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**Research Article** 

# The Effect of Wars on Changing the Average Family Size for the Population of Anbar Province (1977- 2018) and its Future Expectations until 2028

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#### Abstract

The average family size is considered one of the prominent population characteristics for the communities. The study of the changes occurring in the average family size and their causes is considered important in the limitation of the population characteristics now and in the future. The average family size represents a reflection of the demographic postulates and the political, social and economic circumstances through which the society passes. It draws a picture for the population society and the type of the main economic activities and the role of the woman in it. In light of this, the study aims at investigating the changes in the average family size for the population of Anbar Province for the period from 1977 to 2018 and the influential factors such as wars and the security issues affecting these changes. It aims, moreover, to explore the directions of these changes during the study period which have taken different trends and varied negatively and positively in place and time as well as the expectancy of their future orientation until 2028. The problem of the study is limited to the recognition of whether there is a change in the average family size in the population of Anbar and the directions of this change, and whether wars have had any effect on this change during the study period. The most important findings of the study point to an increase in the average family size in the Province occurring at the beginning of the study and during its second decade. However, it decreased by the end of the twentieth century and the beginning of the twenty first century till the end of the study period. Another important finding is the clear variation in the family size in the Province in the rural and urban population with a continuous superiority of the rural over the urban population. The study recommends decreasing of the family size resulting from the high fertility in order to decrease the society needs and direct part of the development revenues towards the infra-structure so that the state will be able to provide security, services and necessary resources for the population. The state should work to make a comprehensive and rapid economic development which provides work opportunities for both sexes. This will prevent making big families that are economically costly and exploit the parents' time in bringing children up.

#### **Keywords**

wars, average family size, Anbar.

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# Introduction

Population is considered the goal and instrument of every society's program. It enables all the plans to revolve on the human being; therefore, the majority of the studies draw their direction towards population to enable putting forth the solutions to the social, economic and developmental problems. The increase in the population crises is affected by the demographic, economic and social circumstances because population nowadays is a social and economic subject in addition to being a demographic one. Countries are paying attention to the population on the basis of the organic relationship between the population and its characteristics and between the development and its population requirements. Due to the significance of the change in the average family size for the population of Anbar and the affecting factors and in order to illustrate these changes, their trends and the affecting factors such as wars during the study period, this subject has been chosen to be addressed in sections starting with an overview of the development of the population size in Anbar, average of population growth and the population relative change according to the environment. In the following section the average family size at the time of the study in the rural and urban population and its effect on the general total of the population is studied to show the factors contributing in maintaining high family size. This is followed by a study of the changes in the average family size in the rural and urban districts and the entire population whether being absolute or relative as well as its time variation. Finally results arrived at which can draw a clearer picture of the society when putting forth future plans have been reviewed.

# Statement of the Problem

In spite of the increase in the average family size of Anbar Province during the period of the study, it has been subject to positive and negative changes in the urban and rural zones or at the global amount level due to the effect of many factors. On this basis, the problem of the study is formulated in the following questions: is there a change in the average family size in Anbar Province.? What are the directions of this change? Have the wars had any effect on this change during the study period?

### The Hypothesis

It is hypothesized that there is a change in the average family size for the total population according to the environment resulting from various factors with a spatial and temporal variation of the effect of these factors. Among these factors are the wars which the region of the study has passed through.

#### Value of the Study

The value of the study comes from its attempt to shed the light on one of the characteristics of the population, namely, the average family size and the relevant influential factors so as to draw a picture of the population society. This is significant since the public and private policies all seek to cope with the population's needs for goods and services. It is on the basis of the population's characteristics that these goods and needs are formulated since the population represents the means and end of development and its restricting factor.

### Spatial and Temporal Limits of the Study

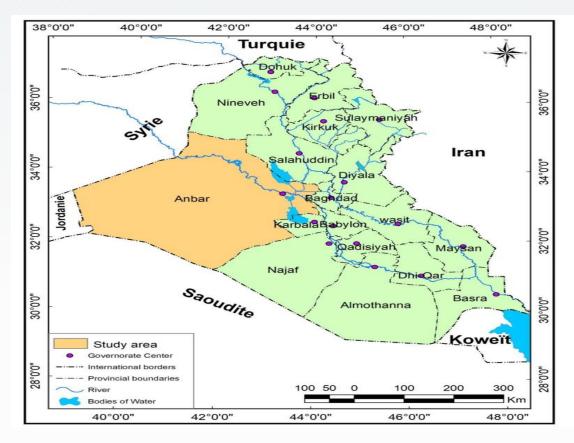
The spatial limits are those of Anbar Province. Anbar lies in the western area from the middle of Iraq. It has international borders with the Syrian Arab Republic to the north west, the Hashemite Kingdom of Jordan to the west, the Saudi Arabia Kingdom to the south west. As for the local administrative borders, it has borders with Nineveh to the north, Salahiddin to the north east, Baghdad to the east and Babylon, Najaf and Kerbala to the south and south east Map (1). Moreover, the astronomical site extends from (23<sup>-</sup> 30° - 15<sup>-</sup> 35°) northern and between the longitude (45<sup>-</sup> 38° - 10<sup>-</sup> 44°) east. The area of Anbar Province is very immense. It is considered the biggest province in Iraq (138288) km<sup>2</sup> or it equals 31.8% from the total area of Iraq which is (435052) km<sup>2</sup> (the annual statistics 2012-2013 – table 1/1). As regards the temporal limits of the study, it

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extends from 1977 to 2018.

#### Map (1)

The site of the Area from Iraq



**Source:** Ministry of Water Resources. The State Organization for Surveying. Iraq Administrative map scale 1: 100000 of the year 2000.

# The Field Study

The study required the design of a questionnaire Appendix (1) to obtain the average family size for the year 2018. The questionnaire was distributed with the help of students at the Department of Geography-College of Education for Humanities-University of Anbar at the end of 2018 on the size of a random sample of Anbar Province of the total population (1771656) persons. The sample of the field study is calculated according to the following formula (Al-Salihi, 2019).

$$N = \frac{t^2}{r^2 + \frac{1}{n}t^2}$$

for:

N = the size of the required sample. t = the tabulated value as regards the allowed error. r = the probability of the error. n = the number of statistical society.

$$N = \frac{(1.96)^2}{(0.05)^2 + \frac{1}{1771656} (1.96)^2} = 1540$$

The study sample is represented by (Burnham et al., 2006) units (family) (771) for the urban, and (769) for the rural populations distributed on the districts of the Province according to the population ratios in the urban and rural districts.



# **Section One**

# The Development of the Population Size in Anbar Province during the Study Period

#### First: Population Growth in Anbar Province during the study period.

The population of Anbar is (1771656) (Clayton & Thomson, 2014) in the year 2018. The population is doubled three times from the period 1977-2018, as Table (1) shows, in an annual growth ratio for this period amounting to (3.3%). This is considered a high growth ratio which falls in the limits of the transitional population stage through which population societies pass. It comes from the high percentage of new born, the decrease in the percentage of deaths and the discrepancy of the growth ratio during this period between a census and another which affects the ratio of the population increase and affects the discrepancy of the increase in the population size among the censuses.

Despite the discrepancy in the annual growth rates throughout the study period which reaches (4.3%) from 1977 to 1987 then it decreases to (3.7%) from 1987 to 1997 then it decreases for the second time to (3.1%) from 1997 to 2009 then the growth rate decreases to (1.9%) for the period 2009-2018, it is considered a high ratio for it extends (2%) or near (2%). If the current growth (1.9%) goes on in the same level, it is expected that it will reach (2138559) persons.

Despite the retreat in the annual growth of the population due to social, political and economic conditions in the country in the late years, the ratio remains near (2%) in the whole Province represents an indication of high new births and a decrease in the rate of deaths. This means a continuous increase in the population and a high average family size.

#### Table (1)

Growth of the Population of Anbar Province for the Period 1977-2018 and the expected in 2028

Year	Population <sup>(1)</sup>	Annual growth rate % <sup>(2)</sup>	Absolute increase	The rate increase compared to previous census
1977	466059	-	-	-
1987	710757	4.3	244698	76
1997	1023736	3.7	312979	25
2009	1483350	3.1	459614	44
2018	1771656	1.9	288306	19
2028	2138559 <sup>(3)</sup>	1.9	366903	20

The Source of above table:

(1) Republic of Iraq-Ministry of Planning/Census Committee for Statistics, the results of census of Anbar Province for the years 1977-1987-1997 and according to the numbering and inventory reports for the year 2009 and the estimates of 2018.

(2) The annual growth is obtained via the following equation:  $r = \left( \sqrt[t]{\frac{p_1}{p_o}} - 1 \right) \times 100$ 

r = the population growth.

p1 = number of the following census.

po = number of population in the previous census.

t = number of years between two censuses. (Freedman, 1978).

(3) Future predictions have been extracted using the following equation:

$$Pn = po (1 + \frac{r}{100})n$$

Where:

Pn = expected population number.

po = population number in reference year.

r = the population growth.

n = number of years between the reference year and the target year. (Harik, 1970).

# Second: Population Growth according to the Environment (rural and urban) of Anbar Province throughout the Study period.

Iraq followed the administrative norm (municipality service) as a basis for the distinction between the urban and the rural districts. The districts which lie within the limits of municipality are



considered urban. The rural are those which lie outside these limits (Haskell et al., 2012) Therefore, urban inhabitants are those who dwell within the limits of municipalities being the center of the governorate or district, whereas the rural are the remaining of the population. The study of population on the basis of rural and urban districts has a great importance in the geographical studies because this distribution represents the discrepancy of demographic, social and economic sides (Hyman et al., 2012). The average family size is considered one of the demographic characteristics which are represented by the environmental population distribution (urban or rural). From table (2) we notice that urban inhabitants of Anbar over (41) years doubled nearly three times. As for the environmental distribution, the ratio increased as regards the urban inhabitants in 1987 and decreased in the years (Khayyat et al., 2020). It reached (54.9%, 57.6%, 52.7%, 48.4%, 50.1%) respectively. The ratio of rural population comes in the reverse direction as opposed to the urban one in Anbar Province.

#### Table (2)

Numerical (per thousand) and Relative Distribution for Anbar Province Inhabitants According to the Environment (Urban (U) and Rural (R)) for the Period (1977-2018)

	19	77			19	87		1997				2009				2018			
U	%	R	%	U	%	R	%	U	%	R	%	U	%	R	%	U	%	R	%
25 5	54. 9	21 1	45. 1	47 2	57. 6	34 9	42. 4	53 9	52. 7	48 4	47. 3	71 8	48. 4	76 5	51. 6	88 6	50. 1	88 5	49. 9

**Source:** Republic of Iraq – Ministry of Planning – Statistics Organization. The results of the census of Anbar Province for the years 1977, 1987, 1997, and the Reports of Inventory and Numbering for the Year 2009 and the Estimates of 2018.

The retreat in the rates of urban inhabitants and the increase of rural inhabitants especially in the second half of the study period is due to the wars and economic blockade whereby economic activities were affected accordingly. The reduction in the standard of living for the urban inhabitants forced them to migrate from the city to the countryside so as to work in the agricultural production because it was economically more rewarding in periods of bad security circumstances in cities together with the difficulty of obtaining a piece of land to build a house, and the high costs of the construction of dwelling units because the government does not support in that affair. On the other side good opportunities are available in the countryside to obtain a piece of land with low price, the improvement in the communication and the gap between the rural and the urban becomes narrow. Thus, the village has become close to the city due to the progress in the transportation and communication together with the increase of fertility in the countryside. All these factors contributed into the high average family size.

# Second Two

#### The Average Family Size in Anbar during the Study Period

The average family size is considered a response to political, demographic, social and economic changes. All these factors could work collectively or individually to cause changes in the population characteristics particularly fertility which affects the high or low average family size. The effect can vary temporally and spatially between the urban and rural districts (Lyndon & Riyadh, 2020). This is clear from the average family size of Anbar Province. Table (3) illustrates this change temporally and spatially. This average will be addressed according to the environmental and total distribution of the Province.

#### First: Average Family Size of the Population of Urban Inhabitants in Anbar

From Table (3) we could notice that the average family size for the urban inhabitants in the Province is below average for all the years of the study in the rural side of the total number of the population. The lowest average family size was registered at the beginning of the study then it rose afterwards and it decreased at the end of the study. Diagram (1) shows the change in the



average family size in the urban side, level of change and amount of the average family size.

#### Table (3)

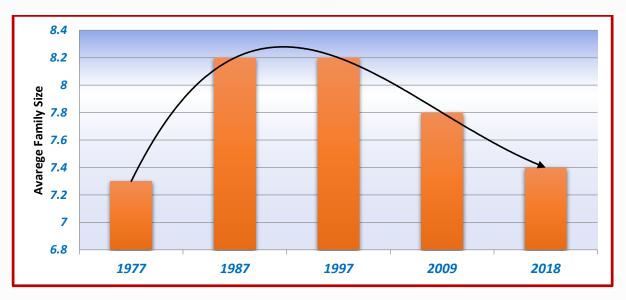
The Average Family Size according to the Environment (urban (U) and rural (R)) in Anbar during the Study Period 1977-2018

Year		1977			1987			1997			2009			2018	8
Environment	U	R	Т	U	R	Т	U	R	Т	U	R	Т	U	R	Т
Average Family size	7.3	8	7.6	8. 2	9.5	8.7	8.2	9.9	9	7.8	8.9	8.3	7.4	7.9	7.5

**Source:** Republic of Iraq – Ministry of Planning. Results of the Census of Anbar for the years 1977-1987-1997, Number of Buildings and Establishments of the year 2009 and the Field Study.

#### Figure (1)

Average Family Size for Urban Inhabitants in Anbar Province for the period 1977-2018



Source: The two Researchers work depending on table (3).

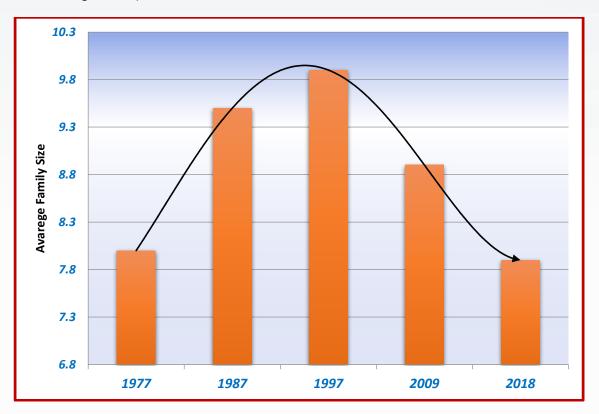
The average in urban side in the Province was (7.3, 8.2, 8.2, 7.8, 7.4) for the years 1977, 1987, 1997, 2009, 2018 respectively. The average family size for the urban side tended to increase at the beginning of the period till the nineties. This was due to various factors such as health development Irag witnessed and led in its turn to a reduction in the number of deaths especially children deaths. This was accompanied by an increase in the standard of living. The policy of the state at that period encouraged the increase in the number of births as a compensation for the losses in the wars and for the need for working labor to carry out development plans. The stability of the average family size till the end of the nineties can be attributed to the long familial structure whose effect continued till this period for economical reasons including the costs needed by the division and building of an independent family in addition to the social factor. The retreat in the average family size of the urban inhabitants in the mid of the period till now was due to various factors. These factors include the deterioration of the health level and standard of living resulting from the economical and political circumstances and wars which had an effect on the reduction of fertility as well as the state abandoning of its population policy and encouragement of increasing birth rates all led to the retreat in the average family size. If this retreat goes on, the average may reach (6.5) in the urban side in the year 2028.

#### Second: Average Family Size for the Rural Inhabitants in Anbar Province.

Table (3) shows that the average family size in the rural population is higher than that of the urban in all the years of the study. However, this rise of the average from the beginning till the mid of the period retreated amounting to (8, 9.5, 9.9, 8.9, 7.9) for the years 1977, 1987, 1997, 2009, 2018 respectively. Diagram (2) illustrates this.

#### Figure (2)

The Average Family Size for the Rural Inhabitants in Anbar Province for the Period 1977-2018



Source: The Two Researchers work depending on Table (3).

We can argue that the causes behind the changes, whether rising or falling, in the average family size during the study period are the same as those factors affecting the average in the urban side mentioned above. To those we add the cause of the superiority of the average family size in the rural side compared to the urban, namely, the continuous superiority the fertility ratio in the rural side. Moreover the people in the countryside are keen to the extended multi-family which all add to the increase in the family size. If the retreat goes on in the same rate in the late years, we expect the average family size to be (6.8) in the countryside in the year 2028.

#### Third: The average family size for the whole population of Anbar Province.

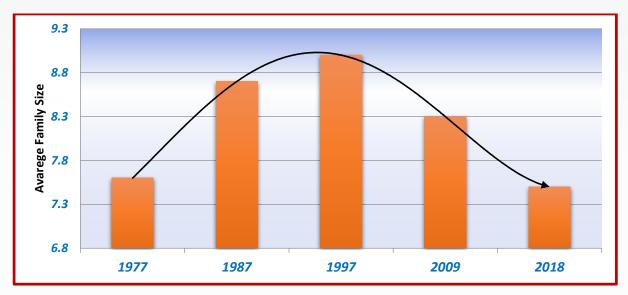
The total average family size in the Province involves the whole population number in the urban and rural sides. Therefore, figures representing the average family size in the urban side always indicate that it is the lowest and that of the rural side which is the highest in the area of the study. Since the average family size represents the ultimate goal in the urban and rural sides, the direction of the change is similar. Hence, the average family size in the Province was (7.6, 8.7, 9, 8.3, 7.5) for the years 1977, 1987, 1997, 2009, 2018 respectively. Figure (3) illustrates this difference. The average family size in Anbar took a linear direction similar to that of the average family size in the final outcome of both.

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#### Fourth: Annual growth of the average family size in Anbar Province 1977-2018

The change in the rate of the annual growth of the average family size in Anbar (Marr, 1970) does change negatively to less than one. The rate of the annual development throughout the study period was positive at the beginning. Then it began to retreat and became negative at the end of the study period Table (4). Therefore depending on this change and the remaining of the political, demographic, social, and economic factors as they are, we expect that till the year 2028, there will not be a big change in the average family size. It will be (7.1) for the whole total (urban and rural), whereby in the urban side it will be (7) and in the rural it will retreat to become (7.6).

#### Figure (3)



The Average Family Size for Anbar Population for the Period 1977-2018

The Source: The two researchers' work depending on Table (3).

#### Table (4)

Rate of the Annual Development of the Average Family Size in Anbar Province (Pidcoke et al., 2012)

1977-	77-1987 % 1987-1997 %			1997-	2009 %		2009-2018 %				
U	R	Т	U	R	Т	U	R	Т	U	R	Т
1.2	1.7	0.9	0.1	0.4	0.8	-0.5	-0.9	-0.7	-0.5	-1.3	-0.9

The Source: The Two Researchers' work depending on Table (3).

The decrease in the average family size to a large extent is an unreal objective in this short period due to the encouraging factors of high fertility. The increase of the urban growth does not necessarily lead to the tendency of the population to really think to keep the family size in balance with its present material capabilities and income to live a prosperous life because the people do not always change their behavior very quickly as they change the environment where they live. If all these indications intermingle supported by the educational level and the work opportunities for the woman and an increase in her educational level and economical independence, all these will participate actively in the reduction of the fertility in future. However, the availability of these individual characteristics are not enough to interpret the general fertility modes. The surrounding factors and the expectation of their future directions are vital factors in our societies. These factors could be the main reasons for fertility not to cope with the social and economical developmental process. These factors include the effect of religious institutions on people behavior, the social stance supporting early marriages and the traditional role of the woman deeply rooted in the society as well as the absence of a blurred transitional state population policy all will lead the changes in the average family size be simple as a reflection of the mild change in the fertility rate



which was (7.3) in 1980 and (7.1) in 1986 and (5.7) in 1996 (Rispler, 2006). It retreated only to (2%) for the ten years 2000-2009. It was (5.1) in 2000 and (4.9) in 2009. According to the fertility hypotheses, Iraq is considered one of high fertility regions and Anbar is part of Iraq. Therefore, fertility expectation it will decrease to (4) children per woman in 2025 and (3) in 2050. However, the decrease in the fertility rate will be very low and will reach an alternative fertility rate compared to its present level to the substitute level amounting to (2.1) children only after 2050. The continuous increase in fertility rates and their very slow decrease can be attributed to the relative low marriage age, non-delay of pregnancy, scarcity of the family planning facilities, and absence of a state population policy which aims to decrease fertility rates. It is also attributed to the decline in the woman education and the decrease of her participation in the work market (Roberts et al., 2004) together with the social factors such as the belief of the moral and economic security of the old aged the parents, the spread of the extended family and the importance of the role of children in the economies of the family and the boasting and pride of the family which gives birth to more children (Shapiro & Weidmann, 2015). The procreation conduct and its effect on the family size is a product of the global factors which affect the demographic development for the society. These include the social and the economic levels of the individuals, the religious beliefs and the cultural factors which shape the individual and enable him to formulate his view about the world. It delimits his social and familial behavior mostly including the procreation conduct.

# **Section Three**

## Change in the Average Family Size for Anbar Population

Linguistically, change means to cause something to be different from its state, to change, replace and transform it (Shawkat, 2019). Idiomatically, change means the increase or decrease in the population or its characteristics. It means that the change could be liable to an increase and decrease (Shawyer et al., 2017). Accordingly, the aim of the research is the study of the changes occurring in the average family size for the population of Anbar. This requires the study of quantitative sides of change and its implications. Through the quantitative change it is possible to reveal the change in the relative power to the average family size of Anbar population. This is done via taking the amount of the change in two limited dates represented by (Stevens et al., 2012). On this basis, there are a number of methods followed by geographers to study the change and examine its spatial directions and the various geographical phenomena. In order to study the change in the average family size for the population the study area and pinpointing its directions, two methods are followed:

#### First: The absolute change in the average family size for Anbar population.

The change in the absolute number can be obtained via the following formula (Wagner, 2004).

#### The absolute change= value in the following census – value in the previous census.

Table (5) shows the absolute change in the average family size for Anbar population (Al-Salihi, 2019). There is a big difference in the absolute change for this average in the Province.

#### Table (5)

The Absolute change in the Average Family Size for Anbar Population

1977-	1987		1987-1997			1997-2009			2009-2018		
U	R	Т	U	R	Т	U	R	Т	U	R	Т
0.9	1.5	0.7	0.1	0.4	0.3	-0.5	-1	-0.7	-0.4	-1	-0.8

The Source: The two researchers' work depending on Table (3).

The change direction was positive at the beginning. Then it started to dwindle down in the mid period then it retreated as positive and it became negative at the end of the period. (Figure 4) The change was positive for the period (Burnham et al., 2006) in the urban and rural as well as the



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total population in the Province. In the urban side it was (0.9). The biggest change was in the rural side for the average family size at the Province level (1.5) whereas the change was (0.7) on the whole level (urban and rural).

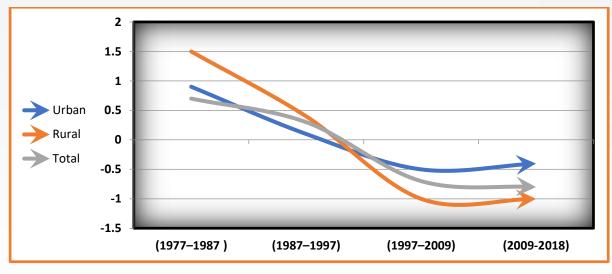


Figure (4) The Absolute Change in the Average Family Size for Anbar Population

The change direction for the period (Clayton & Thomson, 2014) differed from the previous period (Freedman, 1978). It pointed to a reduction during this period. The change was slight (0.5), whereby the absolute change in the average family size in the urban side was (0.1) whereas the absolute change in the rural side was (0.4) and the global both the urban and the rural sides was (0.3).

As far as the period (Harik, 1970) is concerned, the change differed in the second period. In this period, it was clear and taking a negative direction with no positive change. The absolute change for the population of the rural side was (-0.5) in the average family size and in the countryside it was also negative amounting to (-1). The highest absolute change in this period was (-0.7) in the whole Province (rural and urban), taking a negative direction. During the period 2009-2018 it continued to be negative in both the urban and rural sides (-0.4, -1, -0.8) respectively, due to a retreat in the average family size.

#### Second: The Ratio of the Change in the Average Family Size in Anbar Governorate

In order to know the extent and ratio of the change and the directions of the average family size in Anbar Province, the relative change method was followed (Haskell et al., 2012) according to the following mathematical equation (Hyman et al., 2012).

value in the following census - value in the previous census	
Change ratio = X 100	)

#### Value in the previous census

It is obvious from table (6) that the relative change in the average family size for Anbar population for the periods (Khayyat et al., 2020) was (12.3%, 1.2%, -6%) respectively for the urban side. The relative change in the family size for the rural side for the same period was (18.7%, 4.2%, -10%) respectively. The relative change in the average family size for both was (9.2%, 8.4%, -1.2%) for the same periods. It was (-5.1%), (-11.2%), (-10.6%) in the urban and rural sides respectively for the period 2009- 2018.

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The Source: The Two Researchers work depending on Table (5).

#### Table (6)

Relative Change % for the Average Family Size in Anbar Province

1977-	1987		1987-	1987-1997		1997	1997-2009			2009-2018		
U	R	T	U	R	T	U	R	Т	U	R	T	
12.3	18.7	9.2	1.2	4.2	8.4	-6	-10	-1.2	-5.1	-11.2	-10.6	

The Source: The Two Researchers work depending on table (3).

It can be noticed that the relative change during the study period was positive in (Lyndon & Riyadh, 2020) in both urban and rural sides. The highest relative change was registered in the rural side (18.7%) and the relative change in the urban side was (12.3%) and the lowest rate in the total was (9.2%). As for the relative change in the average family size for the second period (Marr, 1970) it took a positive direction, and it was low not exceeding (10%). The highest relative change was on the total (8.4%) and the lowest was in the urban side (1.2%). The change in the rural side was higher than that in the urban (4.2%). As for the third period (Pidcoke et al., 2012), the relative change was different from the first and second periods in its direction. It pointed negatively in the urban and rural sides and the total. The highest change was in the rural side (-10%) and the lowest in the total (-1.2%). The change for the urban side was (-6%). In the fourth period (Rispler, 2006), the relative change was in the rural side (-11.2%). The change in the total. The highest relative change was in the urban and the rural sides as well as in the total. The highest relative change was in the rural side (-1.2%). The change in the total. The highest relative change was in the total (-1.2%). The change for the urban side was (-6%). In the fourth period (Rispler, 2006), the relative change was in the rural side (-11.2%) and the lowest in the total. The highest relative change was in the rural side (-1.2%). The change for the urban side (-11.2%) and the lowest in the total.

We notice that the ratios in the change in the previous table for the whole periods (Roberts et al., 2004) was positive in the urban, rural and total, then it dwindled down for the period (Shapiro & Weidmann, 2015). Then it took a negative direction and continued in this direction for the periods (Shawkat, 2019) in both the rural and the urban side and the total. Figure (5) shows this change and its direction.

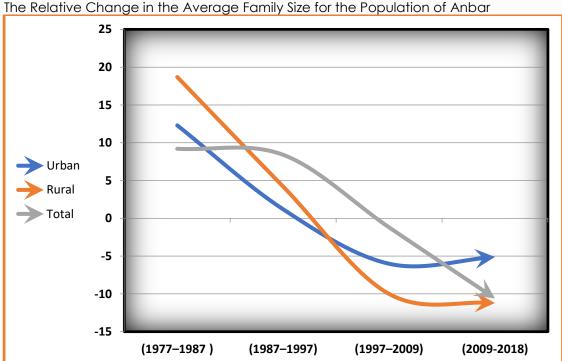


Figure (5) The Relative Change in the Average Family Size for the Population of Anbar

**Source:** The Researchers work depending on table (6).

It is also noticeable that the second period (Shawyer et al., 2017) was transitional between the positive direction for the relative change in the period (Stevens et al., 2012) and its negative direction in the following periods.



## Conclusions

Throughout surveying the average family size in Anbar Province and the relevant changes, the study reveals a number of facts and reaches the following results:

- 1. The study reveals a rising of the average family size in the Province from the beginning of the study which was close to the commencement of the Iraq Iran war until the end of the first decade from the study period. The state was pushing the trend of increasing the births and marriages through incentives and grants given to those who have new marriage projects and the families that have new births from the fourth child onwards.
- 2. The study reveals the continuation of the increase in the average family size during the second decade after 1988 due to psychological factors. This is an international phenomenon to encourage people to marry and give birth. It participates in the observation of this phenomenon during the war. It contributes to the observation of the high level of the family size which was accumulated since the first decade.
- 3. The study reveals a retreat in the average since the end of the twentieth century and the beginning of the twenty first century due to wars, security crises and the non-stability of the state. The Province has had the biggest share of these crises besides other factors due to security and non-stability factors.
- 4. In the last decade from the study period, the average continues in its decrease due to the continuation of the security circumstances, military operations and displacement. The non-stability pushes the people to think of postponing all the projects including marriage projects which contribute to the decrease of the average.
- 5. The study reveals clear discrepancy in the average family size in the rural and urban sides and the continuous superiority of the rural side in the average for the traditions, social habits and the type of the economic activity all have a prime role in the delimitation of the family size in the rural part. The urban people are quicker in responding to the environmental circumstances.
- 6. The study could arrive at the reason behind the high average family size which was the high fertility and the number of big families consisting of more than one subfamily. This is due to the economical and social circumstances as well as the norms and traditions together with the state policies.
- 7. It is probable in the future that the average family size in the rural side would come close to the urban side. This is due to the closeness of the village to the city due to developments in transportation and communication. The differences vanish with regard to the social conduct in the countryside as compared to the city.

# Recommendations

The study puts forth the following recommendations:

- 1. The formulation of a national population policy which adopts the change based on the social, economic and demographic aim. This will cope with developmental plans and the issue of legislations which implement them.
- 2. The reduction of the family size which was based on the high fertility so as to reduce the society needs and to direct it as a part of the revenues towards the infra-structure. This will enable the state to secure services to the population.
- 3. Making a quick comprehensive and economical development to find work opportunities for both sexes. Such measures will prevent the formation of bigger families which will be economically costly. Moreover it requires an adequate time from the parents to bring children up.
- 4. Emphasis should be put on the rotation of the census due to its importance in the following up the social, economic and demographic change and to compare the results on different periods of the censuses. This was not done in Iraq especially after the occupation.

#### Appendix (1)

Ministry of Higher Education and Scientific Research University of Anbar College of Education for Humanities Department of Geography

RICE

The two researchers (Omar Fatah Kamel and Ayad Mohammed Mikhlif) are conducting a field study regarding their research entitled (Al-Salihi, 2019) Please answer the following items of the questionnaire by ticking ( $\sqrt{}$ ). The study is only for scientific research without mentioning the names.

**Definition of the family:** a person or a group of persons tied or untied by the kinship who live in dwelling unit. (Wagner, 2004)

What is meant by the urban population: those people who reside within the limits of municipalities such as the center of districts.

What is meant by the rural population: the people who reside outside the limits of municipalities.

#### The Geographical Site

Domicile	District	Quarter	Urban	Rural
Anbar				

#### The Size of the Family and Its Construction

Number of Family Members Number of Males Number of Females

## References

- Al-Salihi, K. A. (2019). The epidemiology of foot-and-mouth disease outbreaks and its history in Iraq. Veterinary world, 12(5), 706.
- Burnham, G., Lafta, R., Doocy, S., & Roberts, L. (2006). Mortality after the 2003 invasion of Iraq: a cross-sectional cluster sample survey. *The Lancet*, 368(9545), 1421-1428.
- Clayton, G., & Thomson, A. (2014). The enemy of my enemy is my friend... The dynamics of selfdefense forces in irregular war: the case of the sons of Iraq. Studies in Conflict & Terrorism, 37(11), 920-935.
- Freedman, R. O. (1978). The Soviet Union and the Civil War in Lebanon, 1975-76. The Jerusa lem Journal of International Relations, 3(4), 60-93.
- Harik, I. (1970). Syllabus II: An Approach To The Study Of Middle Eastern Politics. Middle East Studies Association Bulletin, 4(1), 30-41.
- Haskell, S. G., Ning, Y., Krebs, E., Goulet, J., Mattocks, K., Kerns, R., & Brandt, C. (2012). Prevalence of painful musculoskeletal conditions in female and male veterans in 7 years after return from deployment in Operation Enduring Freedom/Operation Iraqi Freedom. *The Clinical journal of pain*, 28(2), 163-167.

Hyman, J., Ireland, R., Frost, L., & Cottrell, L. (2012). Suicide incidence and risk factors in an active duty US military population. *American journal of public health*, 102(S1), S138-S146.

- Khayyat, H. A. K. A., Sharif, A. J. M., & Crespi, M. (2020). Assessing the Impacts of Climate Change on Natural Resources in Erbil Area, the Iraqi Kurdistan Using Geo-Information and Landsat Data. In Environmental Remote Sensing and GIS in Iraq, 463-498.
- Lyndon, N., & Riyadh, A. I. (2020). Women Muslim Hardship after Al-Anbar Province War of Iraq. Islāmiyyāt, 42, 69-74.
- Marr, P. A. (1970). Iraqi Revolution-Case Study Of Army Rule. Orbis-A Journal Of World Affairs, 14(3), 714-739.
- Pidcoke, H. F., Aden, J. K., Mora, A. G., Borgman, M. A., Spinella, P. C., Dubick, M. A., ... & Cap, A. P. (2012). Ten-year analysis of transfusion in Operation Iraqi Freedom and Operation Enduring Freedom: increased plasma and platelet use correlates with improved survival. Journal of Trauma and Acute Care Surgery, 73(6), \$445-\$452.
- Rispler-Chaim, V. (2006). Between Islamic Law and Science: Contemporary Muftis and Muslim Ethicists on Embryo and Stem Cells Research. Comparative Islamic Studies, 2(1).
- Roberts, L., Lafta, R., Garfield, R., Khudhairi, J., & Burnham, G. (2004). Mortality before and after the 2003 invasion of Iraq: cluster sample survey. *The Lancet*, 364 (9448), 1857-1864.
- Shapiro, J. N., & Weidmann, N. B. (2015). Is the phone mightier than the sword? Cellphones and insurgent violence in Iraq. International Organization, 247-274.

Shawkat, B. R. (2019). Analysis of the Distribution of The Population Concentration of Anbar



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Province for The Period 1997-2017 Using Statistical Methods and Applications of Geographic Information Systems (GIS). Journal of Al-Frahedis Arts, 11(38), 245-273.

- Shawyer, F., Enticott, J. C., Block, A. A., Cheng, I. H., & Meadows, G. N. (2017). The mental health status of refugees and asylum seekers attending a refugee health clinic including comparisons with a matched sample of Australian-born residents. *Bmc Psychiatry*, *17*(1), 1-12.
- Stevens, G. A., Finucane, M. M., Paciorek, C. J., Flaxman, S. R., White, R. A., Donner, A. J., & Nutrition Impact Model Study Group. (2012). Trends in mild, moderate, and severe stunting and underweight, and progress towards MDG 1 in 141 developing countries: a systematic analysis of population representative data. *The lancet*, 380(9844), 824-834.
- Wagner, M. S. (2004). The poetics of Humayni verse: Language and meaning in the Arab and Jewish vernacular poetry of Yemen (Doctoral dissertation, New York University).