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## Effect of Housing Ownership on Young People's Decisions to Enter into the Union of Marriage

**Charbel ABBOUD<sup>1</sup>, Houwayda MATTA<sup>2</sup> and Maroun KHATER<sup>3</sup>**

1 Lebanese School of Social Work, Saint Joseph University of Beirut, Beirut, Lebanon, PO BOX 11-5076 – Riad el Solh. [a.charbel.abboud@gmail.com](mailto:a.charbel.abboud@gmail.com)

2 Lebanese School of Social Work, Saint Joseph University of Beirut, Beirut, Lebanon, PO BOX 11-5076 – Riad el Solh. [houwayda.bouramia@usj.edu.lb](mailto:houwayda.bouramia@usj.edu.lb)

3 Faculty of Business Administration and Management, Saint Joseph University of Beirut, Beirut, Lebanon, PO BOX 11-5076 – Riad el Solh. [maroun.khater@usj.edu.lb](mailto:maroun.khater@usj.edu.lb)

\* Correspondence: [a.charbel.abboud@gmail.com](mailto:a.charbel.abboud@gmail.com)

**Abstract:** The aim of this study is to examine the link between housing ownership and marriage in Lebanon. This study considers data from the evaluative research of three affordable housing projects implemented by a non-profit organisation. The data covers the 295 owners who purchased houses from this organisation between 1995 and 2003. The study was conducted in 2019. We used the data from the non-profit organisation's projects in Lebanon because in the 1990s, Lebanon experienced an unprecedented housing crisis and delay in marriage ceremonies. As a result, this non-governmental organisation implemented three housing projects to encourage young people to marry. By using mixed methods, the findings reveal a significant impact of housing ownership on the young people's decisions to marry. Therefore, this study confirms the effectiveness of a non-profit organisation's construction programs. It also encourages the Lebanese government and all governments in collaboration with the private sector and non-profit organisations to deliver more affordable housings and facilitate access to home ownership for young people. Additionally, governments may create appropriate public policies to control the real estate market. This will ease the issues associated with postponed marriage, and increase the financial support for young people's ability to purchase a house.

**Keywords:** Affordable Housing – Young People - Homeownership – Housing Crisis – Housing Policy - Marriage

## 1. Introduction

The influence of homeownership on marriage is globally known and confirmed by the literature, showing there is strong evidence for a positive relationship between marriage and the transition to homeownership in different countries (Mulder and Billari 2010).

This is the case in Lebanon, a multi-faith society where the phenomenon of marriage crisis is increasingly prominent due to the housing crisis. One big concern in recent decades has been a delay in family formation and the subsequent changes in fertility rates in the Lebanese society being a multi-faith society. As Gholipour and Farzanegan (2015) explained, the increasing marriage age due to rising economic and financial costs of family formation is one of the major drivers of lower fertility rates. The consequences of this major demographic not only has negative impacts on the economy but also on the preservation of this multi-faith society. For instance, the number of Christians in the population significantly dropped from 65% in 1932 to 45% in 1990 and to 32% in 2022 (Labaki 2008).

One of the main factors which played a major role in this marriage crisis is the housing ownership which is the subject of this paper. It is a study of the link between home ownership and marriage in Lebanon. This line of research is also confirmed by many studies which were conducted in many countries including Spain, Iran, China, Hong-Kong, Egypt, Jordan, and Tunisia (Gholipour and Farzanegan 2015; Asaad et al. 2017; Su et al. 2020; González-Val 2022).

In Lebanon, due to the rising house prices and financial difficulties that had reduced access to housing marriage projects were delayed or canceled (Special Assembly For Lebanon 1995). Therefore, the Synod of Bishops for Lebanon held

in 1995 dealt with several economic and social problems and noted the importance of the housing problem. The Synod mentioned the need for the creation of 500 000 habitats (Special Assembly For Lebanon 1995). In fact, this housing shortage was a serious problem for family life and for young people. It delayed their marriage or made it more difficult. Consequently, the Lebanese Maronite Order (LMO) took the initiative to establish affordable housing projects. Thus, this paper aims to evaluate the link between affordable housing ownership and marriage based on the three housing projects implemented by the LMO in Lebanon.

The remainder of the paper is organized as follows: Section 2 includes the literature review. Section 3 defines the Mixed Methods and the Data. Section 4 shows the main results which are discussed in Section 5, and Section 6 concludes this study.

## **2. Literature Review**

Getting married and the timing may crucially depend firstly on housing. Its function is "first and foremost to provide homes to families" (Mulder and Lauster 2010). Scholars confirmed that marriage and having children are all significant family events connected to homeownership (Rindfuss and Brauner-Otto 2008; Mulder and Lauster 2010). According to Clark et al. (1994), there are two significant life stages that are common for becoming a homeowner: marriage and childbearing. Many studies confirmed there is strong evidence for a favourable association between union formation (and particularly marriage) and the transition to homeownership in various nations, including the United States, The Netherlands, Australia, France, and West Germany. This can be found in this related literature (Kendig 1984; Montgomery 1992; Clark et al. 1994; Clark et al. 1996; Mulder and Wagner 1998; Feijten and Mulder 2002; Mulder and Billari 2010).

In Asia, purchasing a house is a sign of the commitment of the young people to marriage. Some individuals are considering that the value of a house determines the attractiveness of a young man as a spouse (South and Spitze 1986; Wei and Zhang 2011). In the Middle East and North Africa, marriage is a critical social and economic transition for young people. It is a transition that typically announces the formation of a new, independent, nuclear household (Assaad et al. 2017). As a result, housing ownership is essential to being married and independent. Mulder develops a theoretical argument when the “necessity to be a homeowner before marriage” is strong in a society, people expect to become homeowners before having children.

Due to the housing crisis, the occurrence of marriage crisis is becoming more widespread. Therefore, one of the main factors which played a major role in this marriage crisis is the housing ownership which is the subject of this paper studying the link between home ownership and marriage in Lebanon. This line of research is also confirmed by many studies which were conducted in many countries including Spain, Iran, China, Hong-Kong, Egypt, Jordan, and Tunisia (Gholipour and Farzanegan 2015; Su et al. 2020; Asaad et al. 2017; González-Val 2022).

These studies highlighted the important negative consequences of rising house prices on marriage and family formations. Young people must overcome imposed credit constraints. These include securing a mortgage, wealth constraints to save for a down-payment, and income constraints to meet the debt-to-income ratio limit (Barakova et al. 2003).

The majority of the literature has concentrated on the connection between marriage and economic crises. In addition to having an impact on the labour market, these economic crises also have an impact on the cost and availability of public and private commodities, which are essential for marriage. The home

market serves as one illustration of this since it is regarded as a necessity and, in many cases, the family's main asset (Browning et al. 2014).

The economic factors that influence marriage and household formation have been studied in some cross-country and time-series studies. Household formation in the US has been found to be strongly responsive to housing costs (Borsch-Supan 1986), which has substantial policy implications, particularly for low-income couples (Edin and Reed 2005). These studies in China (Wrenn and Zhang 2019; Hu et al. 2023) show that housing costs have a detrimental impact on marriage, with significant social repercussions such as welfare loss for young adults who wish to get married but cannot afford housing or the financial hardships brought on by high housing costs.

In the 1990s, Lebanon experienced a critical housing crisis which arose with the most urgency. It quickly became insoluble. According to Dr. Mohamed Baydoun, Minister of Housing and Co-operatives (1990-1992), nobody could solve this crisis. Politicians were not aware of it. It is true, thousands of apartments were offered for sale, but middle and low-income families could not afford the price. In addition, the owners of buildings refused to rent their apartments while no equitable law governed the landlord/tenant relationship (Hatem 1992). Due to this critical housing crisis, marriage initiatives had been postponed or abandoned in Lebanon due to increased housing costs and financial hardships that had restricted access to housing (Special Assembly For Lebanon 1995).

In many countries, the affordable housing can be supplied by the government through its direct action and indirect action. In Lebanon, the affordable housing projects are provided only by the not-for profit organisations especially the religious ones. Thus, the Lebanese Maronite Order (LMO), on the occasion of its 300<sup>th</sup> Jubilee in 1995 was aware of the gravity of the housing crisis. It was concerned about the welfare of Lebanese communities and citizens. It resolved to look into rational and practical approaches for the implementation of affordable housing projects. It also noted the aim behind such non-profit projects

was to encourage the young to get married and to provide stability for the newlywed couples. Also, it is to be noted that the Lebanese Maronite Order is the oldest and largest religious order in the Middle East.

### **3. Research Methodology**

This research used Mixed research methods which combines quantitative and qualitative data to get a richer understanding of the relationship between owning an apartment and marriage. For this reason, this study involved the beneficiary owners and those responsible for the affordable housing projects of the Non-profit organisation.

The beneficiaries included 295 owners distributed as follows: 201 beneficiary owners at the “Pilot Village of Our Lady of Tamiche”, 58 beneficiary owners at the “Saint Nehmetallah Complex”, and 36 beneficiary owners at the “Saint Jacob Center in Batroun”. All these beneficiary owners were invited to answer a questionnaire to gather data about their opinions and experiences about: the link between owning an apartment and the establishment of a family; the reasons behind the delay of the marriage decision in Lebanon; the effectiveness of these affordable housing projects on young owners’ decisions to enter a union of marriage. This research studied these three following hypotheses. H1- Providing affordable apartment contributes to the marriage of young people and ensures the stability of young newly married couples. H2- Owning an apartment from LMO’s projects encouraged young people to marry, provided stability for newly married young couples to have children. H3- the LMO provided affordable apartments with many facilitations.

In order to receive as many responses as possible, a visit was made to raise their awareness and encourage them to answer the questionnaire. The survey took around 5 months to be completed. The sample size is the 295 owners. However, the number of respondents differs from one question to another.

To present and analyse the data, this study utilizes the descriptive analysis to present the results of few variables, the reliability test (Cronbach's alpha) ensuring the study of the internal consistency of the questions measuring the factors of the questionnaire, the test of normality of the factorial scores (Shapiro Wilk Normality Test, test Kolmogorov-Smirnov) confirming the specifications of the test to use (parametric tests or non-parametric tests), and finally, inferential statistics (Chi-square test, Wilcoxon signed single rank test and Friedman test) to study the relationship between the variables and validate the hypotheses. It should be noted that the results of the questionnaire were compiled and processed using the statistical analysis software SPSS.

In addition, this study conducted a semi-structured interview with the officials, responsible for these three affordable housing projects. These officials include eight managers, one lawyer, two social workers, one topographer, two architects, and one economist. As for those responsible for these projects, qualitative researchers usually work with small samples of people nested in their context and studied in depth (Huberman and Miles 2003). These samples are determined according to certain criteria rather than taken at random in part. However, this sample must be representative of the variability of situations to cover the field studied and contribute to a better understanding of the situation (Fortin 1996). We recall that the purpose of the interview was articulated around two objectives: (1) Obtaining the point of view of the authorities concerned with same questions answered by the owners which were about the link between homeownership and marriage; (2) Clarifying the results obtained from the questionnaire.

## **4. Results**

This study identifies these following findings:

### **4.1. Positive Impact of owning an apartment on marriage decision**

#### **4.1.1. Results obtained from the Questionnaires**

According to this research, there is a positive impact of owning an apartment on marriage decisions. Indeed, out of 90.1% of people who responded to the questionnaire, 97.7% said that owning the apartment helps to establish a family (Table 1). As a result, for 98.5%, owning an apartment reinforces feelings of stability, contributes to the establishment of a family, and is a decisive factor for marriage for 93.2% of cases (Table 1). In general, according to the 3 items measuring the influence of owning an apartment on marriage and the establishment of a family, it was found this possession pushes 96.46% of individuals to marry.

**Table 1: The Link between Owning an Apartment and the Foundation of a Family.**

	<b>Strongly agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly disagree</b>	<b>% Positives responses</b>
Q1 : The possession of the apartment contributes to establishing a family. In % (N = 266)	58.3	39.4	1.5	0.8	97.7
Q 2 : Owning the apartment is rational for feelings of stability and building a family In % (N = 266)	56.4	42.1	1.1	0.4	98.5
Q 3 : The rational nature of owning an apartment to being married In % (N = 266)	46.2	47	6	0.8	93.2
<b>Overall average</b>	<b>53.63</b>	<b>42.83</b>	<b>2.87</b>	<b>0.67</b>	<b>96.46</b>

This finding is assessed through 3 questions (Q1, Q2 and Q3) measured on the Likert scale (1=Strongly disagree, 2=Disagree, 3=Agree, 4=Strongly agree). First, the reliability of these three items is validated by Cronbach's alpha coefficient. This indicates high reliability when its value is above the threshold of 0.7. The return of

the calculations performed on the SPSS@23 software of the reliability of the measurements is shown in Table 2.

**Table 2: Reliability Statistics Measuring the Reliability of the Three First Questions.**

Cronbach's Alpha	N of Items
.821	3

A visual inspection of Table 2 shows Cronbach's Alpha of 0.821. This indicates strong reliability of the measures, i.e., questions Q1, Q2 and Q3 exhibit strong consistency.

To this end, it becomes possible to examine the effect of owning an apartment on the decision to marry. Indeed, the three items will be represented in this test by their average score. The Shapiro-Wilk test (Table 3) shows that this average score does not follow the Normal law, SW (266) =0.838 and  $p=0.0001 < \alpha=0.05$ .

**Table 3: Tests of Normality to Show this Score of the Three First Questions.**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
H1 a	.223	266	.000	.838	266	.000

a. Lilliefors Significance Correction

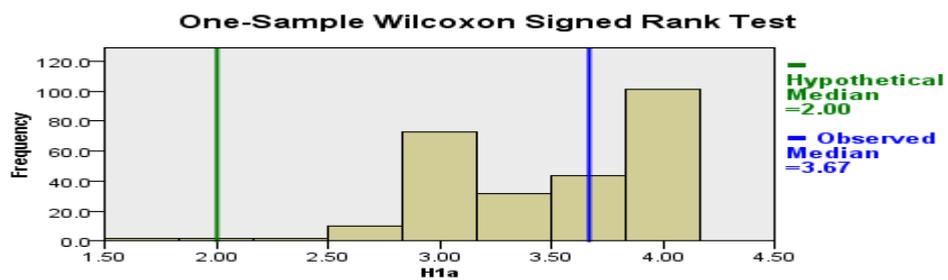
As such, the evaluation of this finding will be undertaken by the non-parametric test of the signs.

In addition, the median of the average score will be compared to the value 2 knowing that the average score can vary between 1 (Strongly disagree) and 4 (Strongly agree). In case the median is less than 2, the mean score is significantly close to 1, and the trend of the empirical data suggests that owning an apartment

does not have a significant impact on the decision to marry. If the median is greater than 2, the average is significantly closer to 4, and the trend of the empirical data suggests that owning an apartment has a significant impact on the decision to marry.

The sign test (Figure 1) shows that the median of the mean score (Me=3.67) is significantly greater than 2,  $U=34975$ ,  $Z=14.229$  and  $p=0.0001 < \alpha=0.05$ . This is consistent with H1; owning an apartment has a positive impact on the decision to marry.

**Figure 1: One-Sample Wilcoxon Signed Rank Test Showing the Median of the Mean Score of the Three Questions.**



<b>Total N</b>	266
<b>Test Statistic</b>	34,975.000
<b>Standard Error</b>	1,228.817
<b>Standardized Test Statistic</b>	14.229
<b>Asymptotic Sig. (2-sided test)</b>	.000

#### 4.1.2. Results obtained from the Semi-Structured Interviews

In addition, according to the majority of the respondents, the acquisition of an apartment for the young people is essential to marry and start a family. According to the Lebanese Culture and Christianity, the groom and the bride should leave their parents and establish a family together. The parents should not get involved into the lives of the new couples who want to live independently and have the

freedom to make the decision without any influence from the parents. This situation cannot be realized if they live with their parents who own the houses. Also, the houses or the apartments cannot fit two families. Even in case of having a unique child, the majority of the young people prefer to have their own houses or apartments. As a result, owning an apartment is a decisive factor for marriage and to establish a family.

#### **4.2. Owning an apartment is a strong reason for the marriage decision**

##### **4.2.1. Results obtained from the Questionnaires**

In the opinion of the owners, the reasons cited for the delay of the marriage relate primarily to not having a job, an apartment, a suitable spouse, and the Western culture (Table 4).

**Table 4: Reasons for Delaying the Marriage of Young Lebanese Couples.**

	<b>Overall average (1-10)</b>
Q 4: Reason for delay in marriage : Apartment (No = 263)	8.6
Q 5: Reason for delay in marriage: Western Culture (No = 261)	6.5
Q 6: Reason for delay in marriage: Job (No = 242)	8.7
Q 7: Reason for delay in marriage: The spouse (No = 261)	8.3

This finding is assessed by the differentiation between the reasons for the delay of the marriage decision by questions Q4 (related to the apartment), Q5 (related to Western culture), Q6 (related to job) and Q7 (related to the spouse). Participants gave scores for each of these questions ranging from 0 to 10. It is important to note that a score of 0 indicates the lack of relevance of the said reason, while a score of 10 indicates the relevance of this reason. The Shapiro-Wilk test (Table 5)

shows that the scores for the four reasons do not follow the Normal distribution, SW (266) =0.605 and  $p=0.0001 < \alpha=0.05$  for the apartment, SW (266) =0.951 and  $p=0.0001 < \alpha=0.05$  for Western Culture, SW (266) =0.577 and  $p=0.0001 < \alpha=0.05$  for employment, SW (266) =0.761 and  $p=0.0001 < \alpha=0.05$  for spouse.

**Table 5: Test of Normality Showing the Scores for four Questions Explaining the Reasons behind the Delay of the Marriage.**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Q 4: In your opinion, what are the reasons that delay the age of marriage among young Christians: The Apartment	.320	236	.000	.605	236	.000
Q 5: In your opinion, what are the reasons that delay the age of marriage among young Christians: Western Culture	.103	236	.000	.951	236	.000
Q 6: In your opinion, what are the reasons that delay the age of marriage among young Christians: The Job	.303	236	.000	.577	236	.000
Q 7: In your opinion, what are the reasons that delay the age of marriage among young Christians: The Spouse	.246	236	.000	.761	236	.000

a. Lilliefors Significance Correction

To this end, Friedman's non-parametric ANOVA test (Table 6) will be used to examine whether there is a difference between the median scores obtained for each of the four reasons. This type of test is used for repeated measurements.

**Table 6: Friedman’s Anova Test Showing the Significant Difference between the Median Scores of the four Reasons for Delaying Marriage.**

	Valid Effective	Missing Effective	Median	Statistic test	P value
Q 4: In your opinion, what are the reasons that delay the age of marriage among young Christians: The Apartment	261	5	10	210.517	0.000
Q 5: In your opinion, what are the reasons that delay the age of marriage among young Christians: Western Culture	242	24	7		
Q 6: In your opinion, what are the reasons that delay the age of marriage among young Christians: Job	261	5	10		
Q 7: In your opinion, what are the reasons that delay the age of marriage among young Christians: The Spouse	251	15	9		

Friedman's ANOVA test (Table 6) shows that there is a significant difference between the median scores of the four reasons,  $U(3)=210.517$  and  $p=0.0001 < \alpha=0.05$ . Pairwise comparisons of the four measurements are reported below. Indeed, Western Culture exhibits the lowest score ( $Me=7$ ) among the four reasons. The reason related to the Spouse exhibits the second lowest score ( $Me=9$ ) among the four reasons. There is no significant difference between the Apartment ( $Me=10$ ) and the Job ( $Me=10$ ). This implies that the most relevant reasons for the delay in marriage are the Apartment and the Job, followed by the Spouse first and Western Culture second. Therefore, this is consistent with H1; owning an apartment has a positive impact on the decision to marry.

#### **4.2.2. Results obtained form the semi-structured interviews**

In addition, the majority of the respondents who confirmed that the acquisition of an apartment for the young people is the first step towards the decision of marriage, explained that young people also need a job opportunity to marry and start a family. Some people had delayed their marriage in the 1990s because they cannot fulfil the needs of their children due to the cost of living, high education fees and unaffordable medical bills. As a result, a secure job is very important to marry. For the majority of the respondents, some young people have an influence from the western culture thinking that they should live their lives to the full before getting married and having children. As a result, they prefer to delay their marriage. A few respondents said a few young people delay their marriage until they find the right partner.

As a result, the respondents confirmed that the most relevant reasons for the delay in marriage are the Apartment and the Job combined, followed by firstly Western Culture and secondly the Spouse.

#### **4.3. Effectiveness of LMO's projects on young owners's decisions to enter into a union of marriage and establish a family**

##### **4.3.1. Results obtained from the Questionnaires.**

This study shows that 44.4% of the owners were single before signing the contract for the purchase of the apartment, 35.6% were married and 18.8% were engaged (Table 7).

**Table 7 : Family Status of the Owners before Purchasing an Apartment from LMO Projects.**

	Single	Fiancé (e)	Newlywed	Divorced	Widow/widower
Q 8 : Family status before purchase.	44.4	18.8	35.6	0.8	0.4
In % (N = 266)					

People who were single and engaged before the purchase of the apartment represented 63.2% of the total population interviewed. Out of 63.2%, 91% answered purchasing the apartment encouraged them to marry, thus pushing them to start a family (Table 8). Before the purchase, singles represented 44.4% while this percentage was reduced to 3.4% after the purchase of the apartments (Table 9).

**Table 8: Impact of Home Ownership on Marriage Decision.**

	Strongly agree	Agree	Disagree	Strongly Disagree	% positives responses
Q 10 : The contribution of the purchase of an apartment to the marriage of single people.	40.4	50.6	7.8	1.2	91
In % (N = 164)					

**Table 9 : Family Status after Purchasing an Apartment from LMO Projets.**

	Single	Fiancé (e)	Married	Divorced	Widow/widower
Q 9 : Family status after purchase.	3.4	1.1	94	1.1	0.4
In % (N = 266)					

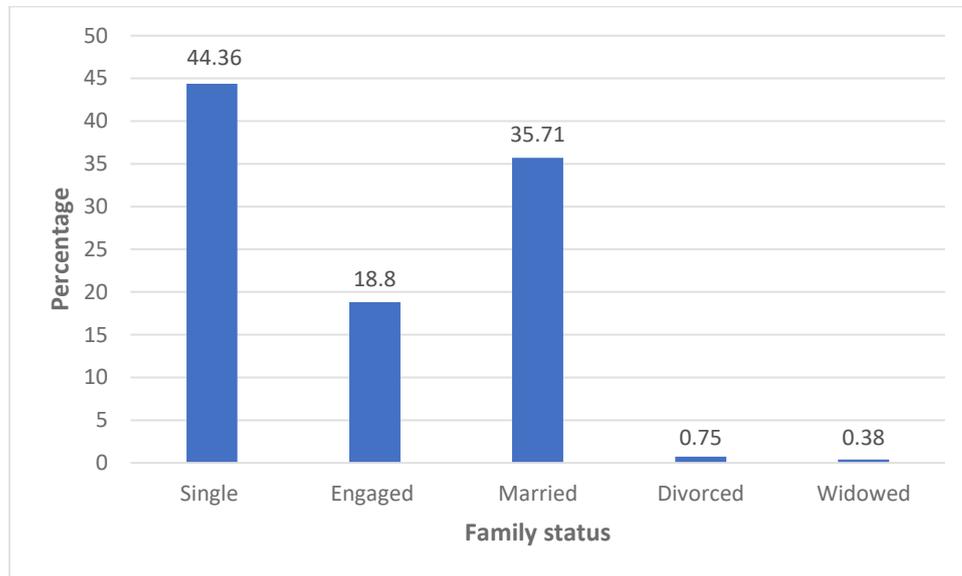
The newlyweds, who represent 35.6% of the respondents, assured the overwhelming majority (97.1%) confirming the stability of their family was relative to the possession of the apartment (Table 10).

**Table 10: Impact of Home Ownership on Marriage and Family Stability.**

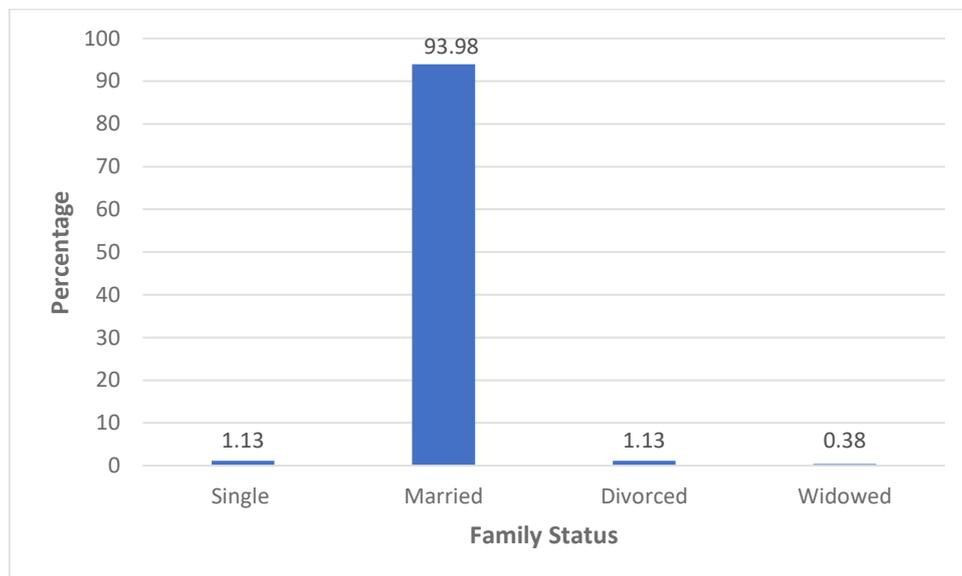
	Strongly agree	Agree	Disagree	Strongly Disagree	% positives responses
Q 11 : The contribution of the purchase of an apartment to the family stability of married couples.	55.3	41.8	0	2.9	<b>97</b>
In % (N = 102)					

The hypothesis is assessed through 2 questions (Q8 and Q9) measuring the marital status of participants before and after signing the contract to purchase an LMO apartment. In addition, the scores for these two questions are: 1 for single, 2 for engaged, 3 for married, 4 for divorced and 5 for widowed. The two bar graphs (Figures 2 and 3) show the percentages of the results obtained for the two questions Q8 and Q9.

**Figure 2 : The Family Status of the Owners before Purchasing House from LMO Projects. (Q 8)**



**Figure 3 : The Family Status of the Owners after Purchasing House from LMO Projects (Q 9)**



The Shapiro-Wilk test (Table 11) shows that the scores of the two items Q8 (SW (266) =0.768 and  $p=0.0001 < \alpha=0.05$ ) and Q9 (SW (266) =0.285 and  $p=0.0001 < \alpha=0.05$ ) do not follow the Normal law.

**Table 11: Test of Normality Showing the Scores of the Questions Concerning the Family Status before and after Purchasing Home from LMO Projects.**

	Kolmogorov - Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Q 8 : My family status before the signing of the contract for the purchase of an LMO apartment.	.288	266	.000	.768	266	.000
Q 9 : My family status after signing the contract for the purchase of an LMO apartment.	.513	266	.000	.285	266	.000

a. Lilliefors significance Correction

As such, the evaluation of this finding will be undertaken by the non-parametric Wilcoxon test.

In addition, the median of the score before signing the contract will be compared to that after signing the contract.

The Wilcoxon test (Table 12) shows that the median of the score before the signature (Me=2) is significantly lower than that of the score after the signature (Me=3),  $U=12694$ ,  $Z=11.379$  and  $p=0.0001 < \alpha=0.05$ . This implies that the participants were engaged before the contract was signed and were married after the contract was signed.

**Table 12: Wilcoxon Test Showing the Median of the Score before Purchasing an Apartment from LMO Projects.**

<b>Total N</b>	266
<b>Test Statistic</b>	12,694.000
<b>Standard Error</b>	556.649
<b>Standardized Test Statistic</b>	11.379
<b>Asymptotic Sig. (2-sided test)</b>	.000

In addition, question Q10 measured on the Likert scale (Figure 4) examines whether the purchase of an apartment in the LMO project contributed to the marriage. It is important to note that the answers to this question are restricted to participants who were single before the purchase.

**Figure 4 : The Result of the Question Concerning the Impact of Owning a House and the Decision of Marriage. (Q 10)**

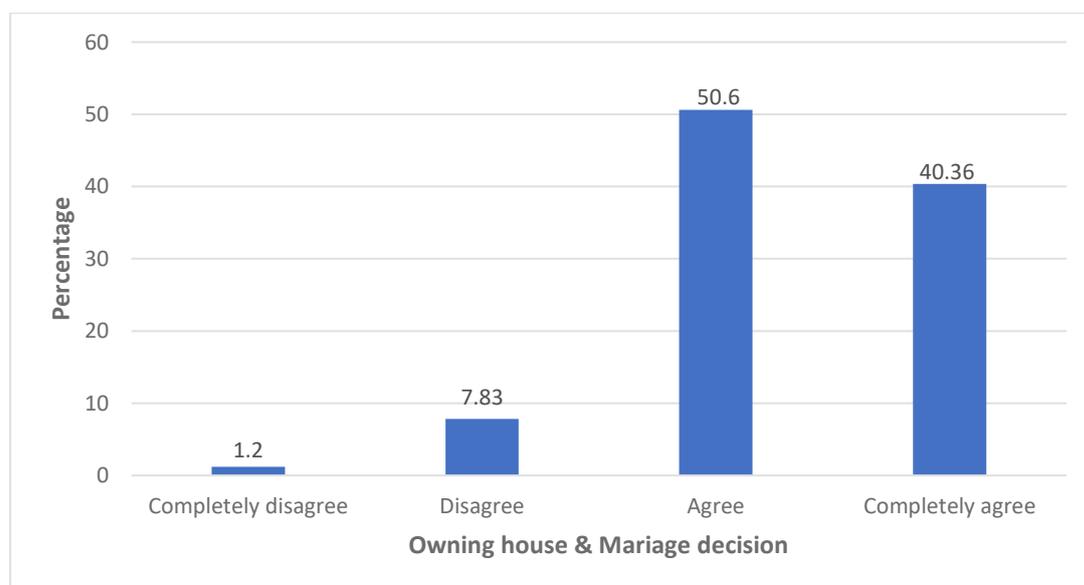


Figure 4 shows (in blue bars) the results collected from the questionnaire. These show that 50.60% of participants answered "agree" and 40.36% chose

"Strongly agree", that is to say that 90.96% have a positive opinion vis-a-vis the claim of item Q10.

Table 13 shows the result of the Chi-square test. This is significant, that is to say that 90.96% of people who were single before the purchase are convinced this purchase has contributed to their marriages and to starting a family,  $\chi^2(3) = 116.361$  and  $p = 0.0001 < \alpha = 0.05$ .

**Table 13 : The Result of the Chi-square Test of Question 10**

<b>Total N</b>	166
<b>Test Statistic</b>	116.361
<b>Degrees of Freedom</b>	3
<b>Asymptotic Sig. (2-sided test)</b>	.000

Also, the contribution of the purchase of an apartment within the framework of the LMO project can contribute to the stability of a marriage. This is examined in question Q11, measured on the Likert scale. It is important to note that responses to this question are restricted to participants who were married prior to purchase.

Figure 5 shows (in blue bars) the results collected from the questionnaire. These show that 42.06% of participants answered "Agree" and 54.21% chose "Strongly Agree", i.e. 96.27% expressed a positive opinion vis-a-vis the claim of question Q11.

**Figure 5 : The Result of the Question Concerning the Impact of Owning an Apartment from LMO Projets on the Stability of the Family of the Newlyweds. (Q 11)**

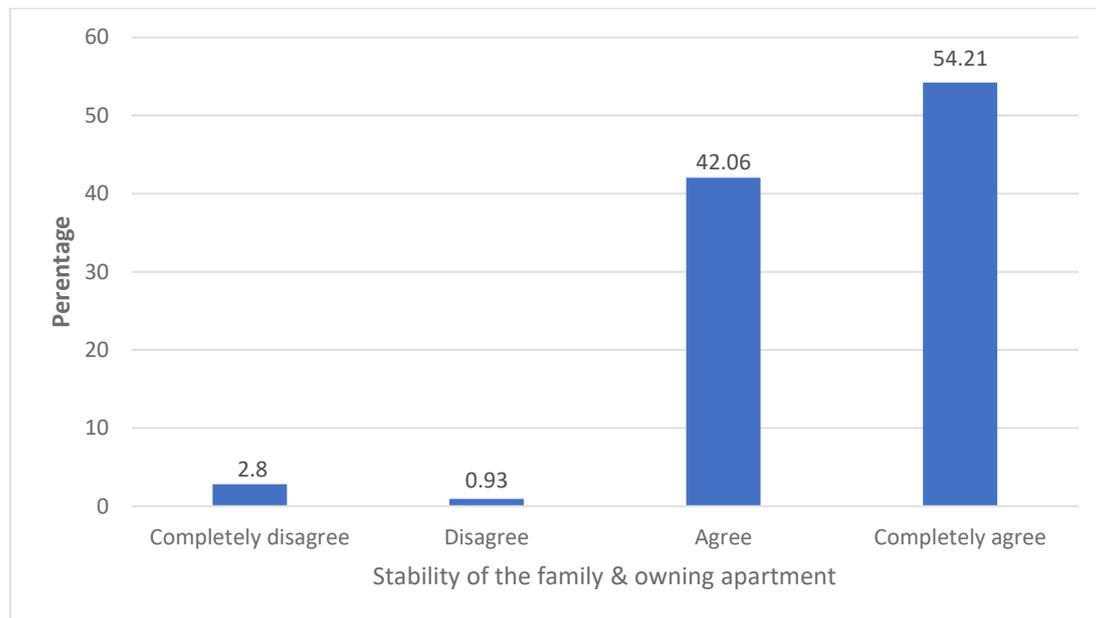


Table 14 shows the result of the Chi-square test. This is significant, in that 96.27% of people who were married before the purchase are convinced this purchase contributed to the stability of their marriage,  $\chi^2(3) = 94.832$  and  $p = 0.0001 < \alpha = 0.05$ . For this purpose, H2 can be accepted.

**Table 14: The Result of the Chi-square Test of Question 11**

<b>Total N</b>	107
<b>Test Statistic</b>	94.832
<b>Degrees of Freedom</b>	3
<b>Asymptotic Sig. (2-sided test)</b>	.000

#### 4.3.2. Results obtained from the semi-structured interviews

Also, the majority of our respondents confirmed that the degree of achievement of the objectives pursued by the projects was very high. According to

them, most of the young people who bought apartments were eager to get married and did get married, and those who were newly married had children and started families.

The vast majority of respondents agreed that the housing projects met the needs of buyers. According to them, these projects contributed to providing shelter, a home, a roof to young Lebanese wishing to marry or recently married and who faced difficult situations which limited their access to home ownership.

These respondents explained that some of the owners especially those originating from the South, Chouf, Bekaa and North regions were obliged to displace in Lebanon due to the Civil War (1975 – 1990). They pointed out that these displaced people were forced to leave their homes, their land and all their belongings... and they had to stay with relatives, friends, in prefabricated houses and sometimes in rental apartments. It is in this context that these interlocutors associated the demand for affordable housing with the needs of the young people who wanted to get married, but could not find an affordable apartment.

#### **4.4. LMO's Apartments offered to the young people at an affordable price and facilitations**

LMO provided a lot of facilitations for the low and moderate-income young people who were not able to secure a mortgage or/and pay a down-payment.

##### **4.4.1. Results obtained from the Questionnaires**

This study confirmed the reasons behind purchasing an apartment from LMO are: firstly, for the affordable cost of the apartment; secondly, facilitation of the acceptance of the purchase request especially in terms of not being able to get a loan from the bank; finally, for the payment of installments directly for the LMO especially if they do not have a full-time job (Table 15).

**Table 15: Reasons for Purchasing an Apartment from LMO Projects.**

	<b>Overall average (1 - 10)</b>
Q 12: Reason for purchase: Cost of the apartment (N = 251)	8.4
Q 13 : Reason for purchase: Payment of installments directly for the LMO (N = 258)	5.5
Q 14 : Reason for purchase: Facilitation of the acceptance of the purchase request (N = 214)	5.6

This study confirmed that the prices offered by the LMO of the apartments were suitable (93.2%). The LMO sold the apartments at affordable prices much cheaper than the projects on the market (Table 16). In addition, they affirmed 80.9% of these prices were lower than those of the apartments offered on the market and even if the materials had a price increase, it did not in any way affect the price of the apartments of the LMO (Table 16). The owners were thus able to meet the needs of their families without the payment by installments affecting them. For this purpose, H3 can be accepted.

**Table 16: Distinction by Housing Price between LMO Projects and Commercial Projects.**

	<b>Strongly agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>% positives responses</b>
Q 15 : The suitability of the price of the apartments of the housing projects relative to the LMO. In % (N = 266)	21.8	71.4	5.3	1.5	93.2
Q 16 : The lower price of apartments in housing projects relating to the LMO than that of commercial apartments. In % (N = 266)	26.5	56.4	14.4	2.7	82.9

Q 17 : The stability of the price of apartments in housing projects relating to the LMO despite the rise in the price of materials during the execution of the works. In % (N = 264)	32.1	60.7	3.8	3.4	92.8
<b>Overall average</b>	<b>32.3</b>	<b>58.7</b>	<b>6.7</b>	<b>2.3</b>	<b>91</b>

#### 4.4.2. Results obtained from the semi-structured interviews

The respondents insisted on the general objective of these projects, which is to encourage young people to marry and thus be able to start a family. For this reason, the LMO sold the apartments at affordable prices much cheaper than the projects on the market.

Similarly, the LMO has offered many facilities in the payment of installments. According to the respondents, the LMO had given the owners the choice of paying the price of the apartment according to one of the two following methods : the first option was paying to the bank ; the second option was a direct payment to the monastery. The latter was to facilitate the ownership of an apartment for young people occupying the liberal professions who had difficulty in having access to a loan from the bank.

#### 4.5. The stability of the newlyweds has a significant impact on the growth of the number of their children

##### 4.5.1. Results obtained from the Questionnaires

The positive impact stability of their marriage can be seen with the growth of the number of children after owning an apartment. Questions Q 18 and Q 19 (Table 17) measure the number of children before and after the purchase of the apartment in the LMO project respectively.

**Table 17: Number of Children before and after Purchasing an Apartment from LMO Projects.**

	Q 18 : Before purchase In % (N = 266)	Q 19 : After purchase In % (N = 266)
Number of children	0.65	2.33

Table 18 shows through the Shapiro-Wilk test that the difference between the scores of items Q 18 and Q 19 does not follow a Normal distribution, SW (266) =0.863 and  $p=0.0001 < \alpha=0.05$ . To this end, the Wilcoxon non-parametric test (Table 19) is used to check whether the number of children has increased after the purchase of an apartment in the LMO project.

**Table 18 : The Result of Shapiro-Wilk Test of Questions 18 and 19**

**Tests of Normality**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
diff_enfants	.249	266	.000	.863	266	.000

a. Lilliefors Significance Correction

**Table 19 : The Wilcoxon Non-Parametric Test of Questions 18 and 19**

<b>Total N</b>	266
<b>Test Statistic</b>	21,508.500
<b>Standard Error</b>	846.526
<b>Standardized Test Statistic</b>	12.692
<b>Asymptotic Sig. (2-sided test)</b>	.000

The Wilcoxon test indicates that the number of children after purchase experienced a median growth of 2 children,  $U=21508.5$ ,  $Z=12.693$  and  $p=0.0001 < \alpha=0.05$ . For this purpose,  $H_2$  can be accepted.

#### **4.5.2. Results obtained from the semi-structure interviews**

The majority of the respondents confirmed the appropriation of an apartment for young Lebanese is decisive to have children. They pointed out that the acquisition of an apartment is necessary to encourage young people to marry and start a family. These respondents confirmed that the majority of the owners get married and have children after the acquisition of the apartment. Some respondents said they do not have more than 3 children as their parents used to have for many reasons: the big house is very expensive; the mothers are working; the cost of living is very high; they want a private school education; they want private hospital cover. Unfortunately, they do not have enough support from the government as it is the case in the rich countries.

### **5. Discussion**

This section discusses the results of this research which confirms having the security of housing and housing ownership is an important factor in Lebanese young people's decisions to enter into a union of marriage.

Firstly, this research shows that owning an apartment is essential to marry, namely that 93.2% of respondents consider that it is a sine qua non for marriage. The impact of rising housing costs on families has been widely discussed, but little literature addressed the causal relationship between rising housing prices and marriage delays. In Lebanon, the delay of marriage is mainly due to not being able to possess an apartment and not because of the changes in marriage, or the population structure, or gender imbalance, or the socioeconomic status of women, or the extension of years of education. In Lebanon, a house provided by the male is considered necessity for marriage. The rising housing prices are responsible for the marriage delay and the increase in leftovers among the Lebanese young people because high housing prices lead to higher marriage costs and discourage marriage as it happened after the end of the Lebanese Civil War. The finding of this research confirms that homeownership is essential for the

Lebanese young people to marry as it is confirmed by many studies such as Mulder and Billari (2010). Moreover, this result is in line with previous studies such as those of Gonzalez-Val (2022), Gholipour and Farzanegan (2015), Su et al. (2020), Asaad et al. (2017) who found that housing cost is an important factor of marriage and household formation. As this current study shows rising housing costs, as a big mountain over the heads of Lebanese young people, lead them to postpone or cancel marriage.

For this reason, it is important to develop appropriate and relevant public policies to regulate the real estate market, and further alleviate the problems of delayed marriage. Furthermore, in a society with a high cost of living especially after this unprecedented economic crisis in Lebanon, the government can try to strengthen economic and psychological support for young people through tax cuts or subsidies.

These actions may also be of interest to other nations dealing with high housing costs and quickly expanding real estate markets. When taken as a whole, this paper confirms that the lowering housing costs and easing of people's housing burden could be significant and effective solutions to the issues of the late marriage and low fertility.

Secondly, the overwhelming majority of single owners (91%) say that buying the apartment contributed to their marriage encouraging them to start a family. Before the purchase, single owners represented 63.2% while after the possession of the apartment, they became 3.4%. This finding confirms that the objectives of LMO affordable housing projects have been achieved. Furthermore, this result is in line with the result of previous studies showing that getting married and its timing may crucially depend firstly on housing and that the function of house is first and foremost to provide homes to families according to Mulder and Lauster (2010). Also, this result is in line with the result of Synod of Bishops (1995) which confirms that marriage projects had been delayed or canceled due to the rising house prices because the young people must secure a mortgage, save for a

down-payment, and secure income to pay the monthly installments. Young married couples have the option of renting or buying their own independent home. Both tenure options can be prohibitively expensive or unavailable, both calling for sizable cash payments to cover the cost of the purchase or construction, as well as sizable down payments.

To help the young people who are not able to pay the down-payment and do not have a secure job as the liberal professions, LMO gave the owners the choice not to pay the down payment if they were not able. Also, they can pay the monthly instalments to LMO which secures the mortgage and ensures the monthly payments to the bank. If the owner was not be able to continue the payments, the LMO would repay him and would sell to another young person with low-or moderate income. This is in line with the shared equity. Consequently, providing affordable housing by the governments and in collaboration with the private sector and charities is necessary for the low- and moderate-income young people to marry.

Thirdly, the overwhelming majority of the recent married owners (97.1%) confirmed that the stability of their family was relative to the possession of the apartment. This result confirms that stability is very important for the Lebanese young people to establish a family and it is in line with the previous studies done in the Middle East and North Africa (MENA). The difficulties of finding housing before marriage are made worse by the challenges of an extended transition to adulthood brought on by more time spent in school and a protracted school-to-work transition. The groom's side is generally responsible for securing the couple's housing. As a result, the groom and his family are taking on more and more of the burden of obtaining the financial means necessary for independent living. The challenges of gathering such resources cause the transition to adulthood to take longer.

The region's subpar housing policies are one of the factors causing the delay of marriage. Research from several developing nations shows that housing

policy has a significant impact on the housing market. Significant global problems include widespread public land ownership, weakly enforced property rights, rent control, and a lack of funding. In terms of limiting supply, overregulation is particularly problematic (Malpezzi 1999; Buckley and Kalarickal 2005).

Globally, less progress has been made recently on the supply side of housing markets than on the demand side (Hammam 2014). Lebanon has unusually high costs associated with homeownership and few options for first-time homebuyers or those on a low income. This is partly due to policy challenges. The rental market typically does not offer an affordable alternative to homeownership, and credit in the form of a mortgage is not widely accessible as it is the case in MENA (Dhillon et al. 2009; World Bank 2005).

Finally, the finding concerning the increase of the number of children after the purchase of an apartment in the LMO project confirms homeownership is essential for the Lebanese couples to start a family and have children and it is in line with the theory of Mulder and Lauster (2010), which explains that people expect to become homeowners before having children. According to Gholipour and Farzanegan (2015), one of the main causes of lower fertility rates is the rising marriage age brought on by rising economic and financial costs of starting a family. This finding is in line with Edlund who defines the marriage as an important social institution that has many advantages, including happiness, fertility, and lowering crime rates (Edlund et al. 2013). According to Farzanegan and Fereidouni (2014), rising housing prices may lower the percentage of marriage because they may make it harder for married couples to start families than for single people.

According to projections based on the most recent United Nations data, the Lebanese population is currently 5,362,165. The population is expected to start declining around 2025 according to current projections. Add to that, Lebanon is the country with the highest number of displaced people per capita in the world. Also, the number of Syrian refugees which is over 2,000,000 is considered as the biggest risk on the Lebanese demography. The risk comes not only from their

huge number in comparison with the Lebanese population, but also from the birth rate. Indeed, out of 7 new infants in Lebanon, one is Lebanese and the rest are Syrians. These statistics set the alarm for the future of the Lebanese population.

As a result, the affordable housing is one solution to encourage the young people not to delay their marriage and establish a family. This study urges the Lebanese government - in collaboration with the private sector and non-profit organisations - to start the implementation of the affordable housing projects all over the country.

## **6. Conclusion**

Even though housing is typically seen as both an asset and consumption goods, some scientists emphasize the idea that housing may also be a positional good (Cyrus et al. 2020). The general belief is that a man who has a good housing asset has a significantly higher chance of getting married or getting married earlier than a man who does not have such an asset. To study the link between housing ownership and young people's decisions to marry, and due to data limitations, this paper uses data from the research conducted on the affordable housing of three projects implemented by a non-profit organisation in Lebanon.

This research results contribute insights into the impact of homeownership and getting married in Lebanon. This study confirms that there is a strong relationship between homeownership and marriage decisions for the young people with low- and moderate-income. In Lebanon, as in many countries, men who own real estate have advantage finding a partner in the marriage market. The findings of this study suggest that owning a house is a strong reason to marry, establish a family and have children.

The findings of this paper provide some important implications for policymakers. First, policy could be directed towards the development of affordable housing in Lebanon for the young people who want to marry and for new married couples to encourage marriage and household formation. Second,

government policies could be directed to provide housing finance systems to offer housing loans with low interest for those who have low and moderate incomes. The policymakers need to redefine taxing system to control speculation demands for houses because investment demands and speculations in housing market are among the major drivers of high property prices in Lebanon.

The government must encourage the property developers to implement affordable housing projects. Also, the non-profit organisations must multiply such projects to encourage marriage among young people. Since marriage is negatively affected by increases in housing prices after the end of the Lebanese Civil War, Lebanese authorities should avoid the escalation of the crisis in order to reduce housing prices to encourage family formation among young Lebanese.

Although this study is an important step in advancing the understanding of the relationship between homeownership and marriage decision for the young Lebanese people with low and moderate- income, and would benefit from future research, it has some limitations. This study did not include if there is any impact of homeownership and marriage on the rich and very wealthy young people because the rich life-history data are rarely accessible. This hypothesis will be the subject of the future research.

### **Author Contributions**

C.A. and H.M. conceived and designed the study. C.A. wrote the manuscript. H.M. supervised and edited the manuscript. C.A., H.M. and M.K. provide formal analysis and validate the study. C.A., H.M. and M.K. reviewed and approved the final version of the protocol. All authors have read and agreed to the published version of the manuscript.

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the Second Advisor of the Doctoral Thesis, and it was paid by the Lebanese Maronite Order. This research received no external funding.

### **Data Availability Statement**

The authors confirm that the data supporting the findings of this study are available within the article and its supplementary materials. This study was approved by the Ethics Committee of St Joseph University of Beirut (Ethics Code: USJ -2018-09) on the 20<sup>th</sup> of February, 2018. All participants provided written informed consent prior to enrolment in the study. This research was conducted ethically in accordance with the code of ethics for scientists.

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### **Disclosure statement**

Authors declare no conflicts of interest.

## Appendix A

### The questionnaires:

1. The possession of the apartment contributes to establishing a family.  
 Strongly Agree     Agree     Disagree     Strongly disagree
2. Owning the apartment is radical for feelings of stability and building a family.  
 Strongly Agree     Agree     Disagree     Strongly disagree
3. The radical nature of owning an apartment to being married.  
 Strongly Agree     Agree     Disagree     Strongly disagree

Reasons for delay in marriage :	Overall Average 1 - 10
4. Apartment	
5. Western Culture	
6. Job	
7. The Spouse	

8. Family status before purchasing an apartment from LMO Projects :  
 Single    Engaged    Married     Divorced    Widowed.
9. Family status after purchasing an apartment from LMO Projects :  
 Single    Engaged    Married     Divorced    Widowed.
10. The contribution of the purchase of an apartment to the marriage of single people.  
 Strongly Agree     Agree     Disagree     Strongly disagree
11. The contribution of the purchase of an apartment to the family stability of married couples.  
 Strongly Agree     Agree     Disagree     Strongly disagree

Reason for purchasing an apartment form LMO Projects :	Overall Average
	1 – 10
12. Cost of the apartment	
13. Payment of installments directly for the LMO	
14. Facilitation of the acceptance of the purchase request	

15. The suitability of the price of the apartments of the housing projects relative to the LMO.

- Strongly Agree     Agree     Disagree     Strongly disagree

16. The lower price of apartments in housing projects relating to the LMO than that of commercial apartments.

- Strongly Agree     Agree     Disagree     Strongly disagree

17. The stability of the price of apartments in housing projects relating to the LMO, despite the rise in the price of materials during the execution of the works.

- Strongly Agree     Agree     Disagree     Strongly disagree

18. Number of Children before purchasing an Apartment from LMO Projects :...

19. Number of children after purchasing an apartment from LMO projects : ...

## Appendix B

### The interview questions :

1. In your opinion, owning an apartment is essential to encourage the young people to marry and establish a family ?
2. In your opinion, why had the Lebanese young people delayed or canceled their marriage in the 1990s according to the Synod of Bishops in 1995 ?
3. In your opinion, were the LMO Projects effective on young owners's decisions to enter into a union of marriage and establish a family ? If Yes, explain why they were effective ?
4. In your opinion, did the LMO provide affordable apartments with many facilitations ? If Yes, explain how ?

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