

# Fertility decline and social change among the Negev Bedouin in Israel

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# Bedouin society in Israel

**There are 220,000 Bedouins in the Negev, 50% still live in 45 unrecognized villages**

The unrecognized villages are not connected to electricity, water and sewage. Their residents live in makeshift shacks and tents. Stone building is illegal, and expected to be demolished by court order.

The Bedouin claim that they are an indigenous people of the Negev and they have the right to land ownership, despite the fact that they didn't register it in land-books during the British Mandate and the Ottoman Empire.

The State attitude towards Bedouins is as **Internal Colonialism** (Zureik, 1979) and **Ethnocratic-relations** (Yiftachel, 2006), not as equal citizenship.

Cont'...

They were under military rule until 1966; restrictions of movement, education, work, medical treatment; hunger.

They were evacuated from the north-western (good agricultural area) and central Negev to the "Siyag Zone"- an arid Zone, east of Beer-Sheva.

Restrictions on Bedouin's cattle raising and agriculture, destruction of crops, plowing fields and orchards, spraying agriculture fields with planes and more.

Massive land expropriation

Concentration of the Arab (Bedouin) population and decentralization of the Jewish population (Yiftachel, 2006).

# Houses demolition

## Demolition of houses

That built without permits in the unrecognized villages (“unrecognized”- so no master-plan, no building permits).

More than 60,000 structures defined as ”non-legal”.

In 2011, 1080 houses were demolished (Yiftachel, 2013).



Cont'...

Government-planned Bedouin towns : Under-development, high density, low budgets, inappropriate infrastructure (Swirski, 2006)

Ranked the lowest ratings of the CBS socio – economic index of the populations.

Low level of education and income; poverty, criminal activity and violence.

Very high infant mortality rate

11 per thousand, compared with 3.3 in Israel - in 2014 (CBS, 2015).

Traditional social structure: tribalism, mutual responsibility and blood vengeance, serious conflicts between tribes, Low status of women, endogamous marriage (70% ), polygamous marriage (20%-30% of marriages)

# **The Idea behind the research**

## **The Global Economic Conception**

reducing child allowances and government expenditure

**Unregistered Children**- not eligible for child allowances

**General Framework of Analysis**: fertility is a social phenomenon in which courses of action and thought become individual within the context of the society in which people live.

## **Research Questions:**

1. What are the main factors that have led Bedouin society to maintain very high fertility rates, despite all the changes they have experienced, from 1948 to 2000?
2. What are the factors for fertility decrease from an average of 9 TF in 2001-2003 to 5.5 in 2012-2014



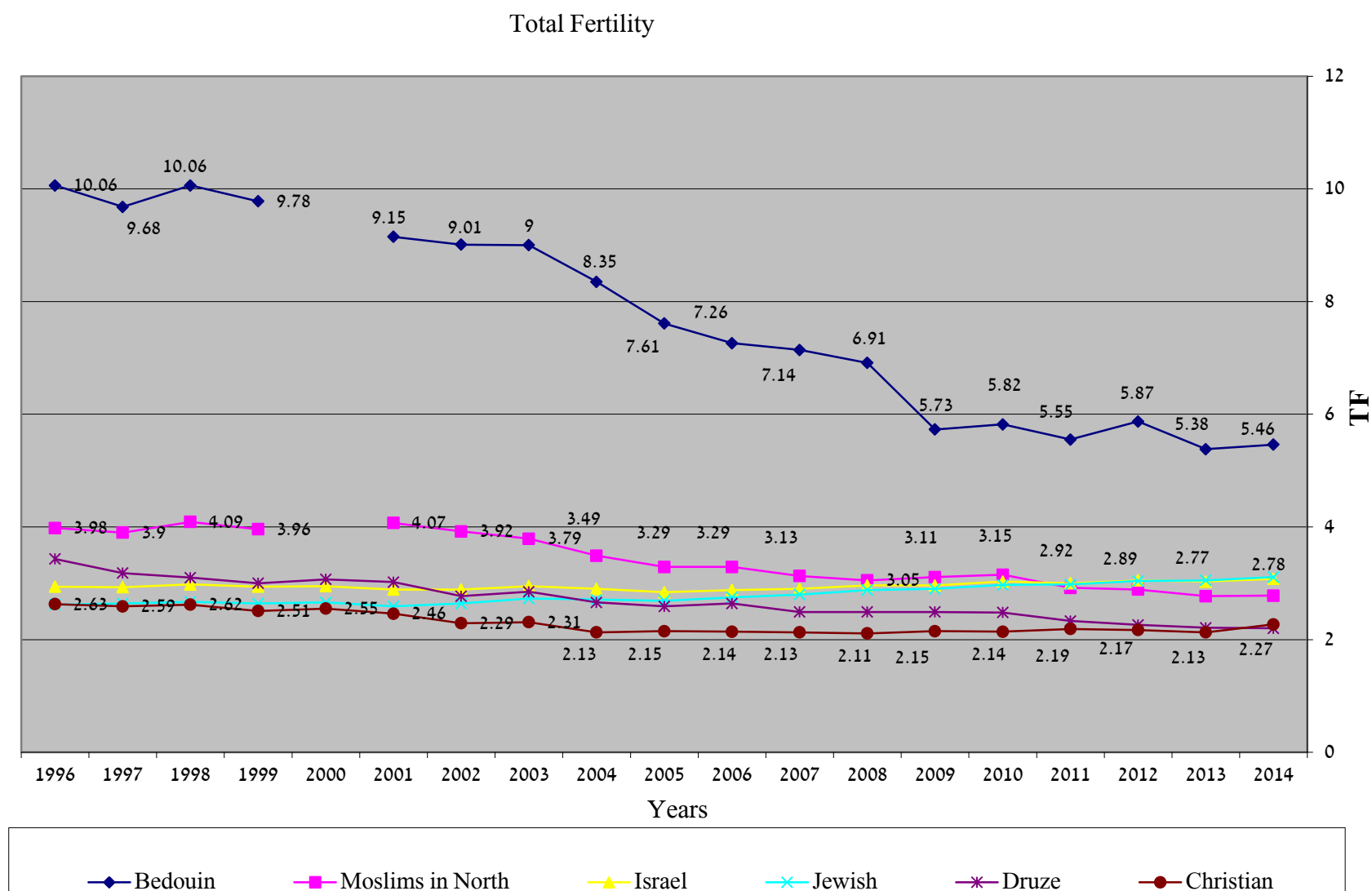
## Very high rates of Bedouin fertility

The Bedouin community in the Negev has continued to maintain a very high fertility rates

In 1998 TF reached **10.06** births per Bedouin woman, versus **4.09** for the Muslims in the North of Israel and a national average of **2.98**

From 2003 to 2014 total fertility decreased from **9** to **5.46** children, but still remains almost double the **Moslems in the north- 2.78** and the national average- **3.08** , **Jewish- 3.11**, **Christian-2.27**, **Druze- 2.2**

# Figure 1: Total Fertility in Israel, by population group





# **Methodology**

In this study we use data from the second Socio – Economic survey- 2007 of the Galilee Association.

A representative sample of 540 Bedouin households in recognized settlements and unrecognized villages.

## **Dependent variable**

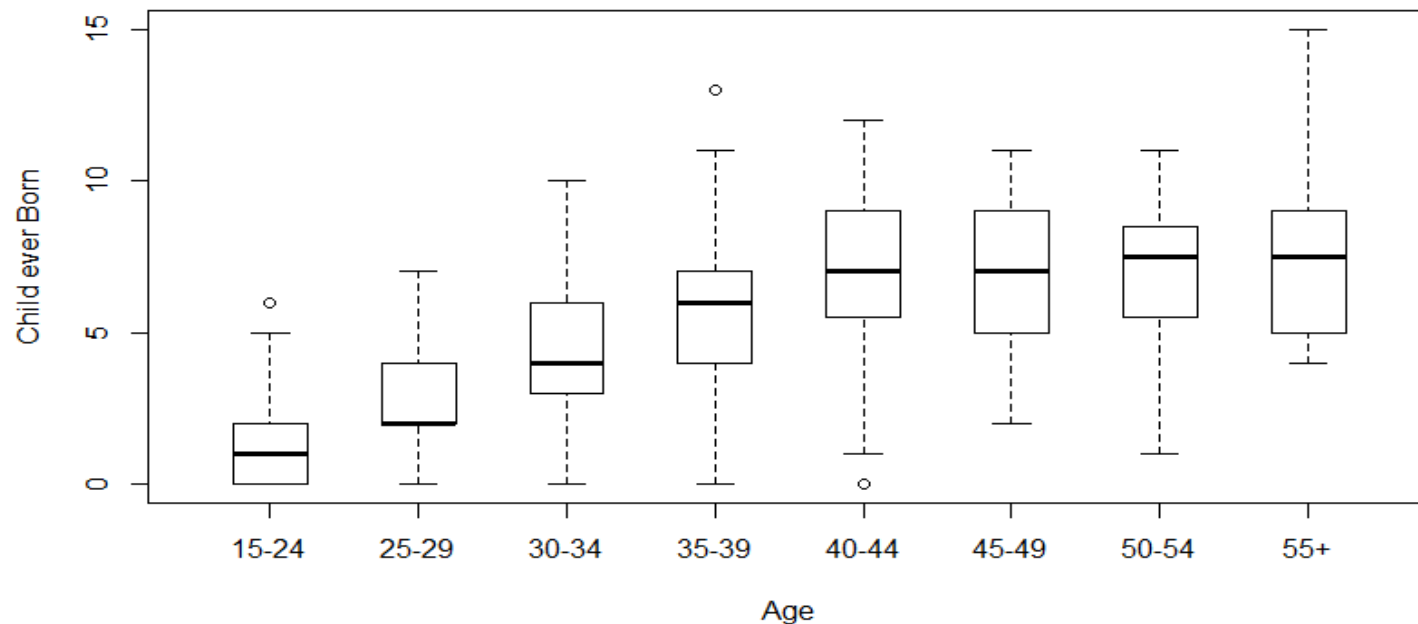
the number of Children ever Born (CEB) per Bedouin woman

## **Independent variables:**

1. Modernization
2. Traditional family structure
3. Relationship between the Bedouin and the State

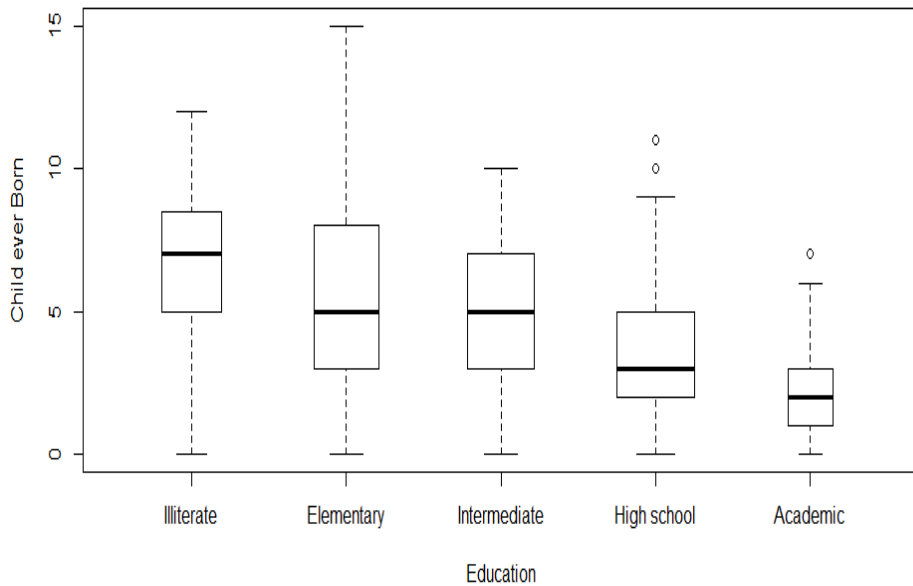
# Findings: bivariate analysis

1. Women's age is the most significant variable affecting fertility. The average number of children per woman increases from 1.4 children at age 15-24, to 8 at age 55+.

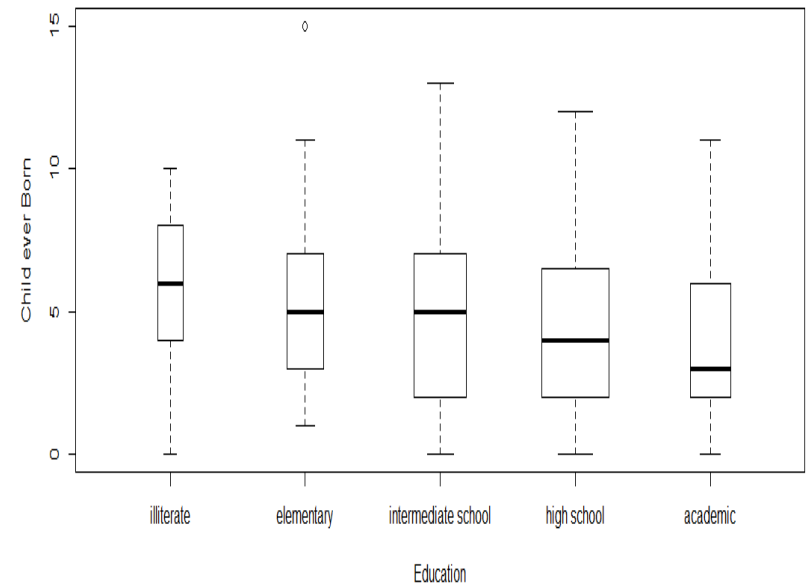


Con'...

2. There are significant differences in fertility by husbands' and wives' level of education, from an average of 7 children among illiterate women to just 2.25 children among university graduates (husbands: from 5.9 to 4.1).



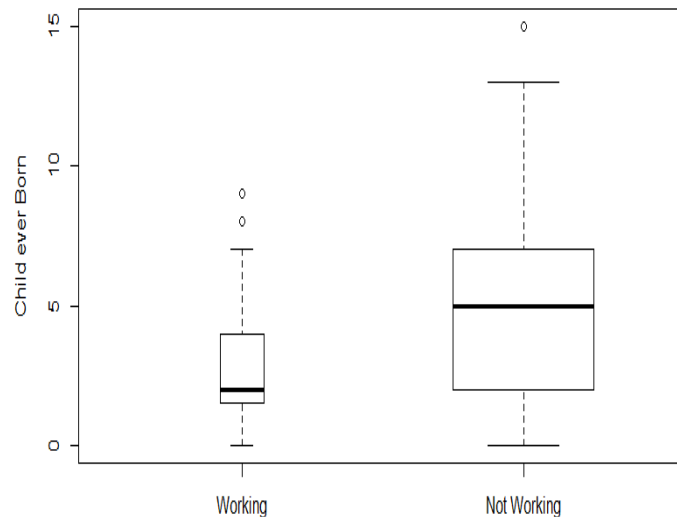
**Wives**



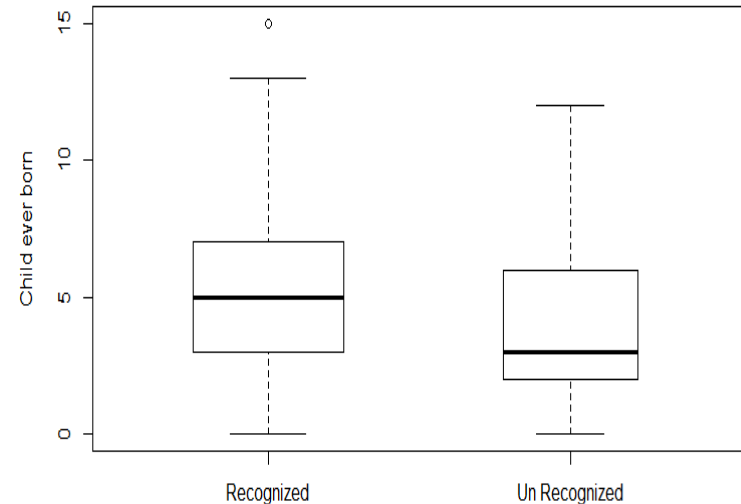
**Husbands**

Con'...

3. Working women have about half as many children as non-working women
4. In urban settlements fertility is about one child-per-woman higher than in unrecognized villages



Working-not working



Recognized-unrecognized

Con'...

5. We did not find any evidence of a positive effect of conflictual relations of Bedouin population with the state on fertility. Moreover, women's fertility in families with conflictual relationship with the state was significantly lower.

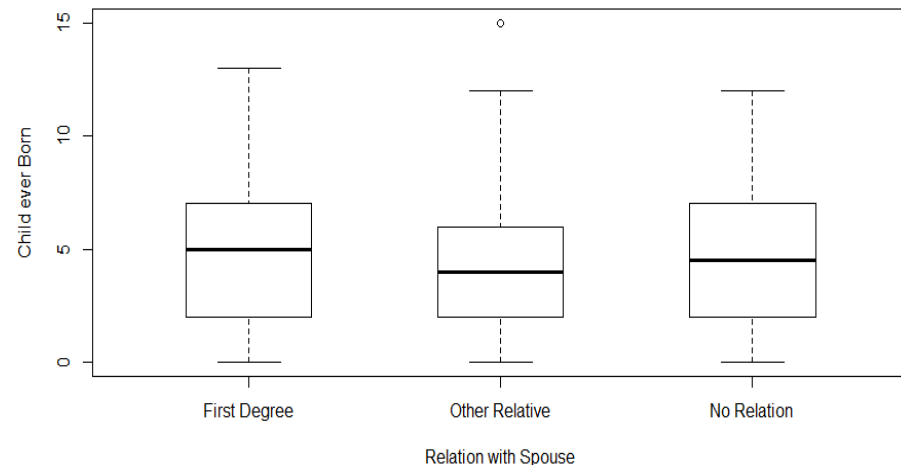
Fertility is half a child lower among families who have suffered displacement, home demolitions, or destruction of crops by government agencies.

But: With controlling for age the fertility differences were not significant.

Con'...

6. Fertility is considerably higher among women in polygamous than in monogamous unions (average- 6.96 vs. 4.24)

7. Marriage patterns did not affect the level of fertility, and there were no differences between women married to parallel cousins, to other members of the same tribe or outside the tribe



Con'...

8. Women with a high standard of living, had, on average, one child more than did women with a low standard of living.

9. Women with low personal modernity had, on average, 1.6 children more than Women with high personal modernity

10. Women with low middle-class life-style had one child more than Women with high middle class life-style.





**Table 1: the effect of different variables on fertility and the effect of the interaction between women's age and standard of living on fertility- GLM model (poisson regression)**

<b>Women's age categories</b>	<b>Variables with interaction</b>		<b>Variables with no interaction</b>	
	<b>Net effect of age:</b> exp-coefficient (Z value) Sig ***	<b>Interaction's effect: age and standard of living</b> exp-coefficient (Z value) Sig ***	<b>Variable</b>	<b>Variable effect:</b> exp-coefficient (Z value) Sig ***
15-24	1.543 (4.33)***	1.063 (3.149)**	<b>Woman's education-</b> over matriculation certificate Base: less than matriculation certificate	0.634 (-4.15)***
25-29	3.202 (17.01)***	1.045 (3.445) **	<b>Type of settlement-</b> recognized Base: unrecognized village	0.881 (-2.37)*
30-34	4.544 (24.61) ***	1.031 (2.628) **	<b>middle-class lifestyle:</b> <b>Known lifestyle</b> Centered at mean NA set to 0 <b>Unknown lifestyle</b> Base: known lifestyle	0.971 (-1.86) § 1.142 (2.68)**

35-39	6.186 (28.12) ***	1.029 (3.025) **	<b>Sig. code:</b> *** $p < 0.000$ ; ** $p < 0.01$ ; * $p < 0.05$ † $p = 0.0511$ ; § $p = 0.0631$
40-44	6.696 (29.32) ***	1.023 (2.794) **	
45-49	6.545 (25.19) ***	1.0216 (1.951) †	
50-54	6.998 (21.3) ***	1.0225 (1.496) n.s.	
55+	8.24 (13.33) ***	0.9105 (-2.259) *	

<b>Compatibility Test</b>	
<i>Null Deviance (1078.7, 497) is significant</i>	$p = 0$
<i>Model (Residual) Deviance (477.5, 478) is not significant the model is reconstructing the original data</i>	$p = 0.498$
<i>The difference between Null deviance and Residual deviance is significant The model contributes explain the phenomenon</i>	$p = 0$
<b>Explained "variance" = 56%</b>	
1- deviance / Null deviance : $1 - (477.5 / 1078.7) = 0.55734$	

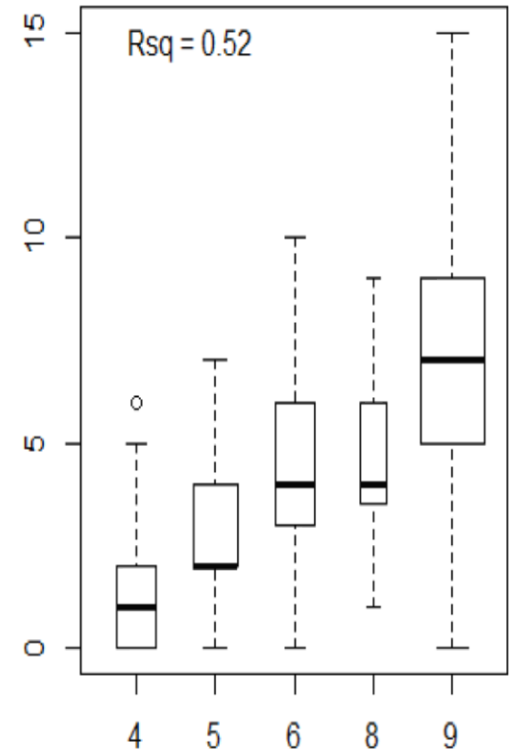
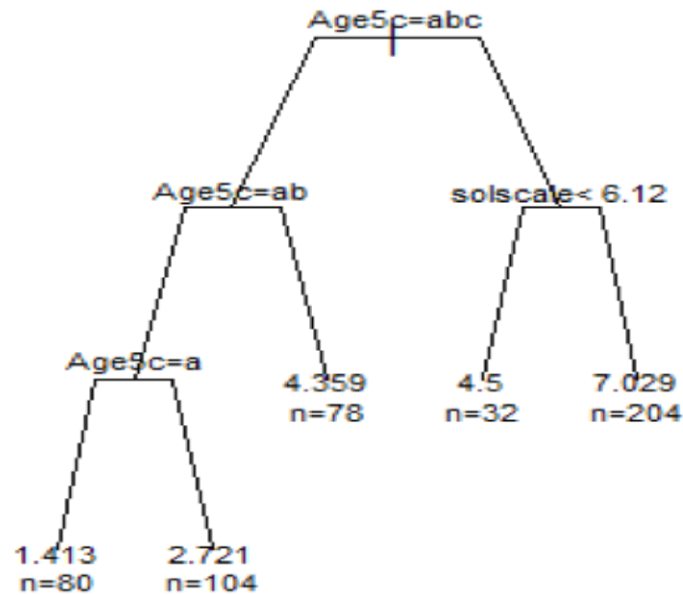
## Multivariate Analysis (GLM, Poisson Regression):

1. The major effect on fertility was age: the number of children increased consistently from one age group to the next (Table 1, Figure 2).
2. Standard of living operated in interaction with age, but its net effect was *positive*, and this effect declined consistently with age, so that at age 55+ the effect was negative.
3. **Education** decreased fertility, as did a middle-class lifestyle. Fertility was particularly high among the group of women who did not answer the lifestyle questions.
4. Net of these effects, fertility was *lower* in the recognized urban settlements than in the unrecognized villages.

## Figure 2: Partition Tree Analysis of Children Ever Born

Tree- group a: 15-24, b: 25-29, c: 30-34

Boxplot- group 4: 15-24, 5: 25-29, 6: 30-34, 8: age >34 sol < 6.12, 9: age >34 sol >6.12



# Conclusion:

Variables with *positive* effect on fertility:

- 1) Woman's age
- 2) Polygamy
- 3) Standard of Living (declines with age)

Variables with *negative* effect on fertility:

- 1) Education (wives and husbands)
- 2) Woman's work
- 3) Personal modernity of women  
style of the family
- 4) Middle-Class life-
- 5) Urban settlements



Cont'...

Variables with *no-effect* on fertility:

1) Conflictual relationship with the State 2) Endogamy

**But...**

1. The major effect on fertility was woman's age, and it also effects other variables. With controlling for age, the effect of some variables was not statistically significant

2. There was an interaction of age and standard of living. The effect of standard of living declined consistently with age.



Cont'...

3. Recursive partitioning analysis shows that age and standard of living are the most distinguishing variables that effect Bedouin Fertility.
4. In the Bedouin society, It's clear that young women are more educated, working in modern occupations, adopting modern norms and lifestyle than old women.
5. Fertility decline is a social and demographic response to the increasing pressure created by rapid population growth within a restricted area.
6. Child allowances have indirect effect on fertility by affecting families income and standard of living.
7. As with all social change, we can identify vanguard groups, but the change cannot be explained in relation to individual characteristics alone.