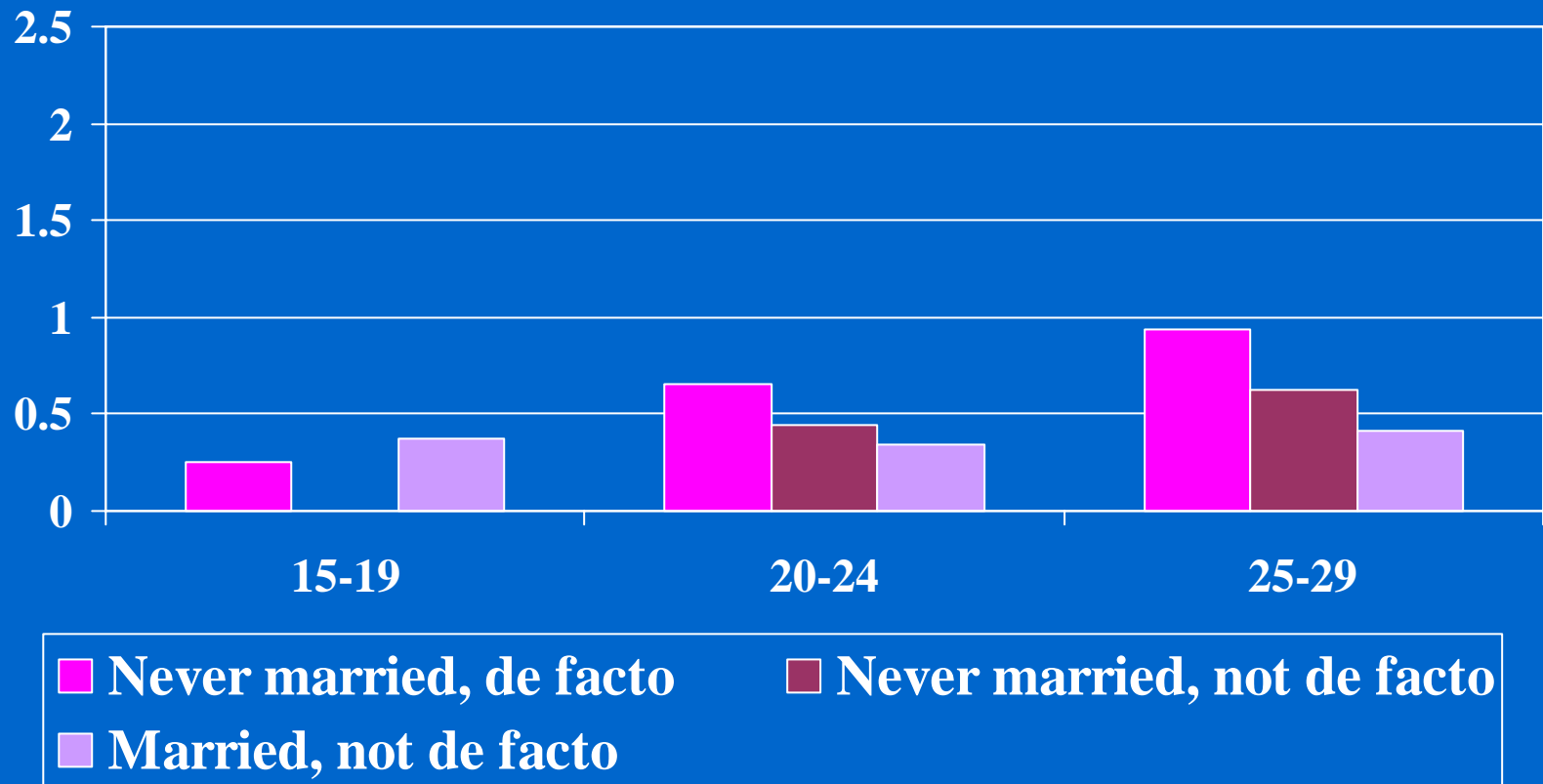
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# Other urban areas: proportionate fertility excesses over major urban areas ages 15-29



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## Rural balance: proportionate fertility excesses over major urban areas ages 15-29

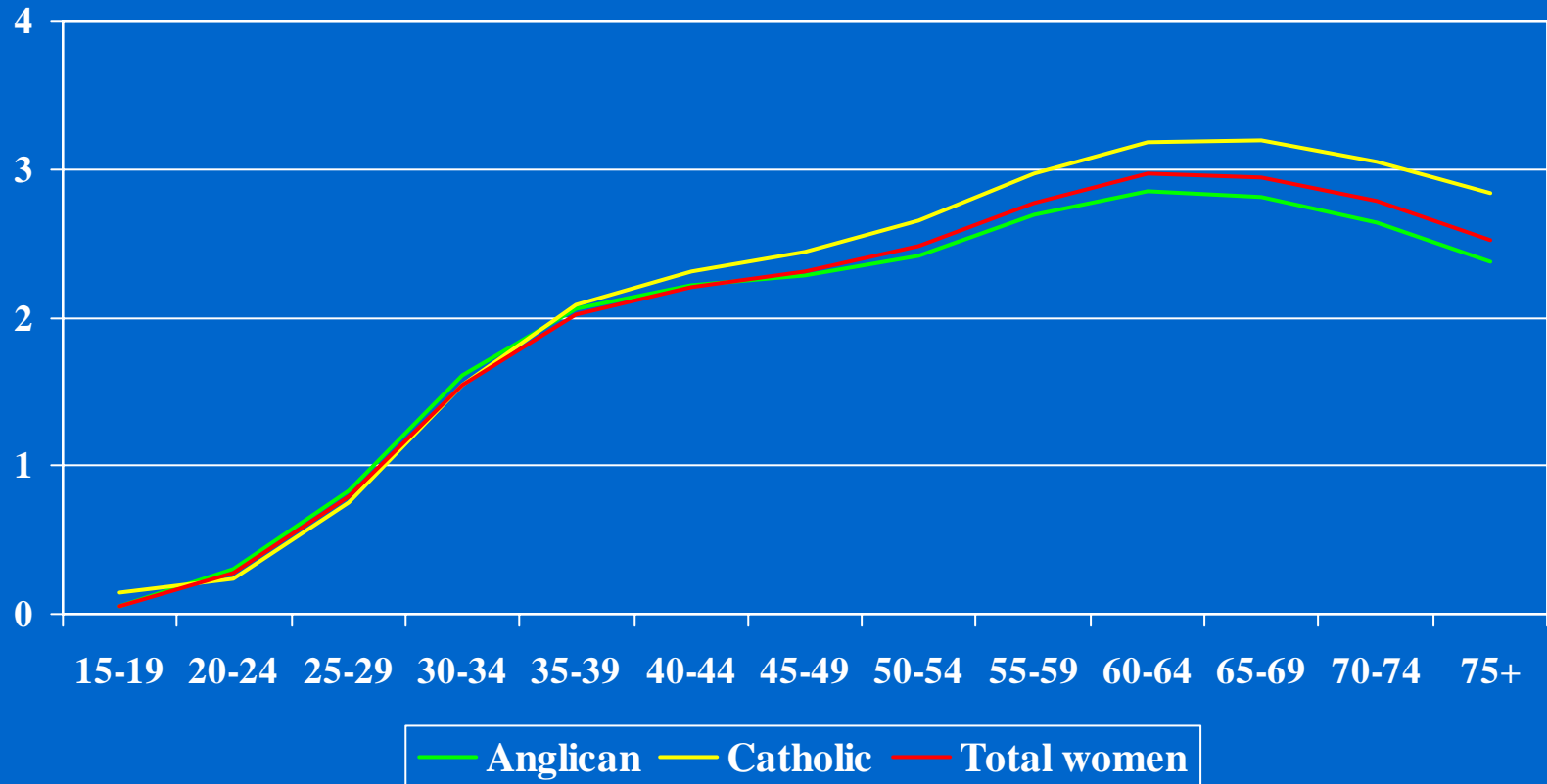


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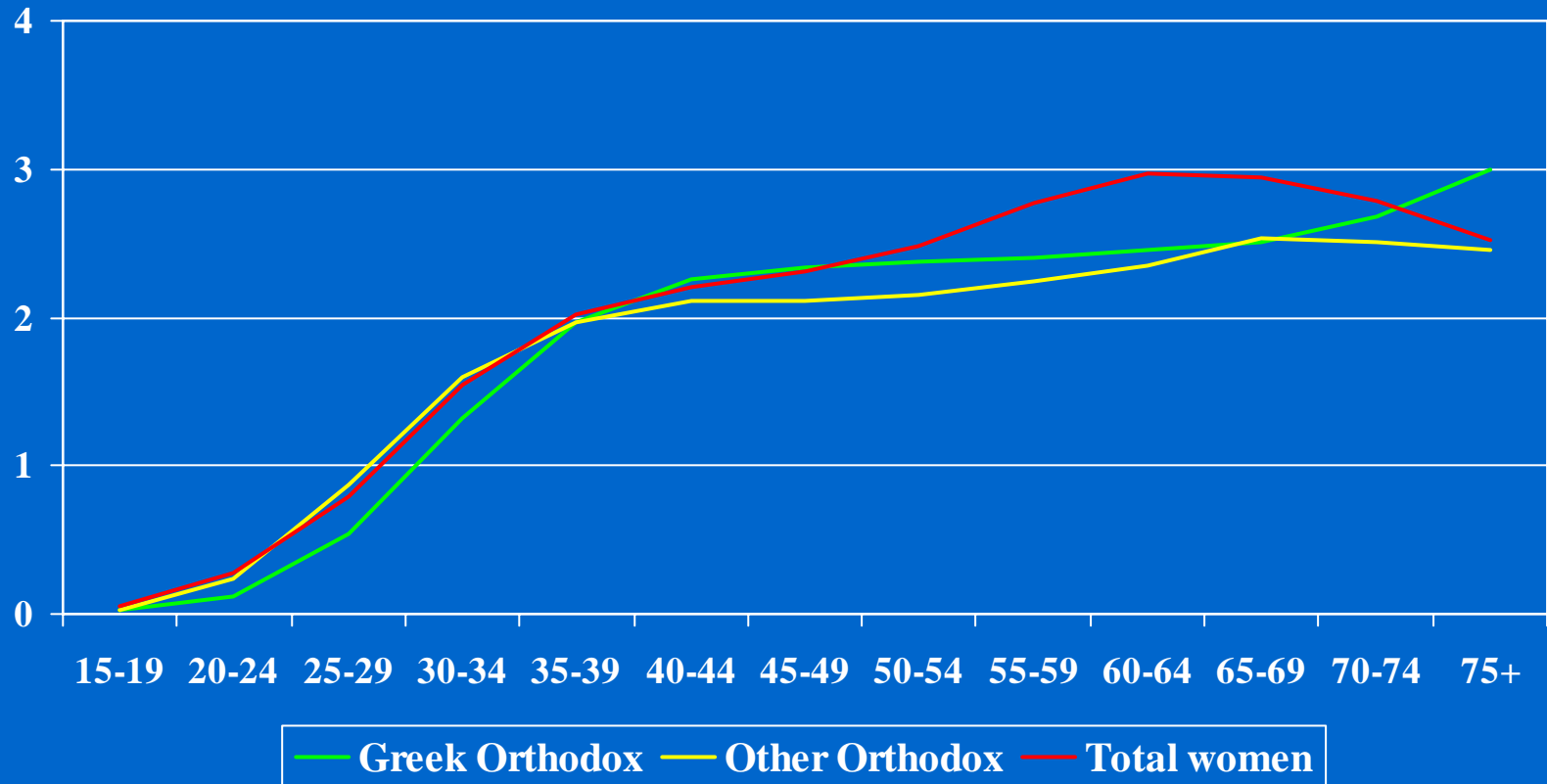
## **Factors possibly explaining fertility excesses at ages 15-29 outside major urban areas**

- **Limited employment opportunity, and possibly related attraction of welfare income linked to sole parent status**
- **Selective outmigration of women with educational and career aspirations**
- **In-migration of unemployed young parents attracted by cheaper living in smaller urban places**
- **Concentration of indigenous population outside major urban areas**
- **Remoteness from abortion services, perhaps coupled with less favourable attitudes towards using them**

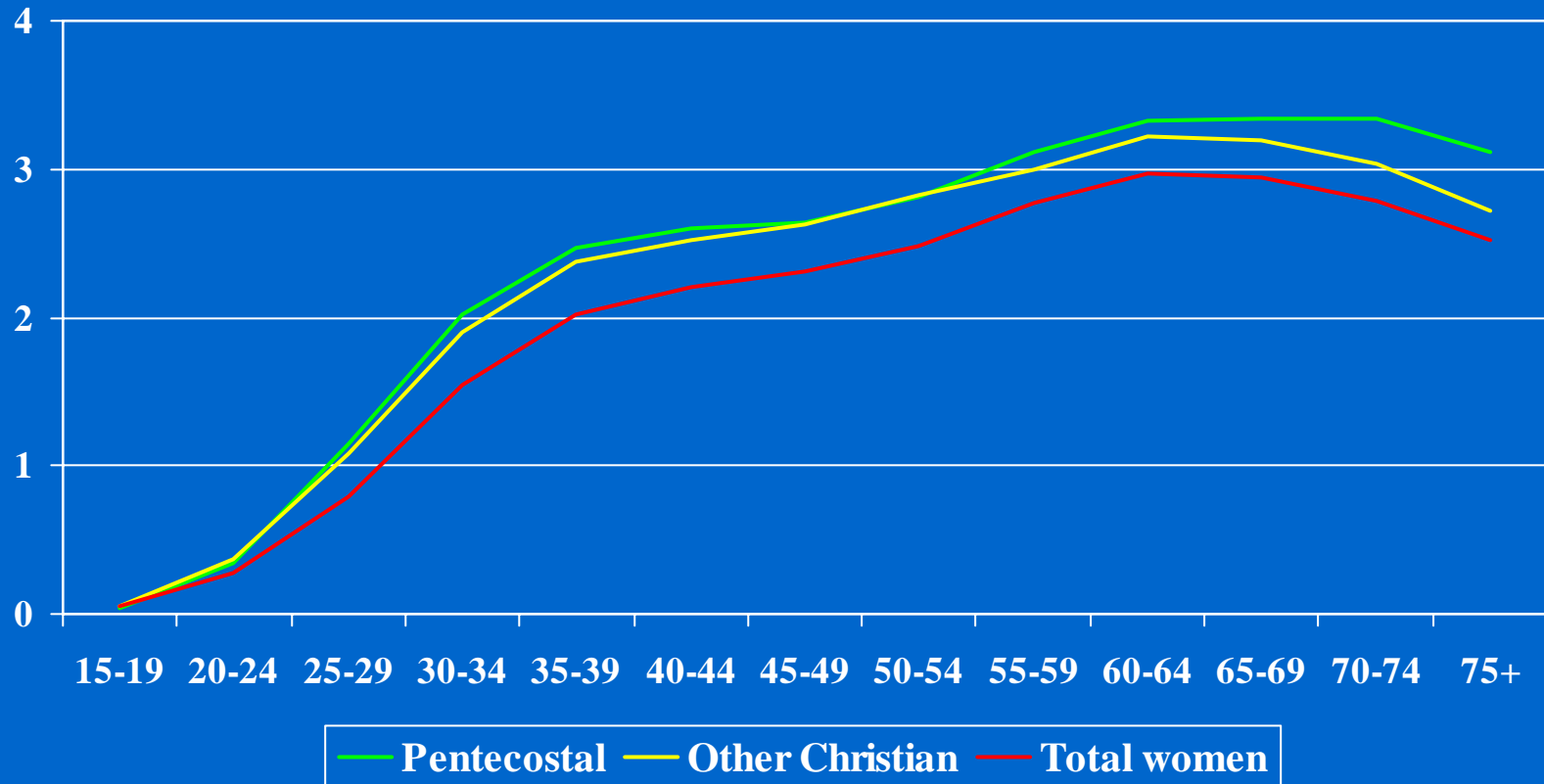
# Age-specific mean CEB: Catholics and Anglicans



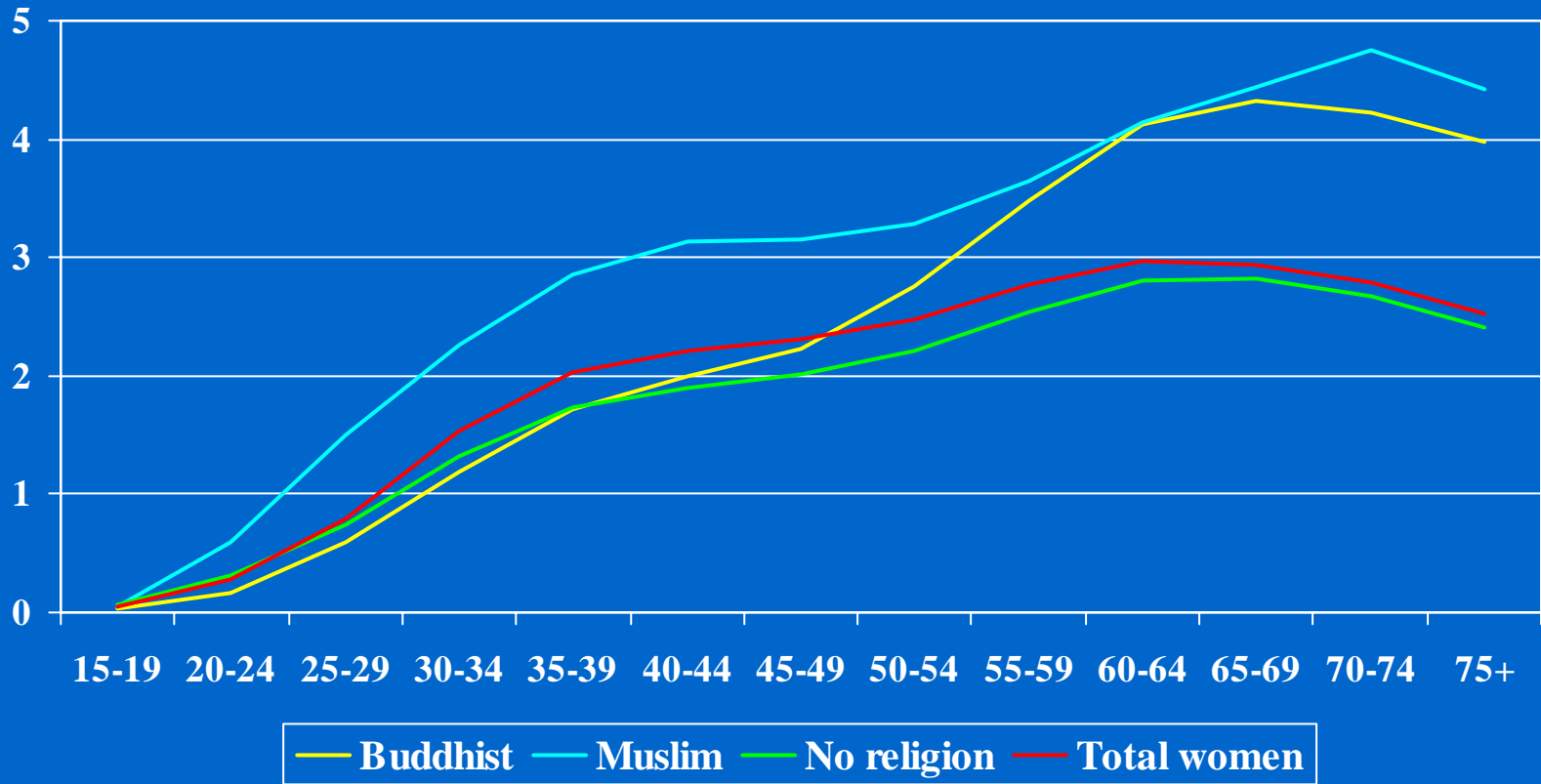
# Age-specific mean CEB: Greek and Other Orthodox women



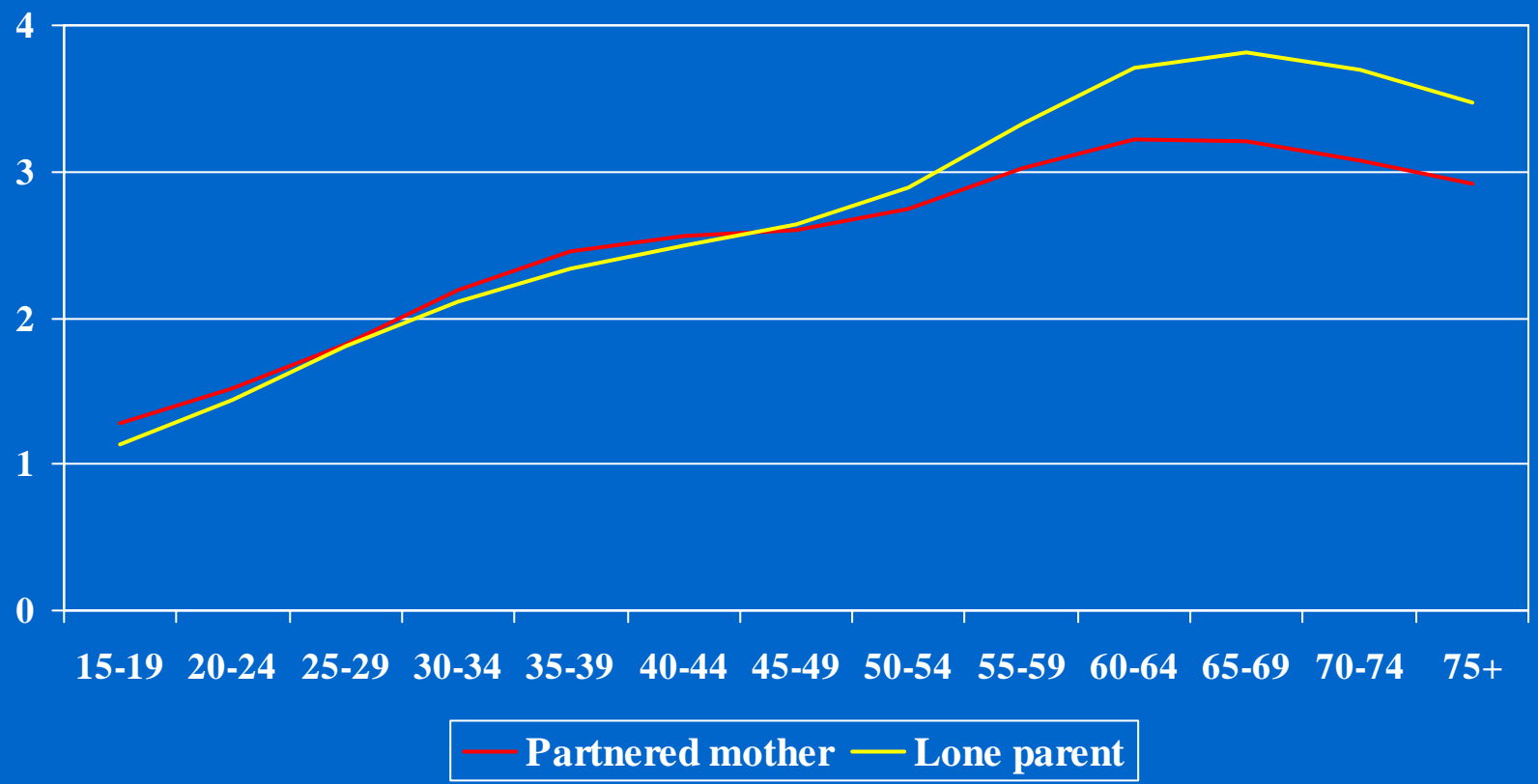
## Age-specific mean CEB: Pentecostals and 'Other Christians'



# Age-specific mean CEB: Buddhists, Muslims and 'No religion'



# Age-specific mean CEB: partnered mothers and lone parents



## Mean CEB by country of birth: top 10 countries

Country of birth	Mean CEB	Age-std mean CEB	Std index	Age/ms-std mean CEB	Std index
Cook Islands	2.432	2.851	163	2.757	158
Lebanon	3.107	3.023	173	2.694	154
Western Samoa	2.624	2.749	157	2.565	147
Tonga	2.645	2.668	153	2.501	143
El Salvador	1.959	2.389	137	2.381	136
Cambodia	2.115	2.506	143	2.364	135
Afghanistan	2.347	2.933	168	2.344	134
Syria	2.727	2.620	150	2.290	131
Laos	1.940	2.427	139	2.279	130
Vietnam	1.787	2.254	129	2.222	127
AUSTRALIA	1.748	1.748	100	1.748	100

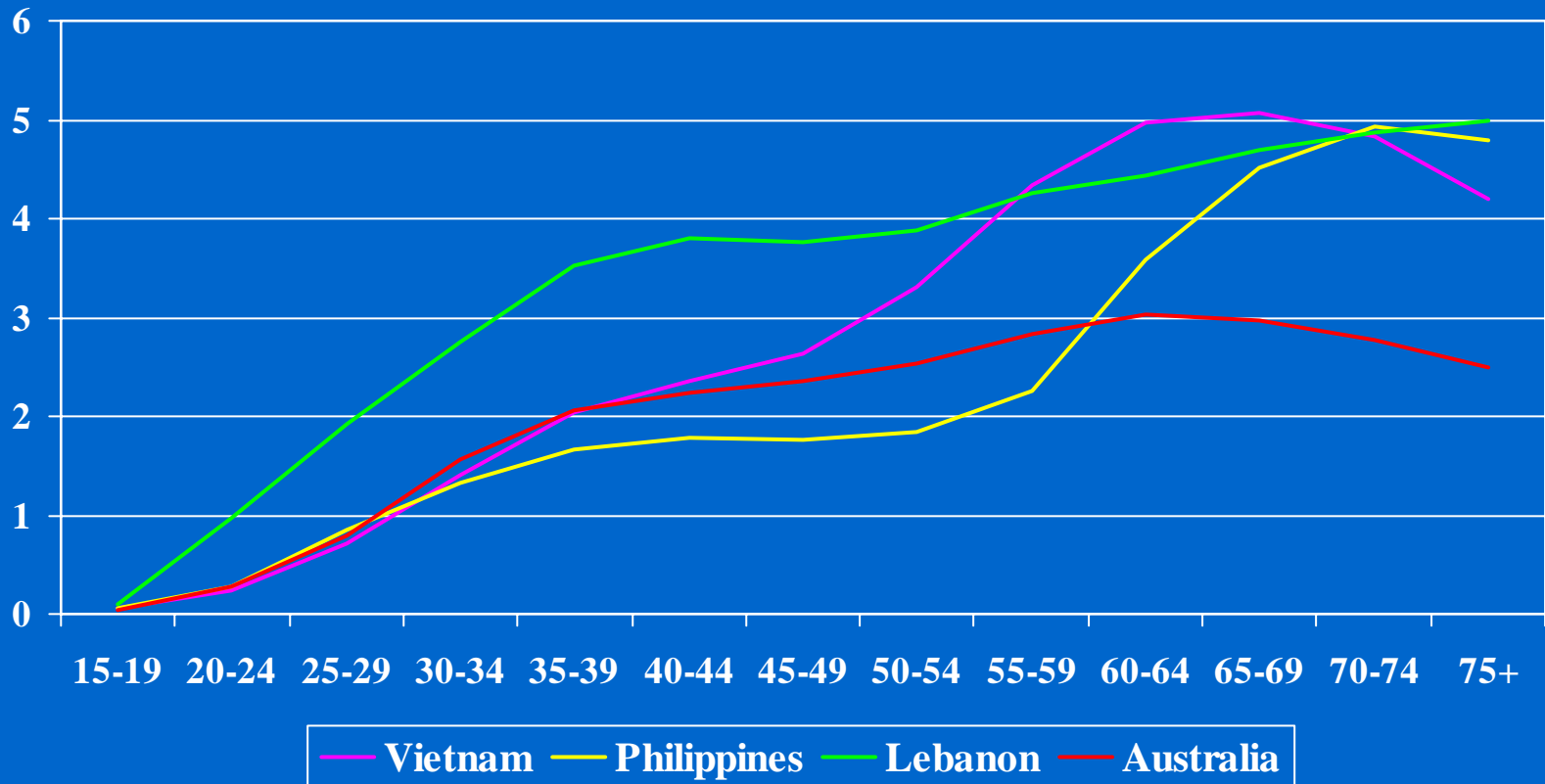
## Mean CEB by country of birth: bottom 10 countries

Country of birth	Mean CEB	Age-std mean CEB	Std index	Age/ms-std mean CEB	Std index
<b>AUSTRALIA</b>	<b>1.748</b>	<b>1.748</b>	<b>100</b>	<b>1.748</b>	<b>100</b>
<b>Austria</b>	<b>1.892</b>	<b>1.391</b>	<b>80</b>	<b>1.366</b>	<b>78</b>
<b>Canada</b>	<b>1.289</b>	<b>1.353</b>	<b>77</b>	<b>1.346</b>	<b>77</b>
<b>Romania</b>	<b>1.600</b>	<b>1.459</b>	<b>83</b>	<b>1.343</b>	<b>77</b>
<b>Thailand</b>	<b>0.957</b>	<b>1.310</b>	<b>75</b>	<b>1.320</b>	<b>76</b>
<b>Poland</b>	<b>1.779</b>	<b>1.364</b>	<b>78</b>	<b>1.284</b>	<b>73</b>
<b>Switzerland</b>	<b>1.504</b>	<b>1.312</b>	<b>75</b>	<b>1.283</b>	<b>73</b>
<b>Hungary</b>	<b>1.768</b>	<b>1.330</b>	<b>76</b>	<b>1.274</b>	<b>73</b>
<b>Former USSR</b>	<b>1.817</b>	<b>1.337</b>	<b>76</b>	<b>1.253</b>	<b>72</b>
<b>Former Czechoslovakia</b>	<b>1.590</b>	<b>1.289</b>	<b>74</b>	<b>1.233</b>	<b>71</b>
<b>Japan</b>	<b>0.816</b>	<b>1.071</b>	<b>61</b>	<b>1.065</b>	<b>61</b>

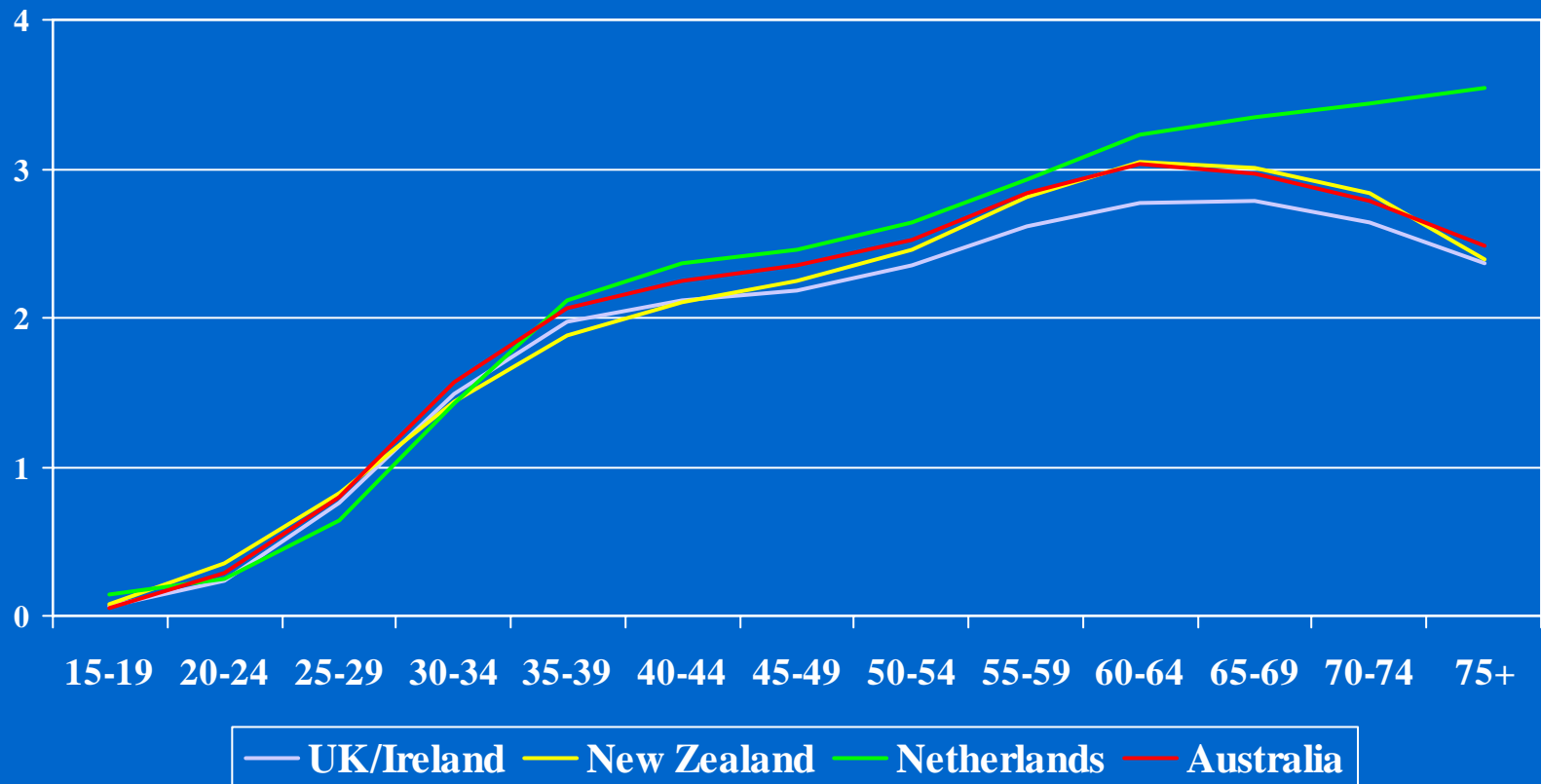
## Mean CEB by country of birth: 15 largest birthplace groups

Country of birth	Mean CEB	Age-std mean CEB	Std index	Age/ms-std mean CEB	Std index
Lebanon	3.107	3.023	173	2.694	154
Vietnam	1.787	2.254	129	2.222	127
Netherlands	2.693	1.882	108	1.823	104
Philippines	1.599	1.865	107	1.755	100
AUSTRALIA	1.748	1.748	100	1.748	100
New Zealand	1.629	1.700	97	1.718	98
Italy	2.627	1.872	107	1.715	98
Greece	2.332	1.778	102	1.620	93
UK/Ireland	2.073	1.675	96	1.608	92
India	1.923	1.678	96	1.569	90
Malaysia	1.287	1.555	89	1.555	89
Former Yugoslavia	2.016	1.692	97	1.554	89
China	1.733	1.529	87	1.436	82
Hong Kong	1.090	1.418	81	1.420	81
Germany	1.960	1.426	82	1.402	80
Poland	1.779	1.364	78	1.284	73

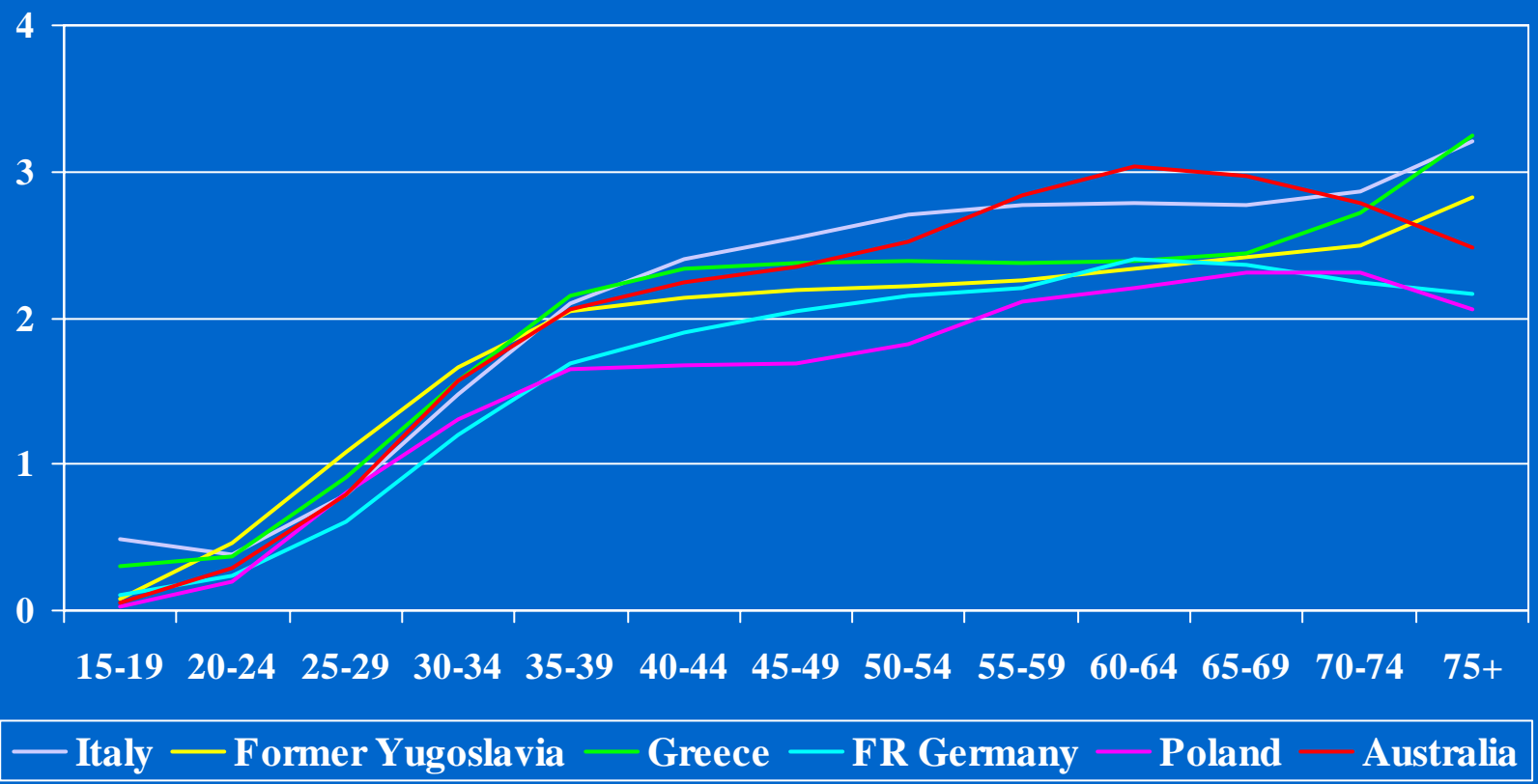
## Age-specific mean CEB: the really deviant birthplace groups



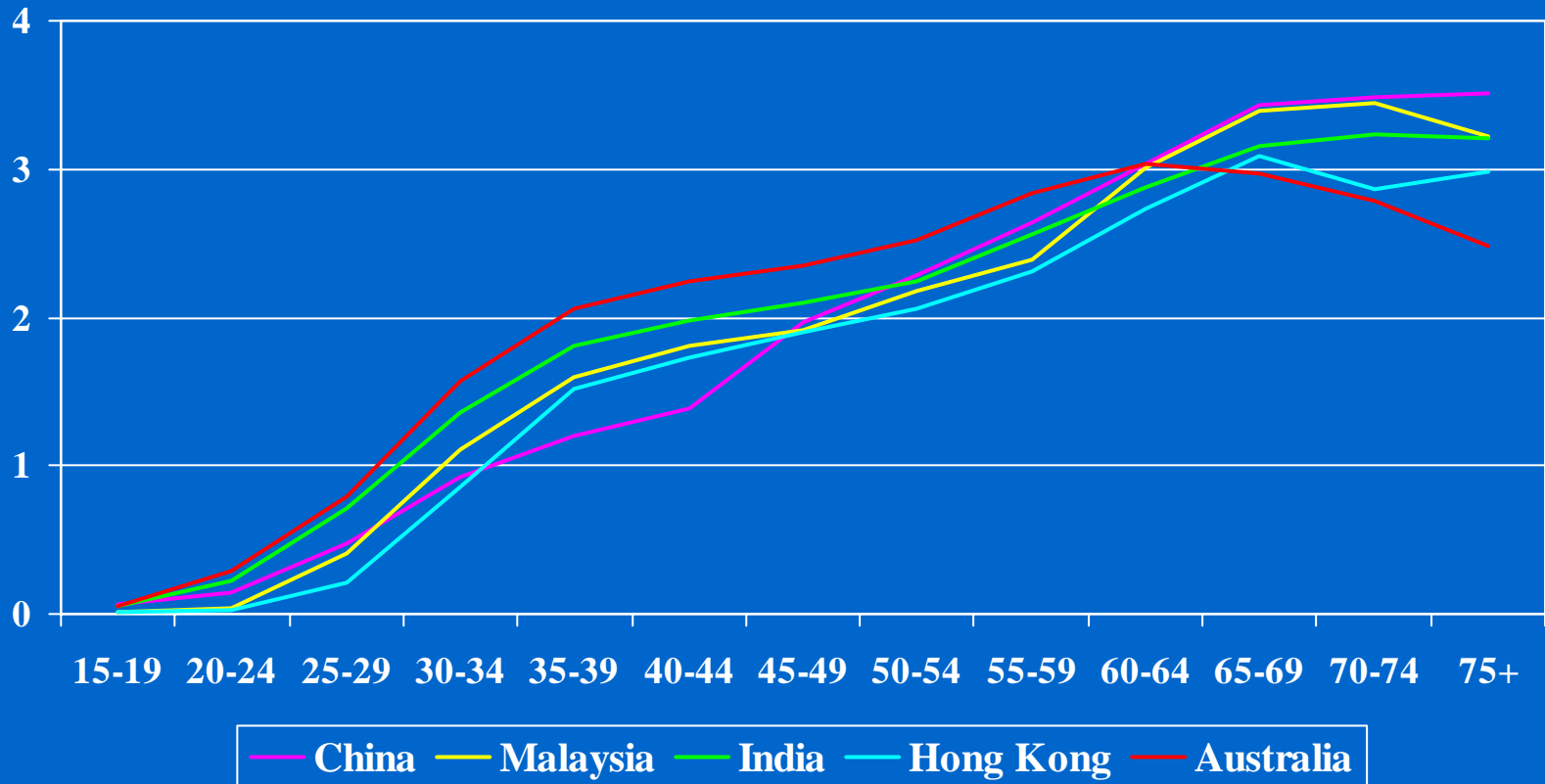
# Age-specific Mean CEB: birthplace groups similar to the Australia-born



# Age-specific mean CEB: other European birthplace groups



# Age-specific mean CEB: other Asian birthplace groups



# Second generation fertility

The second generation of a birthplace group can be defined as Australia-born persons with:

- **AT LEAST ONE** parent born in the relevant overseas country, or
- **BOTH** parents born in the relevant overseas country

Analysis covers both definitions, but discussion assumes the former unless otherwise indicated.

# Birthplace groups examined

**The 15 birthplace groups with the largest numbers of women aged 15 or older, except:**

- Most Asian groups - migration histories too recent for significant second generations to have formed**
- Poland - inadvertently omitted when data ordered**

## Mean CEB for migrant and second generation Lebanese and Greeks

Country of birth	Mean CEB	Age-std mean CEB	Std index	Age/ms-std mean CEB	Std index
<b>Lebanon</b>					
Migrants	3.107	3.023	173	2.694	154
Either parent	0.715	1.757	101	1.815	104
Both parents	0.669	1.778	102	1.806	103
One parent	0.878	1.682	96	1.754	100
(N 'Either parent' = 17,392; % in 'Both parents' category = 78.2)					
<b>Greece</b>					
Migrants	2.332	1.778	102	1.620	93
Either parent	0.804	1.476	84	1.492	85
Both parents	0.751	1.434	82	1.445	83
One parent	0.963	1.553	89	1.573	90
(N 'Either parent' = 60,241; % in 'Both parents' category = 74.9)					
<b>Total Australia</b>	<b>1.748</b>	<b>1.748</b>	<b>100</b>	<b>1.748</b>	<b>100</b>

## Mean CEB for migrant and second generation Italians and Yugoslavs

Country of birth	Mean CEB	Age-std mean CEB	Std index	Age/ms-std mean CEB	Std index
<b>Italy</b>					
Migrants	2.627	1.872	107	1.715	98
Either parent	1.058	1.609	92	1.596	91
Both parents	1.110	1.596	91	1.567	90
One parent	0.959	1.635	94	1.647	94
(N 'Either parent' = 134,998; % in 'Both parents' category = 65.8)					
<b>Former Yugoslavia</b>					
Migrants	2.016	1.692	97	1.554	89
Either parent	0.717	1.553	89	1.569	90
Both parents	0.612	1.570	90	1.567	90
One parent	0.893	1.498	86	1.486	85
(N 'Either parent' = 43,490; % in 'Both parents' category = 37.0)					
<b>Total Australia</b>	<b>1.748</b>	<b>1.748</b>	<b>100</b>	<b>1.748</b>	<b>100</b>

## Mean CEB for migrant and second generation Germans and Dutch

Country of birth	Mean CEB	Age-std mean CEB	Std index	Age/ms-std mean CEB	Std index
<b>Germany</b>					
Migrants	1.960	1.426	82	1.402	80
Either parent	1.096	1.657	95	1.670	96
Both parents	1.348	1.598	91	1.625	93
One parent	1.036	1.667	95	1.681	96
(N 'Either parent' = 56,203; % in 'Both parents' category = 19.0)					
<b>Netherlands</b>					
Migrants	2.693	1.882	108	1.823	104
Either parent	1.116	1.796	103	1.775	102
Both parents	1.633	1.798	103	1.769	101
One parent	0.868	1.768	101	1.749	100
(N 'Either parent' = 58,340; % in 'Both parents' category = 32.1)					
<b>Total Australia</b>	<b>1.748</b>	<b>1.748</b>	<b>100</b>	<b>1.748</b>	<b>100</b>

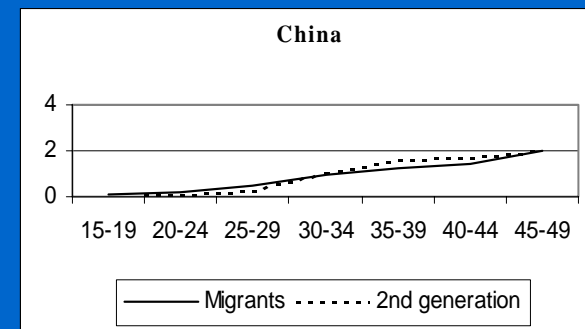
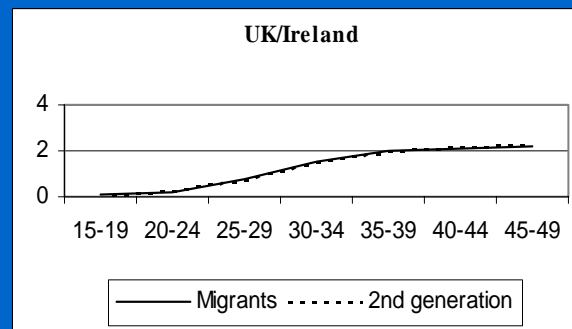
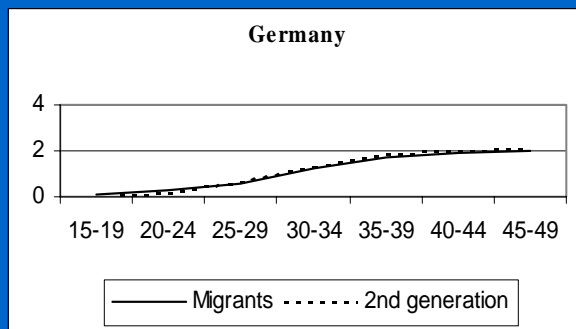
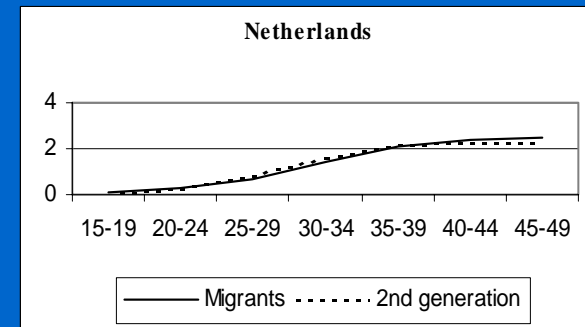
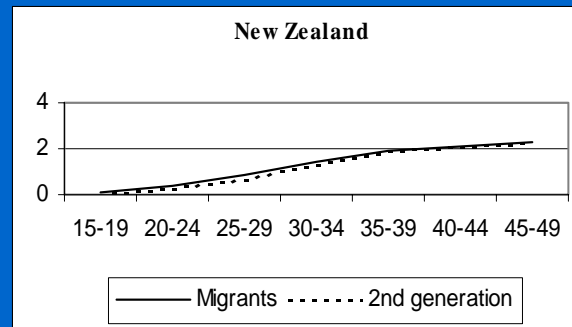
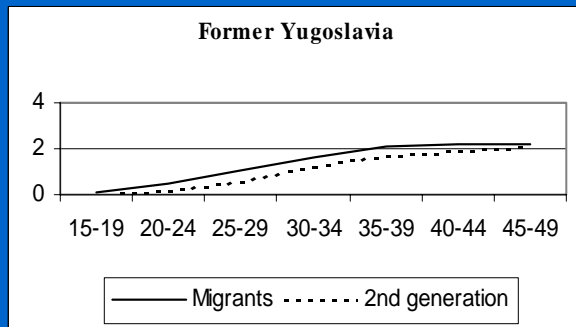
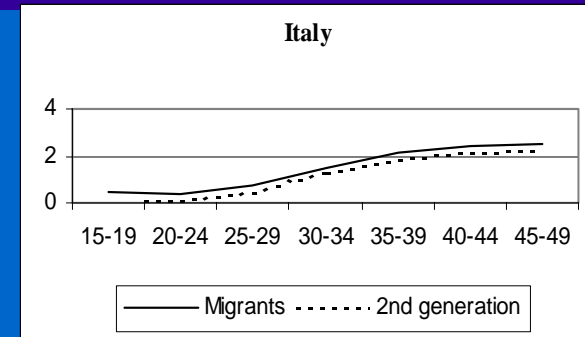
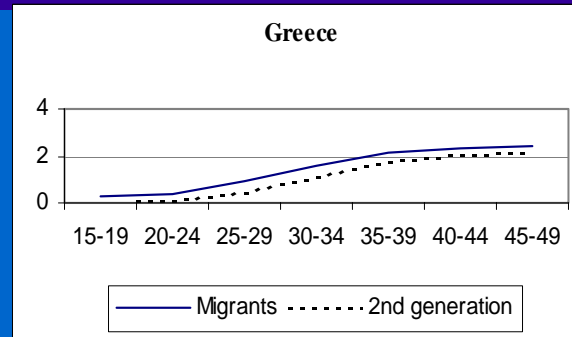
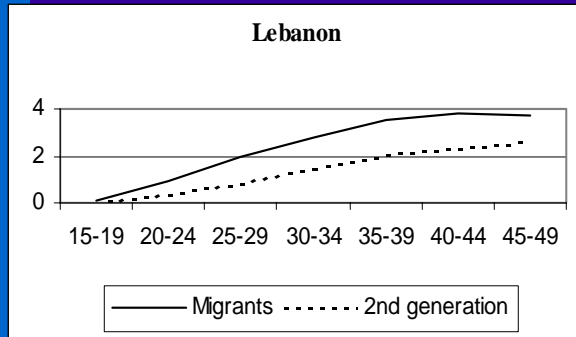
## Mean CEB for migrant and second generation British/Irish and New Zealanders

Country of birth	Mean CEB	Age-std mean CEB	Std index	Age/ms-std mean CEB	Std index
<b>UK/Ireland</b>					
Migrants	2.073	1.675	96	1.608	92
Either parent	1.754	1.696	97	1.700	97
Both parents	1.747	1.692	97	1.691	97
One parent	1.756	1.696	97	1.702	97
(N 'Either parent' = 590,661; % in 'Both parents' category = 24.7)					
<b>New Zealand</b>					
Migrants	1.629	1.700	97	1.718	98
Either parent	1.477	1.611	92	1.645	94
Both parents	1.035	1.552	89	1.631	93
One parent	1.520	1.615	92	1.646	94
(N 'Either parent' = 48,843; % in 'Both parents' category = 9.0)					
<b>Total Australia</b>	<b>1.748</b>	<b>1.748</b>	<b>100</b>	<b>1.748</b>	<b>100</b>

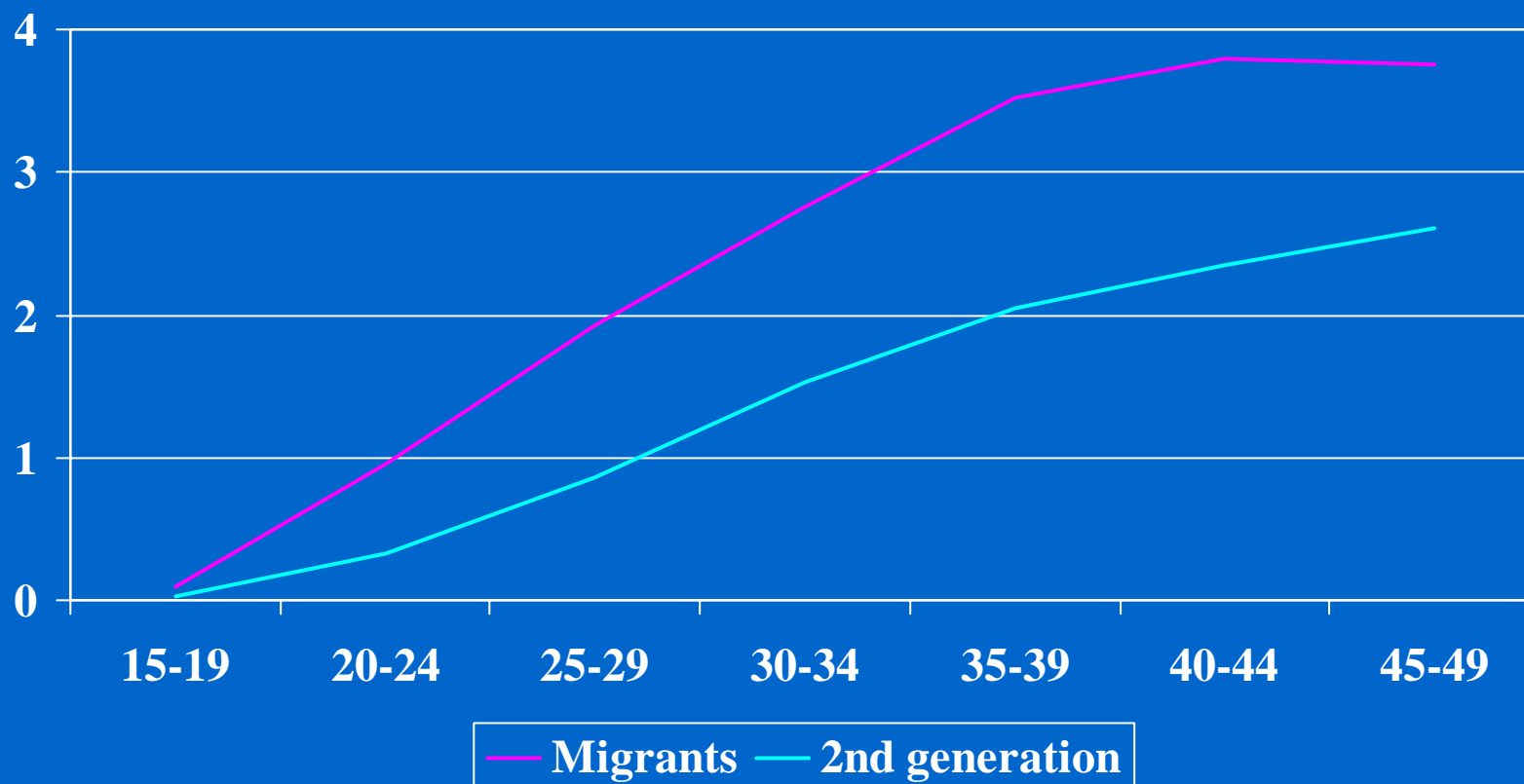
## Mean CEB for migrant and second generation Chinese

Country of birth	Mean CEB	Age-std mean CEB	Std index	Age/ms-std mean CEB	Std index
<b>China</b>					
Migrants	1.733	1.529	87	1.438	82
Either parent	0.905	1.409	81	1.463	84
Both parents	0.784	1.421	81	1.460	84
One parent	0.968	1.415	81	1.455	83
(N 'Either parent' = 9,593; % in 'Both parents' category = 34.0)					
<b>Total Australia</b>	<b>1.748</b>	<b>1.748</b>	<b>100</b>	<b>1.748</b>	<b>100</b>

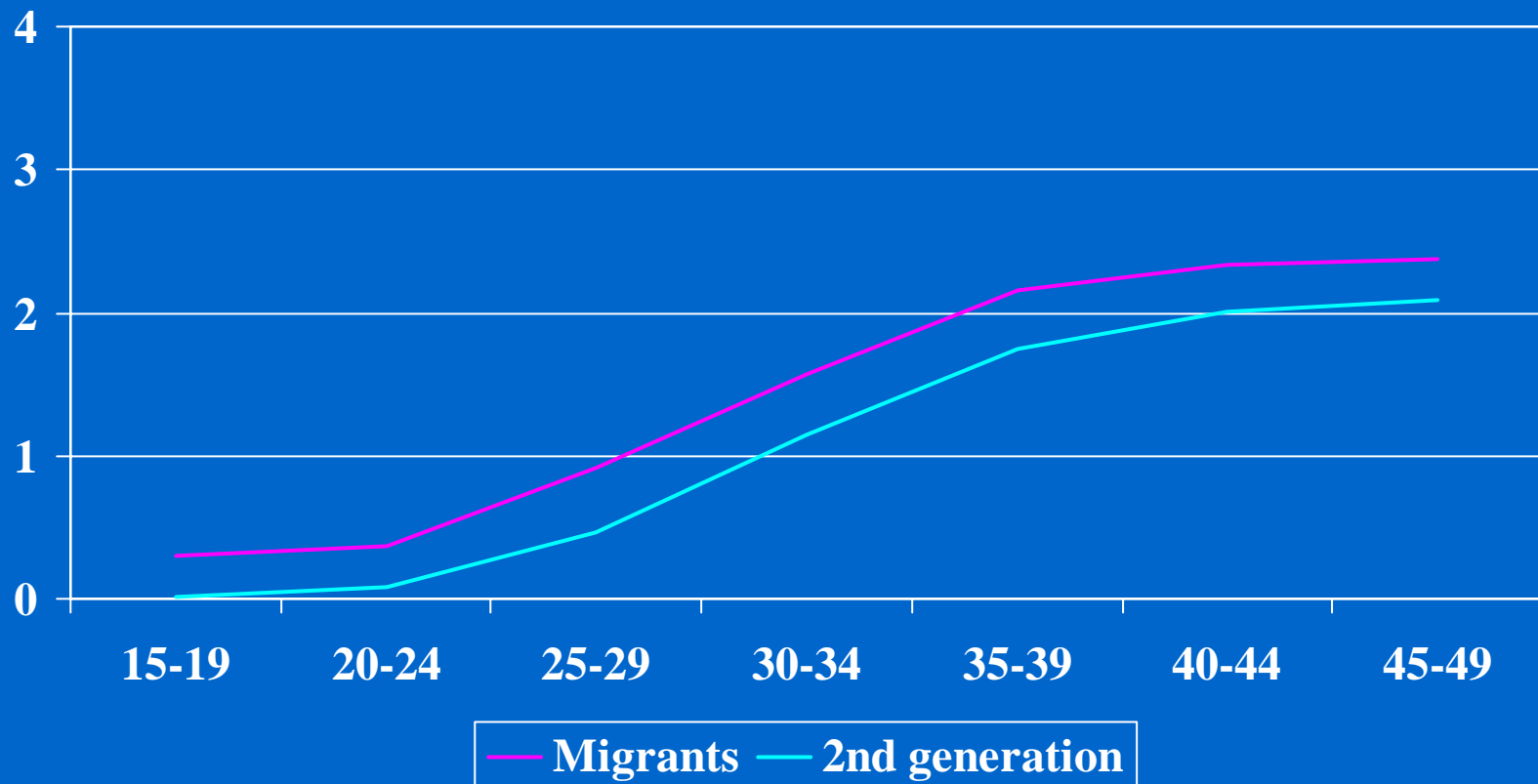
# Age-specific mean CEB: migrants and second generations



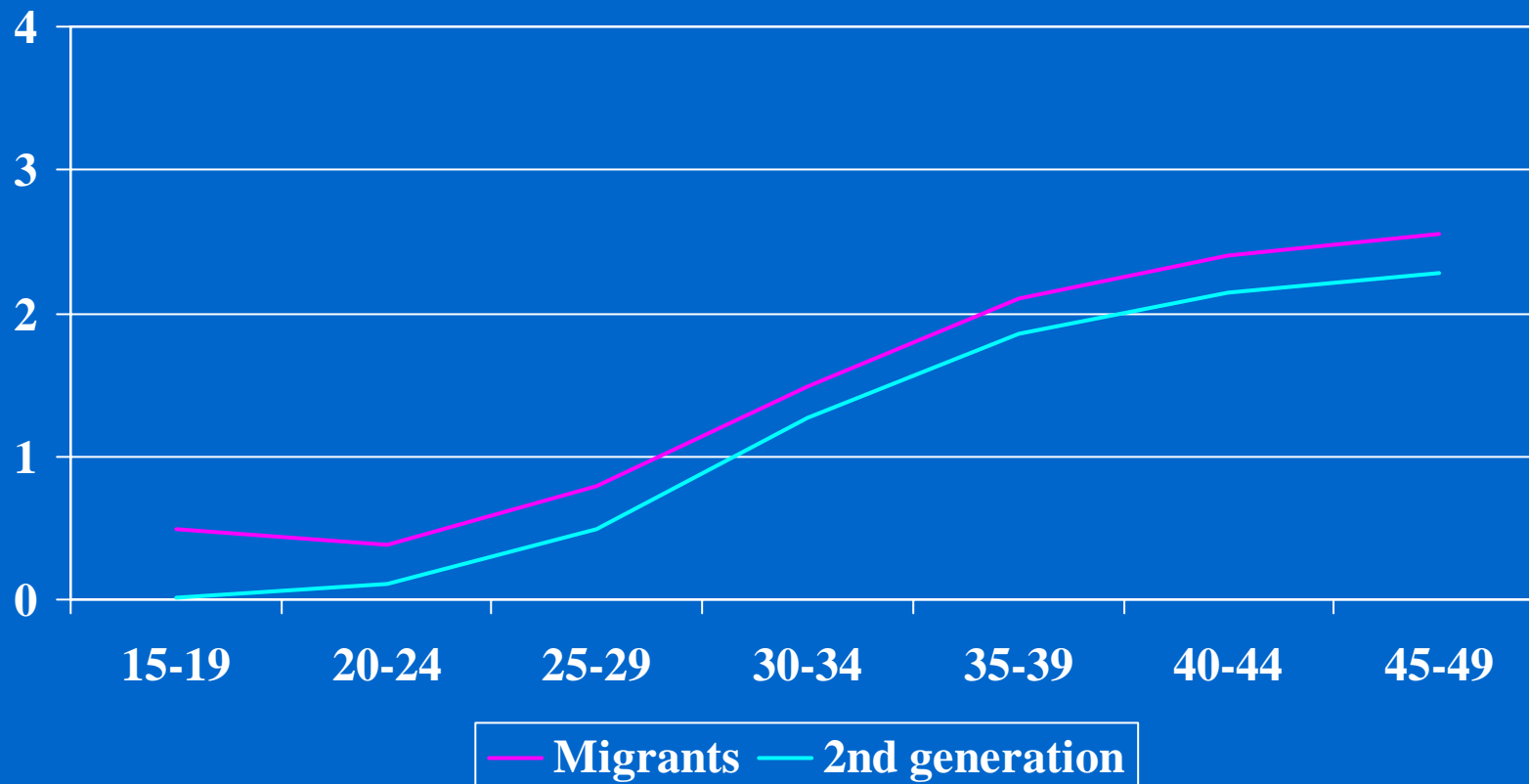
## Age-specific mean CEB by generation: Lebanon



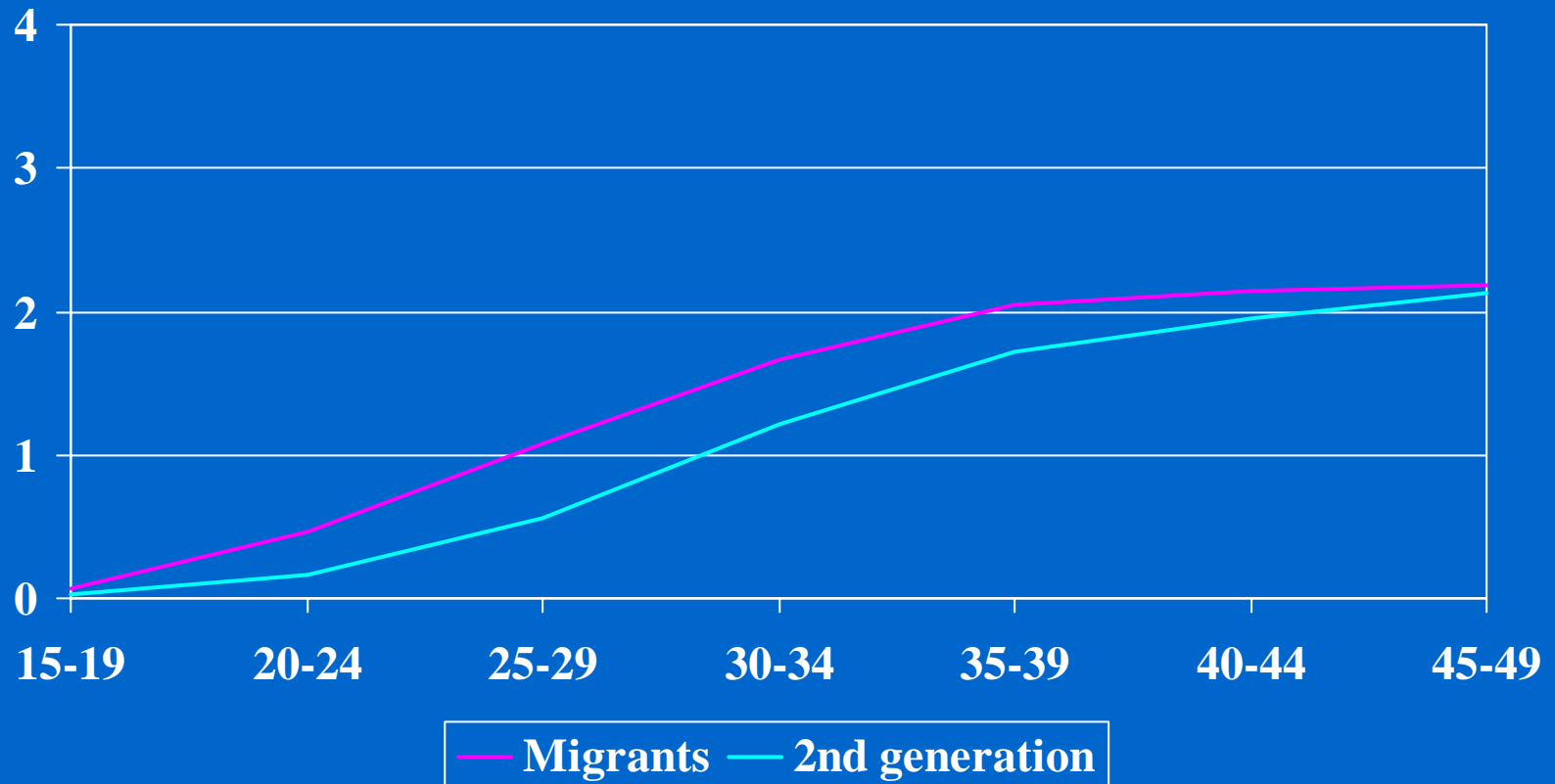
## Age-specific mean CEB by generation: Greece



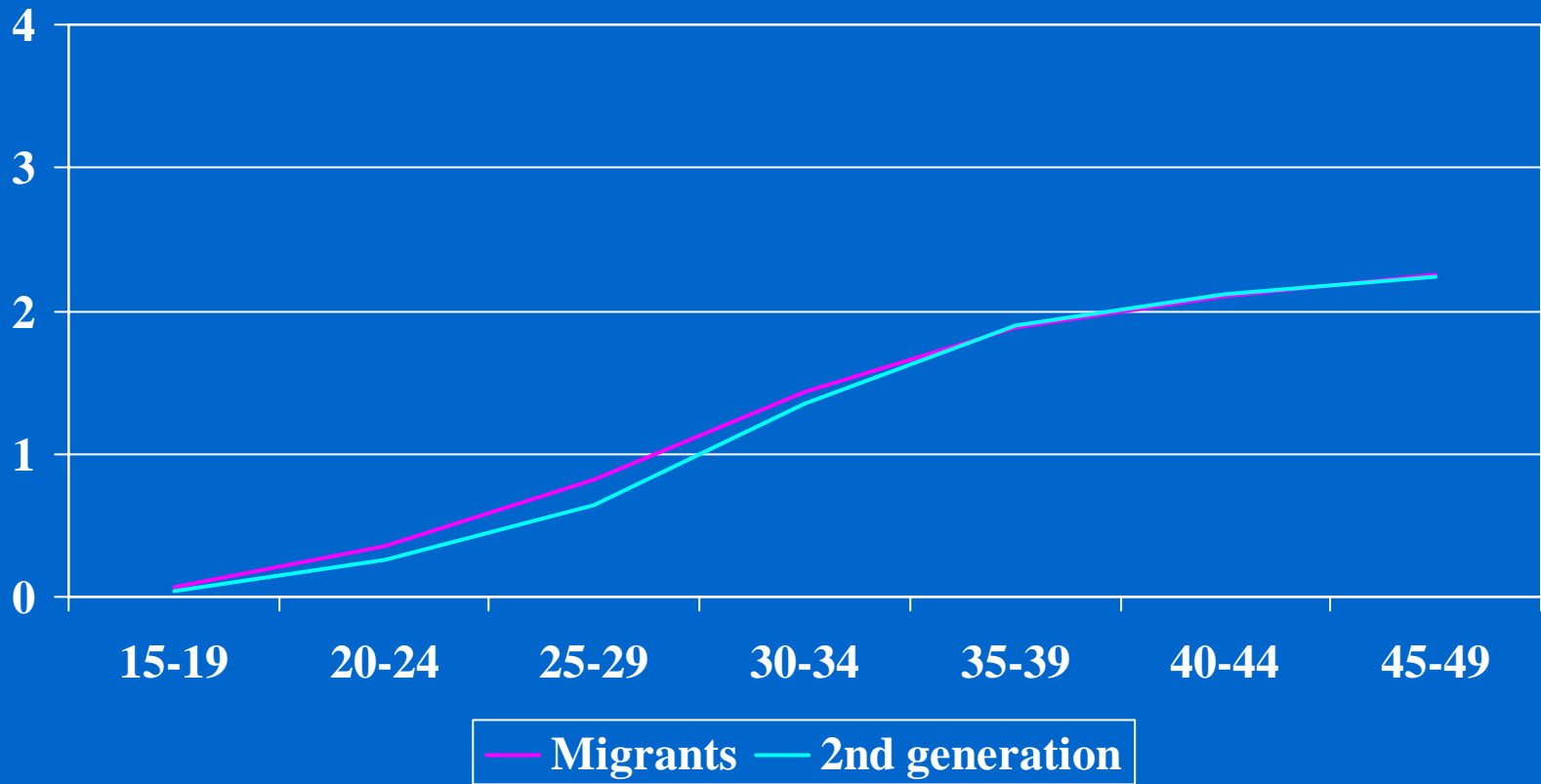
## Age-specific mean CEB by generation: Italy



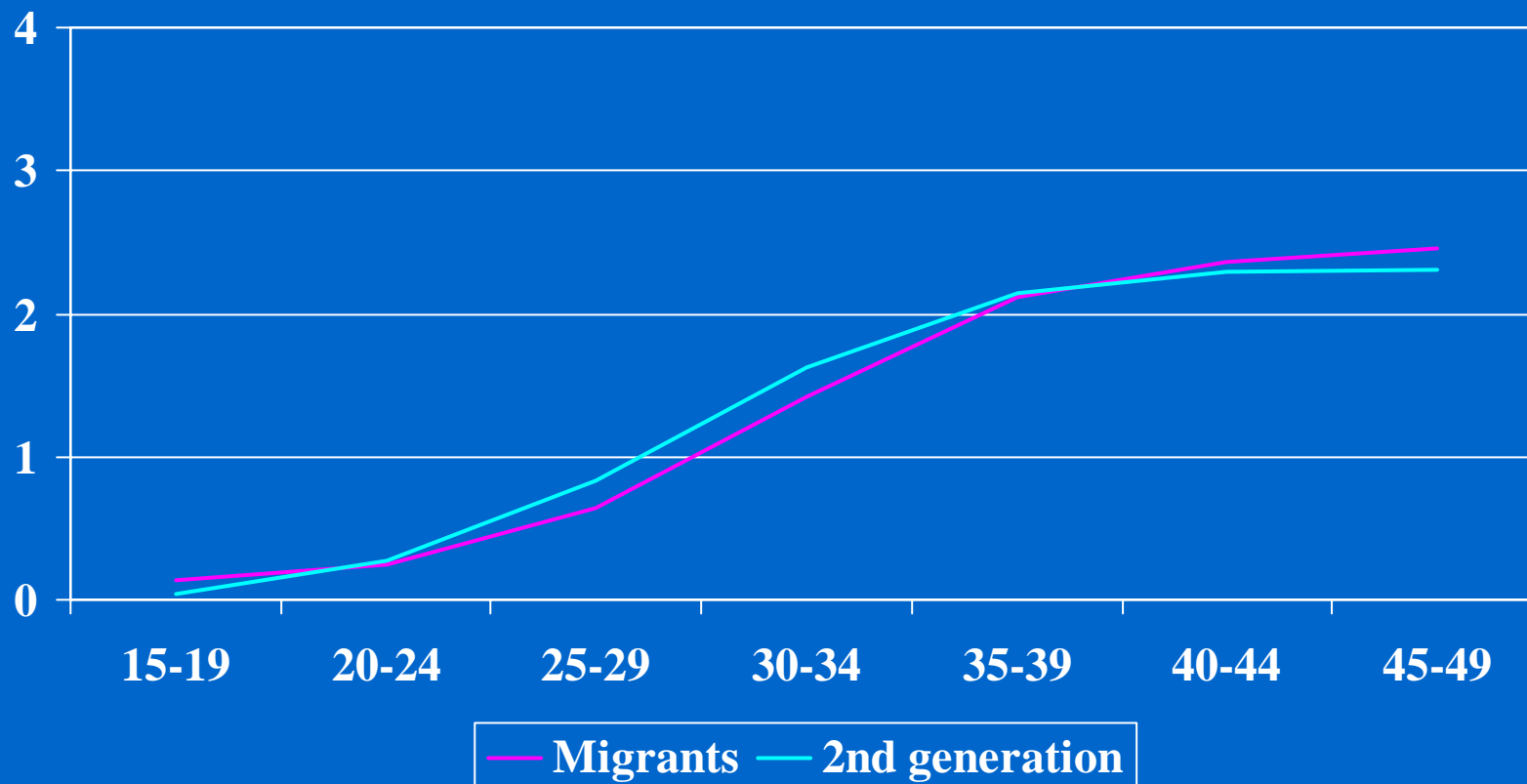
# Age-specific mean CEB by generation: Former Yugoslavia



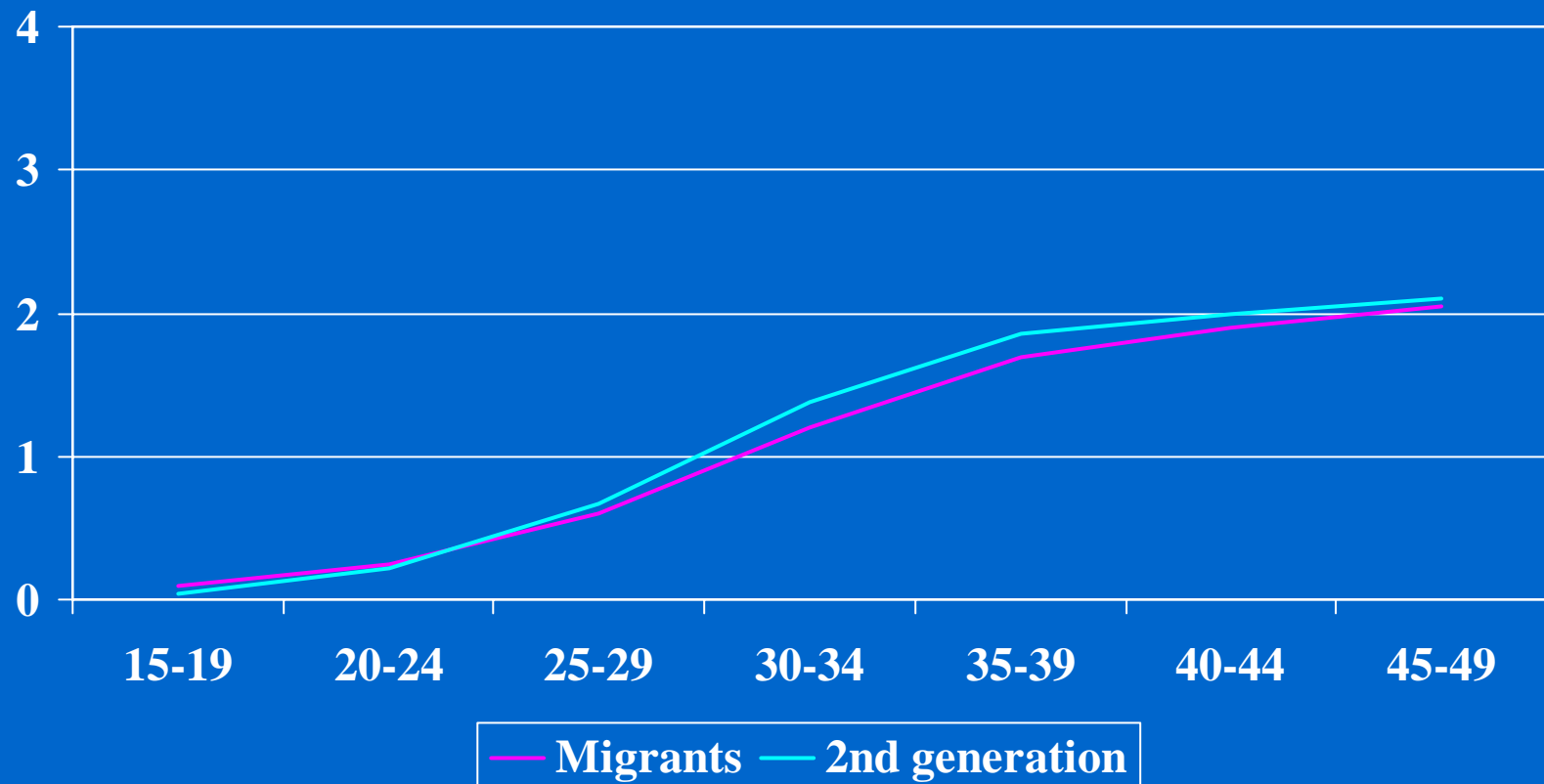
# Age-specific mean CEB by generation: New Zealand



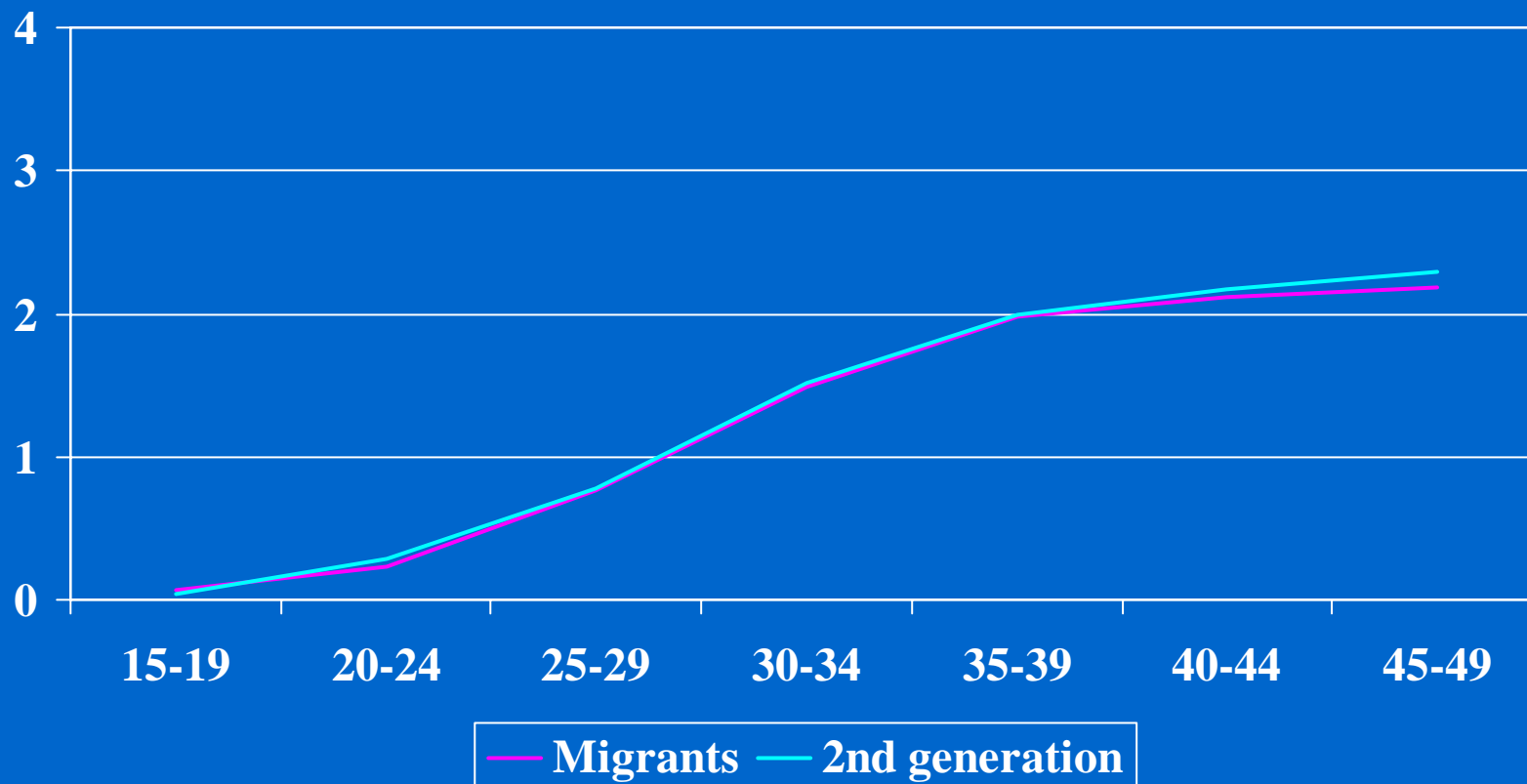
## Age-specific mean CEB by generation: Netherlands



## Age-specific mean CEB by generation: Germany



## Age-specific mean CEB by generation: UK/Ireland



## Age-specific mean CEB by generation: China

