TRANSFERRING EXPERIENCES OF POST-WAR
WEST GERMANY IN SOCIAL HOUSING TO RECONSTRUCTION STRATEGIES
AFTER THE WAR IN SYRIA

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Disclaimer

This dissertation is submitted to the University of Stuttgart, Faculty of Architecture and Urban Planning for the degree of PhD.
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The candidate confirms that the work submitted is his own and that appropriate credit has been given where reference has been made to the work of others.

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Signature

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ABSTRACT

Die Arbeit konzentriert sich auf eine Strategie des Wiederaufbaus für Wohnen in Syrien nach dem Krieg. Sie widmet sich den Möglichkeiten, eine geeignete Lösung für das Problem des Mangels an Wohnraum zu finden, das durch den Krieg entstand, und zeigt die Mängel der Wohnungspolitik von vor dem Krieg. Die Arbeit schlägt vor, dass die Erreichung dieses Ziels dadurch unterstützt werden kann, dass man die Erfahrungen der erfolgreichen Politik des Sozialen Wohnungsbaus in Deutschland nach dem 2. Weltkrieg in Westdeutschland analysiert und die Möglichkeiten untersucht, ob und wie man Charakteristika der deutschen Erfahrungen in den syrischen Kontext übertragen kann.

Um dieses Ziel zu erreichen, folgte die Untersuchung einem schrittweisen Vorgehen. Zunächst wurden die allgemeinen Probleme weitgehend zerstörter Städte nach dem Krieg untersucht, unter besonderer Berücksichtigung des Falles Deutschland. Sodann wurde eine detaillierte datenbasierte Analyse der Situation vor und im derzeitigen Zustand, nahe dem Kriegsende, durchgeführt; dabei wurde besonderes Gewicht auf die Ansätze des sozialen Wohnungsbaus gelegt, sowie auf die kulturellen, sozialen und ökonomischen Aspekte des Wohnbaus. Zum dritten wurden in einer umfassenden Zusammenschau der beiden Fälle Deutschland und Syrien die Grundlage für eine Beurteilung darüber ausgearbeitet, ob die Ergebnisse der deutschen Erfahrungen in den syrischen Kontext übertragen werden können.

In Rahmen dieses Vorgehens konzentrierte sich die Untersuchung darauf, neue Perspektiven und Lösungen für die Notlage im Wohnungsbereich nach dem Krieg in Syrien zu finden. Schließlich wurden Szenarien der Nachkriegs-Wohnlage vorgestellt, sowie eine Liste von Empfehlungen, wie man die existierenden Probleme lösen könnte und wie man die Bedingungen für den Entwicklungsprozess in Syrien verbessern könnte.

Dies schließt eine umfassende Datenbasis über die Wohnsituation in Syrien nach dem Krieg ein, als Ausgangspunkt für die Entwicklung einer integrativen Strategie des sozialen Wohnungsbaus in Syrien. Der Bedarf, eine angepasste rechtliche und gesetzgeberische Basis einzurichten, die geeignet ist, die Entwicklung des Wohnbausektors und die Verbesserung der Wohnsituation voranzutreiben, wird diskutiert. In diesem Zusammenhang wird als entscheidend für den Erfolg einer zukünftigen Nachkriegs-Wohnungspolitik betrachtet, dass ein spezielles Gesetz erlassen wird, das die Lösung der Nachkriegs-Wohnprobleme regelt. Darüber hinaus sollten die Zielgruppen spezifiziert werden, für die das „sozial" orientierte Programm zutreffen soll; es sollte vom Einkommensniveau sowie von dem Ausmaß abhängen, in dem die Betreffenden vom Krieg geschädigt wurden.

ABSTRACT

This thesis focuses on the post-war housing reconstruction strategy in Syria. It addresses the possibility of finding a suitable solution to the problem of lack of home resulting from the war and presents the deficiencies in the policy of housing before the war. The thesis suggests that this aim can be supported by analyzing the successful experience of the post-WWII social housing strategy in West Germany and investigating the possibility of transferring the characteristics of the German experience into the Syrian context.

To reach this objective the present research followed a stepwise approach: First, the general context of the common problems of largely destroyed post-war cities was studied with special respect to the case of Germany. Secondly, a detailed data-based analysis on the situation in pre- and expected post-war Syria, with a special focus on social housing approaches and the cultural, social, and economic aspects of housing, was performed. Thirdly, in a comprehensive synthesis of the first and second case studies, the basis for a comparative evaluation on whether the lessons learned from the German experience can be transferred to the Syrian context was elaborated.

In this process, the present study was focused on finding new perspectives and solutions for the problem of the destitution of housing units after the war. Putting the results together, it proposes scenarios for the post-war housing situation and a list of recommendations to solve existing problems and improve conditions using the developmental process in Syria.

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This includes a comprehensive database on the housing situation in post-war Syria as the starting point in the development of an integrative social housing strategy. The need to implement adapted legal and legislative bases supporting the development of the residential sector and improving the Syrian housing situation is discussed. In this regard, it is regarded as critical for the success of a future post-war housing policy that a specific law concerning post-war housing problems should be enacted. Furthermore, the target group for "social housing" reconstruction programs should be specified based on income level and to what extent they have been affected by the war.

List of abbreviations

Abbreviations are common in many fields, including those of the Housing sector, international organizations, and development cooperation. Abbreviations used only in limited areas (e.g. in one paragraph) are described in the text. Those with broader use and relevance are listed below:

CDU: Christian Democratic Union of Germany

DDR: Deutsche Demokratische Republik, German Democratic Republic (East Germany)

DGB: Deutscher Gewerkschaftsbund (German Trade Union Confederation)

DG ECHO: The Directorate-General for European Civil Protection and Humanitarian Aid Operations

DM: Deutsche Mark

ECA: Economic Cooperation Administration**,** the first American-sponsored housing construction program was to build residential settlements in 15 German cities

ERP: European Recovery Programme "Marshall-plan"

ESCWA: The United Nations Economic and Social Commission for West Asia

FAO: Food and agriculture organization of the United Nations

FDP: Free Democratic Party Germany

FRG: The federal republic of Germany, West Germany

GDP: Gross Domestic Product

GDR German Democratic Republic

GOPA -DERD: Gesellschaft für organization Planung und Ausbildung -The Department of Ecumenical Relations and Development

HAI: Housing Affordability Index

HDI: Human Development Index

HLP: housing, land and property rights

HRP: Humanitarian Response Plan

IASC: International Accounting Standards Committee

ICRC: Syrian Arab Red Crescent

IDPs: Internally Displaced Persons

KFW: Kreditanstalt für Wiederaufbau " Reconstruction Credit Institute"

MOHC: ministry of housing and construction

MOD: ministry of defense

NGO: Non-Governmental Organization

NH: Neue Heimat (largest German housing and urban development company)1926-1990

NHH: Neue Heimat Hamburg

OBG: Oxford Business Group

S.H.A.R.P: Swansea Humanitarian Aid Response Project. Aid for Refugees

SPD: Social Democratic Party of Germany

S.P.: Syrian pound

UNDP: United Nations Development Programme

UNESCO: The United Nations Educational, Scientific and Cultural Organization

UNHCR Syria: United Nations High Commissioner for Refugees (The UN Refugee Agency in Syria)

UN-Habitat: United Nations Human Settlements Programme

UNHCR: The United Nations High Commissioner for Refugees

UNITAR: The United Nations Institute for Training and Research

UNOCHA: United Nations Office for the Coordination of humanitarian affairs

UN/DESA: Department of Economic and Social Affairs of the United Nations

USSR: The Union of Soviet Socialist Republics

WFP: World Food Program

Laws in the German case:

AbG: Abbaugesetz or reduction law, 1960

Erste Bundesmietengesetz, July 1955

GG: Grundgesetz für die Bundesrepublik Deutschland or basic law for the federal republic of Germany, 1949

Mieterschutzgesetz: 1942

WoBauG l: First Housing Construction Law, 1950

WoBauG 2: Second Housing Construction Law, 1956

WoBindG: German Housing Binding law, 1965

Laws in the Syrian case:

The organization and construction of cities law Nr.9 issued in 1974

The urban expansion law Nr.60 issued in 1979

The urban planning law Nr.5 issued in 1982

The expropriation law Nr.20 issued in 1983

The amending of the urban expansion law Nr. 26 issued in 2000

The real estate development law Nr. 15 issued in 2008

The law of real estate investment Nr.25 in 2011

The law Nr. 39 in 1986, conditions of housing's purchase from public authorities

The law Nr. 39 in 2002, some provisions relating to the protection of state property

The law Nr. 38 in 1978, housing savings

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Chapter 1. **Introduction**

1.1 Introduction

In 2011, a war started in Syria. Parties involved have been the Syrian Government force, Army of Islam (ISIS), Free Syrian Army, and Al-Qaeda (Al-Nusra Front, Ahrar Al-Sham), in addition to the international participants. In 2019, the war persists and flames up again in some parts of the country, and huge human losses and severe destructions across the country are already apparent. In the ten most war-affected cities, more than 27 % of the housing stock has been affected, with 7 % destroyed and 20 % partially damaged (World Bank, 2017). In consequence, social and economic life has dramatically changed and is continuously worsening. Between 2011 and 2016, the cumulative losses in the gross domestic product (GDP) have been estimated at $226 billion (Ibid). The pre-war population of Syria was estimated at 21.1 million in 2011

(Central Bureau of Statistics in Syria). Until February 2016, more than 470,000 people have died with 1.2 million people injured (World Bank, 2017). This number has been increased up to 560,000 people died until 2018 (SOHR, 2018).

As the young population was more severely affected than the older generations, the Syrian society has undergone serious demographic changes. A large amount (56%) of the pre-war population are either displaced within the country (6.2 million) or have become refugees abroad (5.6 million); (UNHCR, 2018). Young people mostly escaped from the war, either to evade military service or the bad economic situation.

Even if the end of the war is not to be seen, timely considerations for a post-war situation are necessary and are already in preparation. As soon as humanitarian interventions and politics successfully end the war, the next urgent step will be a proposed strategy to bring the people back and to rebuild the destroyed cities. Under the pressure of all these changes and the difficult situation in general, a major objective of Syrian politics is to encourage the return of its people. The urban planner's role is to contribute to a coordinated and effective reconstruction of the destroyed cities. Once the situation in Syria is calmer and safer, one of the most urgently

needed measures is to find a solution for the lack of housing facilities and the necessary infrastructure of the cities. A prepared reconstruction strategy is necessary in order to create enough housing facilities, as more than half of the number of the existed pre-war housing units are required, as soon as possible.

Many countries have experienced similar post-war situations in the past. Therefore, it is pertinent for a professional planner to analyze and use existing practical knowledge, and the related experiences of other countries. European countries passed the Second World War with much destruction to the urban housing areas of their cities, including Germany. The Germany capital Berlin, for instance, was destroyed by 80 % in its center after five years of bombing and intense street fighting at the end of the war. In Hamburg, 42,600 people died in one week during the bombing of Hamburg in 1943 (The Guardian, where are the world's most war-damaged cities?). Stuttgart was less severely damaged, but also here 68 % of the city center was destroyed by a totality of 53 air raids, to hit significant industrial infrastructure, military bases, and railway transportation in the southwest of Germany (Wikipedia article). In order to capitalize on the use of historical experiences such as those of

Germany, one must first determine whether this knowledge is suitable to be transferred to the Syrian case.

This research will focus on the experience of former West Germany. It will describe the situation after World War II (WWII), between 1945-1960, and the strategies of housing supply to understand the pro and cons in this case and thus inform a suitable strategy for post-war housing in Syria. The focus of the present work will not be on the provisional short-time emergency supply, but rather on a long-term recovery strategy. An important aspect of this strategy is to avoid illegal settlement in the future while maintaining the social and cultural identity of Syrian communities.

To begin, a literature review will be presented on the general characteristics of post-war cities and the use of social housing as a successful strategy for many countries after conflict. This will be followed by a case study of the post-WWII German social housing program, and an investigation of the former and current situations in Syria. The objective is to find transferable characteristics of the German social housing strategy and to define the criteria for the selection of transferable characteristics to the Syrian case as a developing country.

1.2 Research problem and approach

When it comes to war, general consequences for citizens include the destruction of homes and loss of infrastructure, jobs, income, and local cultural identity.

As Collinson describes, conflict "transforms society, rather than simply destroying it, causing people to adapt their behavior and their livelihoods in order to survive or to minimize risk or to capitalize on the opportunities that conflict presents" (Collinson, 2003, in Zetter, 2013)

For planners, the main problem is to identify practical and effective approaches for reconstruction and development after the war. This thesis deals with a focus on housing, especially social housing. Housing reconstruction is one of the first steps towards social and economic recovery and development after a 'complex emergency'.

In 2018, the ongoing crisis in Syria is escalating and the number of people affected by the crisis is increasing daily. A large number of internally displaced people create great pressure on rental demand, they sometimes even rent apartments without finishing, without doors or windows.

Cities and towns, including their hospitals, schools, as well as water and sanitation infrastructure, have been targeted, while

hundreds of thousands of homes have been partially damaged or fully destroyed. Since housing investment was interrupted, the quality of living space has worsened, and land and property rights have been challenged (World Bank, 2017).

The numbers mentioned at the beginning of this introduction demonstrate the degree of destruction and the dimension of the need for housing stock after the war. In searching for a solution to this problematic situation, the German social housing system which was implemented in 1950 in West Germany and proved to be a successful solution in Europe after the Second World War, has been recognized as one promising source of insight to derive similar approaches suitable for the Syrian cause. The objective of the present work is to analyze the pre-war challenges of the housing sector, and the current situation and Syria as well as the historical situation in Germany with respect to its comparability to the Syrian situation and to develop therefrom strategies for preparedness to tackle the problem in Syria after the war.

Analysis of the German experience in the present thesis will be limited to West Germany, which had been established in 1949, named the Federal Republic of Germany (Bundes Republik Deutschland (BRD).

1.3 Hypothesis and research questions

To put it together the objective is to bring evidence for the following hypothesis:

It is possible to transfer the west German experience in social housing after WWII to the Syrian after war context as a developing country.

In order to bring evidence for this hypothesis, the thesis will address the following questions:

1-What are general characteristics of post-war cities? What kind of housing reconstruction approaches has been made?

2- What is the definition of social housing? What were the post-WWII approaches to social housing in West Germany?

3-What were the pre-war approaches to social housing in Syria? What is the current situation of housing in Syria?

4-What are the similarities and differences between the historical post-war German situation and the expected post-war Syrian situation? Which parts of the experiences made in post-war West Germany can be recommended to be used in the Syrian case?

5-What are the criteria for transferring the experiences of social housing in the case of West Germany to strategies in Syria?

1.4 Research methods

Three primary approaches will be applied in this research:

1 - A literature-based analysis of the common problems of largely destroyed post-war cities with special respect to the case of Germany. To this approach belongs a review of theoretical terms related to social housing and reconstruction concepts in general and specifically in post-war Germany. This includes a critical comparison and discussion of different aspects documented in the relevant literature.

2 - A data-based analysis on the situation in pre- and expected post-war Syria, with a special focus on social housing approaches and the cultural, social, and economic aspects of housing.

3- In a comprehensive synthesis of 1 and 2, the basis for a comparative evaluation on whether the lessons learned from the German experience can be transferred to the Syrian context is formed. Therefrom adapted novel approaches are developed and critically discussed in order to evaluate what can be transferred from the German case to the Syrian context.

The aim of this conceptual work is to make fruitful the German experiences for the unique context of Syria. Figure 1 illustrates the used methods of this research in a flow chart.
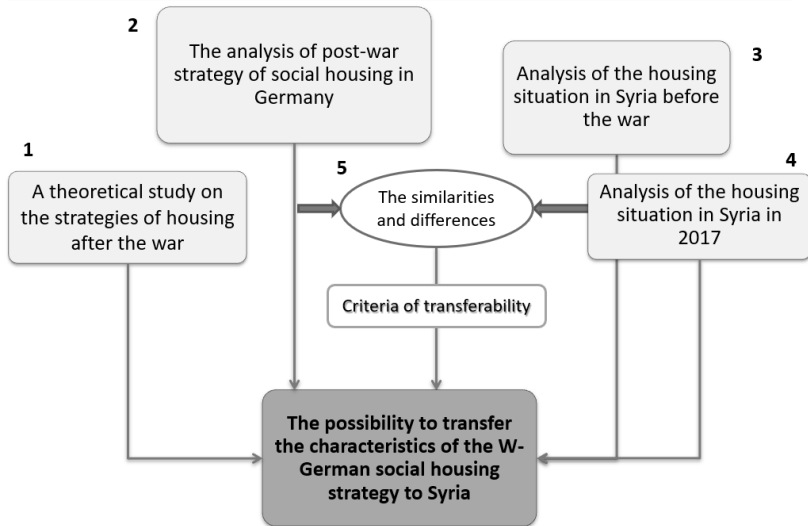
Figure 1 Overview of the different methodological work packages combined to tackle the expected post-war situation in Syria. Source: The author.

1.5 Expected applicability of results

The present study has been written during wartime. Yet, the war in Syria is not finished, and there are many issues that are not yet settled and hardly predictable in their future development. This situation limits the scope of the current research. But the main features of the expected situation in Syria after the war can be stated. The thesis ends with a list of

recommendations for coordinated operation in the post-war time, for which the possibility of transferring characteristics of the German experience is analyzed. (Figure 2) illustrates the expected impact of results within the whole methodological framework of this research.
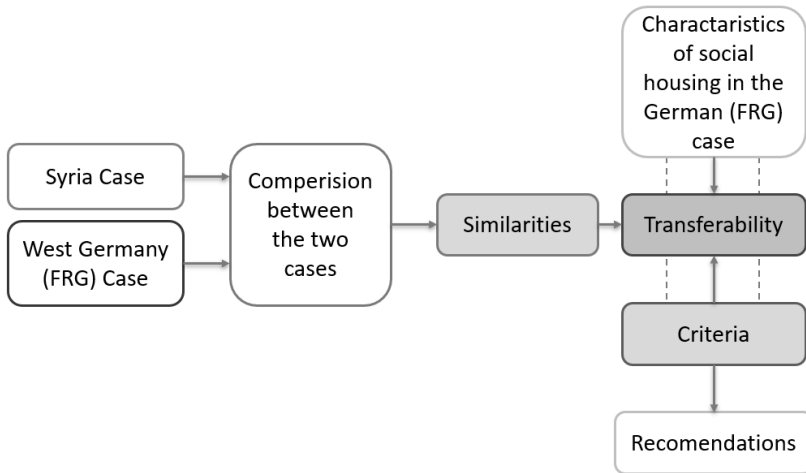
Figure 2 The methodology of this research including the expected results. Source: The author.

The end of the second world war in Germany was in 1945. In the Syrian case, the situation in 2019 will be considered as the end of the war because war activities ceased in many cities by 2017, although this restriction means that the later impact of the still ongoing war is not considered and the results need to be interpreted with respective care. The difficulty for the statement for the transferability is that in the German case there

is a factual experience because it happened already. However, in the Syrian case for the situation, which is coming, there is an open frame. (Figure 3) represents a correlating time axis presenting the historical case in Germany and the future in Syria, which is an object of the recommended transfers.
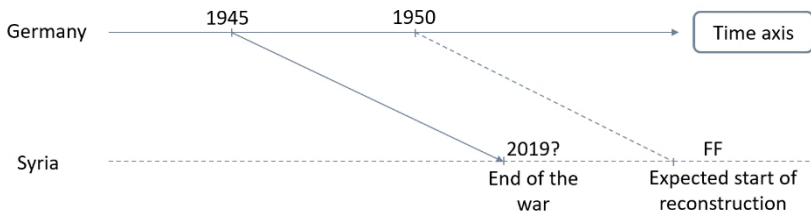
Figure 3 time axis of the two cases, post-war in Germany and post-war in Syria. Source: The author.

1.6 Structure of the thesis

This research is divided into eight chapters, which are organized as follows:

Chapter 1:

The first chapter provides an overview of the key issues that prompted this research, its aim, and objectives, and provides a summary of the research methodology used in this study.

Chapter 2:

Before starting with the key questions concerning the hypothesis, Chapter 2 provides a general introduction to post-war housing and strategies to provide it.

There are similar aspects of cities going out of the war. Chapter two is dealing, in general, with these aspects and with post-war housing strategies of providing housing. Then, the key issues of desirable outcomes and postulates in the provision of housing are identified. In this chapter also, post-conflict setting, post-conflict reconstruction, post-conflict housing reconstruction, housing needs, and social housing definitions are presented, using related literature.

Chapter 3:

Chapter 3 forms the basis of this research. In this chapter, the social housing concept is defined as housing for a low-income target group with financial (governmental or non-governmental) support. The experience of West Germany's social housing after WWII is then presented as an inspirational guide for Syria.

In the German case, the housing ministry responsible for setting housing laws was established after WWII. The first law was enforced in 1950, and it specified the standards of the

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dwelling sizes, building types based on low-cost calculations, the duration of implementation, the target groups, the investors, the funding support mechanism and the location of needed houses.

An analysis of the post-WWII German experience in social housing, pre-war Syria and the Syrian situation in 2017, will be presented.

The data analysis is based on categories that emerged from the empirical data collection of housing policy: urban and architectural side, reconstruction and building laws (governmental side), main actors, and funding process (economic side).

Chapter 4:

The fourth chapter demonstrates that there was already a housing problem present in Syria, especially in the big cities, before the war. This problem arose from many factors throughout the years:

-The increasing annual growth rate of the population.

-The immigration inside the country, from rural to urban areas.

The social housing concept was first implemented in Syria in the 1980s. The construction of planned houses was slow

because of many factors, including limited resources of land and money. However, the Syrian concept of social housing did not target low-income groups of people, as the criteria by which people were classified as low-income were and still are not yet formally identified. The main characteristic was, that the social housing programs and development companies mostly built on cheap land. In Syria, there is no official information about income distribution and expenditure by which people can be classified as low-income. In addition, most of the information provided to the government about the real value of the possessions that individuals own or the amount of money they earn is not accurate, but rather bribes might be paid to some of the tax collectors not to estimate the real values. In fact, informal settlements were the solution for low-income people who had no chance to enter the official housing market.

Chapter 5:

The fifth chapter describes the situation in Syria after seven years of war (in 2017). The economic, social, urban and administrative situations are described with a focus on the situation of housing and the overall requested number of housing units in Syria. As the most war-affected cities are the

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most populous cities in Syria, more analysis is required for the case of Aleppo and Homs, whose results may generalize to other cities. The analysis is based on data provided by the Central Bureau of Statistics in Syria, the World Bank, ESCWA, and UN-Habitat.

More focus will be given to the cities of Homs and Aleppo also due to the fact that more information than from other cities is available, also for understanding the problem of post-war housing in these important big cities of Syria in more detail. Because the war in Syria is still not yet finished, it is necessary to present data from cities that are already accessible, as it is in contrast to the historical German situation.

Chapter 6:

Chapter 6 compares West German and Syrian post-war situations in order to find out the similarities and differences. In this chapter, the results of the data analysis fall under four main categories: urban situation, economic situation, social situation, and administrative situation. The discussion of findings will focus on the points that can be applied to the Syrian context.

Chapter 7:

In Chapter 7, the transferability of the characteristics of the German experience is examined. In this process, two kinds of criteria are used to assess transferability: the consequences of the war and the contextual criteria. The transferability of German solutions is based on the results of Chapter 6.

Chapter 8:

Finally, the research leads to a list of recommendations. At the end, a critical perspective with respect to the limitations of the present study as well as an outlook on future research needs is given.

Chapter 2. *Post-war activities with respect to housing*

Before analyzing social housing strategies as one of the post-war housing provision strategies, it is useful to define the terms "post-war" and "post-war reconstruction". Therefore, an overview of the post-war situation in general, the post-war housing situation, as well as the available strategies for housing provision is provided.

2.1. Characteristics of post-war cities

2.1.1 Definition of the term "post-war"

The concept of "post-war" refers to the period that follows the end of the war in a specific country. This period typically starts

with an official political contract of peace. It is also possible to be marked by a landmark victory by one of the warring parties, such as the fall of the capital city (Nkurunziza, 2008). Sometimes, it is identified by the date of the signature of an agreement between the fighting parties. In some cases, it is difficult to define the start and end of post-war time, as war activities continue because of the diverse ethnic and religious groups in the country, so progression towards peace does not follow a simple way. For example, after the end of a war, many deprived people try to occupy and move into others' properties in ways that may instigate social problems and/or reactivate war. Thus, housing, land, and property (HLP) rights should be taken into consideration especially in these cases (Geda, 2011).

Primary crisis relief activities in the post-war period include emergency support, development of policies and laws and implementation of these policies. Depending on the extent to which peace can be preserved, these activities may not follow a simple order or happen independently of each other. Emergency activities concentrate on providing humanitarian services and setting up basic governance. Policy development focus on the planning of needed physical, administrative, and social infrastructure. This generally happens upon the conclusion of emergency actions when more coherent plans

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can be made for the future. Implementation of policy typically occurs later in the post-war period when there is a return to a reliable degree of social, economic and political stability (Nkurunziza, 2008).

The post-war period is normally characterized by poverty, emergency, lack of health and education institutions, and a need for infrastructure facilities. Thus, the post-war period in a country ends when the inhabitants of this country have sufficient food, jobs, and homes. Theoretically, the needed time for all of that to be achieved is about 10 years, following the end of the conflict (Ibid).

Lucchi indicates that an increasing number of countries are emerging from internal struggles and transitioning into post-conflict. The circumstances in each country emerging from conflict are necessarily unique. Thus, understanding the specific post-war setting of a distinct country after a conflict is very important in developing adequate reconstruction programs. Therefore, the following paragraphs critically review the literature on the most important characteristics of cities emerging from war conflicts. (Lucchi, 2010)

2.1.2 Destroyed and injured properties

During the war, physical infrastructure is the most affected structural element. The attacking groups tend to target it as a part of the war strategy, to put the current government in difficulty (Barakat, 2002). The physical infrastructure most often damaged in war includes bridges, roads, airports, companies, industrial firms, telecommunications networks, health buildings, schools, and water, oil, gas and electricity grids.

Nevertheless, also housing is one of the most affected physical structures (Barakat, 2009). In addition to the amount of destruction directly caused by war activities, there is also no new housing construction or maintenance during the conflict. Moreover, in the areas where the houses are not totally destroyed, most of the material and equipment is likely to be stolen.

2.1.3 Weak institutions

Institutions and governmental administrative capacities are weak after conflicts, and unable to perform their normal functions (Cian, 2007). The extent to which administrative capacity is hindered depends on the availability of skilled personnel and the extent of physical destruction of institutional

buildings. Most skilled and educated government officers generally escape the country. In addition to that, the capacity of decision-makers of the government is confounded by the complexities of post-war politics (The World Bank, 1998) and the limited ability to operate in some parts of the country during the conflict. Reconstruction processes are particularly problematic under this limited capacity of decision making.

As a consequence, there are no property rights, public expenditure is poorly managed, and legal systems become corrupt. According to Bojicic-Dzelilovic (2002), repairing the institutional infrastructure of countries after conflict requires strengthening the legal system and administrative capacity, and therefore is considered as the most difficult task of reconstruction.

2.1.4 Displaced inhabitants

Population displacement is the main consequence of the armed conflict. Displaced peoples include refugees and internally displaced people (IDPs). Refugees are people who seek safety outside the county, whereas IDPs are those who relocate within the country in search of safer living conditions.

In 2011, the number of the world's displaced people was 42.5 million, either as refugees (15.2 million), IDPs (26.4 million), or those seeking asylum (895,000). Among refugees, most people fled from Afghanistan, followed by Iraqis, Somalis, Sudanese and people from the Democratic Republic of the Congo (UNHCR, 2011).

In 2017, the numbers rose to 68 million global displacements, with fully 85 percent of refugees coming from developing countries (UNHCR, 2017). There are 25.4 million refugees, and almost two-thirds of all displaced people were forced to flee internally. The refugees mostly coming from Syria, Afghanistan, South Sudan, Myanmar, and Somalia.

This increasing number of refugees and internal displacements was in part due to the rising of Syrian conflicts and the straining of Western States' borders. In displacement situations, the people usually lose their properties, wealth and livelihoods.

2.1.5 Collapsed economy

According to Collier 1999, post-war economy is deteriorated through:

- The destruction of physical and human resources

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- Social disruption
- The diversion of public expenditure from development activities to military spending
- The lack of savings and portfolio substitution as private agents shift their assets out of the country.

As stated by Teodosijevic in 2003, wars reduce or stop production in areas of conflict. For example, most of the industries and exports are affected by the destruction of the infrastructure facilities such as roads and telecommunication. The tourism sector is one of the most war-affected sectors. Agriculture is affected, especially in developing countries as a result of land inaccessibility (e.g. land mines) and lack of input which makes the lands unusable. The loss of domestic and foreign investment is yet another result of the conflict.

2.1.6 Poverty, unemployment

According to the World Bank (1998), destitution is the result of, and reason for, conflicts. Recent wars mostly exist in developing countries that have a lot of debt and depend heavily on the international community for funding. Wars have generated poverty and severally destroyed economies in the least prosperous countries.

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When countries have poverty the amount of problems and challenges is high. Wars limit the available local resources (because of destruction) to provide funds for post-war reconstruction, and it influences the world's development negatively as the donor countries inject a lot of money into the post-conflict countries.

As a result of the loss of infrastructure, economic investment and the ethnic conflict, the percentage of unemployment is high in post-conflict countries in comparison to their pre-war situation (Seneviratne, 2013). The main role of post-war reconstruction programs is to create job opportunities for ex-combatants and for the people who returned after conflicts.

2.1.7 Socio-economic changes

War makes deep changes in societies especially with regard to gender roles. During wartime men are the predominant casualties. Women become responsible for the economic survival of the rest of the family and must take new responsibilities as decision-makers in the family (Wanasundara, 2006). Women are mostly affected by the death or disappearance of their family members or the migration of young men to avoid military service (Seneviratne, 2013).

The flexibility in the gender role has an important part in the economic recovery as the women assume more economic activities (The World Bank, 1998). Thus, post-war reconstruction should integrate women into all programs, projects, and policies to sustain the gains women have made through the wartime (Ibid). It is important to enforce property laws that ensure equal rights of women and to integrate women into the formation of a post-conflict society.

War changes the values of communities. The involvement of women in non-governmental organizations (NGOs), and taking up responsibilities' arms without the protection of the family's male members can encourage women to get more a feeling of independence and self-confidence.

After presenting the urban, economic, political and social characteristics of post-war cities an idea about the concept of post-war reconstruction and housing, land, and property rights after displacement and return will be given in the following sections.

2.2 Post-war reconstruction

Post-war reconstruction deals with development and conflict. The international peacebuilding and development community

works with many concepts of recovery (the economic, social and urban ones). According to the World Bank, post-conflict reconstruction supports the transition from conflict to peace in an affected country through "the rebuilding of the socio-economic framework of the society" and "the reconstruction of the enabling conditions for a functioning peacetime society, explicitly including governance and rule of law as essential components" (World Bank, 1998), in (Ohiorhenuan, John, p3). The United Nations Development Program (UNDP) considers reconstruction as the process of return to a "normal" development path, where a country has "reacquired the capability to make and implement economic policy as part of a largely self-sustaining process of economic governance" (UNDP, 2008, p4).

Post-war reconstruction gives the opportunity to improve the urban, economic, and social situations of the country. According to El-Bushra (2004), post-war reconstruction is key to preventing further conflict or war, and it is a step towards development.

Mendelson-Forman defined reconstruction as achieving broad socio-economic well-being. This would comprise: guarantee societal security, public health, food security, and restoring the

physical structure and infrastructure, as well as, generating employment and educational systems, opening markets, re-establishing prudential frameworks for financial institutions. (Mendelson-Forman, 2002).

However, post-war reconstruction is a major challenge for development agencies in developing countries. According to (Barakat, 2009), the interventions of the international committee could support post-conflict countries, including developments related to the local economy, security, infrastructure rehabilitation, peacebuilding, refugee resettlement, education, health, and governance. This intervention was presented by the World Bank (1998) and synonymously by El Bushra (2004) with the following priorities:

Fixing the economy:

This involves restoring an economic base that depends on agricultural production or existing industries, and the provision of loans and grants for new ventures or businesses, the development of currency, new industries, market and commerce, and new sources of income.

Reconstructing the governmental framework:

Post-war activities with respect to housing

This involves rectifying the political system, to restore the law and to build governance and administrative capacities.

Reconstructing the physical structure and infrastructure:

This involves rebuilding shelters (housing), schools, hospitals, transportation systems (e.g., bridges, roads, etc.), restoring electricity, oil, gas and water supplies, and providing the training for conservation.

Reconstructing social infrastructure:

This involves interpolating the basic needs of education, health care, cultural care (ex. playing theatre), and social care (ex. basic life needs such as food, clothes, and shelter) of the people.

Rebuilding communities:

This involves revitalizing disrupted local communities, to support the families headed by women, and to reintegrate the displaced people and the former combatants.

De-mining programs:

Mine surveys and de-mining of important infrastructures.

Rebuilding the judiciary system:

This involves reforming courts and judicial processes by establishing a functioning and credible judicial system.

Rebuilding financial stability:
This involves rescheduling, get rid of debt and planning for financial stability.

According to Nkurunziza (2008), physical reconstruction is the most visible indicator of economic reconstruction. It is important for building trust and stability in post-war communities, and to attract foreign investors. Since physical reconstruction is an important factor for social stability in the country, it is recommended to be started before economic programs are fully underway.

According to Barakat (2003), among the physical reconstruction of destroyed structures post-conflict housing reconstruction is very important because it contributes to development and peace in the recovering country by rebuilding the economic (housing industry) and social life of these affected communities.

In the present work, therefore, the main focus is on post-war housing reconstruction, with a particular focus on the social housing concept. Although, post-war housing reconstruction

presents some obstacles and challenges that will be discussed in the following section.

2.2.1 Housing, land, and property rights for special cases

Post-war reconstruction is one of the very important factors for the transition from conflict to peace. The reconstruction strategy should consider carefully the issues of property rights. Private property and public property can easily be a point of conflict among fighting parties and therefore extend the conflict. This is only in the case of war, where there are different ethnic, religious and political groups participating. These problems occur repeatedly when refugees and displaced people attempt to reclaim their properties upon their return, or when they are not able to move back in their homes, which are inhabited by others. Post-conflict peace-building efforts, including these cases aimed at rebuilding the rule of law, are mostly delayed by attempts from "victors" to occupy the properties of the defeated group. (Leckie, 2005).

The United Nations increasingly views property rights as an essential element of the peace-building process and as a prerequisite for the rule of law (The report of the UN Secretary-General, 2004). Housing, land, and property (HLP) rights are recognized throughout international human rights

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and law, and thus the legal framework required for the development of a complementary policy by the UN and others already exists.

To enforce HLP rights in post-war settings is typically hampered by the following challenges: displacement and return; the legal framework and institutions; the status and availability of housing stock, and other often-overlooked concerns such as homelessness and landlessness (Leckie, 2005). Understanding these challenges and how they have been met in former cases will provide a stronger, more informed basis for reconstruction and development strategies.

Displacement and return

When refugees and IDPs return to their pre-war houses, they often find that some groups have taken advantage of the breakdown in law and have occupied their former homes. Some common disputes that result from the return of refugees and IDPs to their pre-war houses include:

- Trials by refugees and IDPs who find that their former houses are occupied by people of the opposite ethnic or national group (secondary residence); or by people without documentation to show their ownership but with legitimate rights. These cases

are to be differentiated from the case of secondary residents with legitimate humanitarian housing needs, who will often leave the houses by themselves when their own home's problems are solved by the possibility to return into their own houses or by the provision of another house, a land plot or compensation.

- Determining rights where the present residents hold legal titles, but the returnees do not or have not followed legal transfers of property. For instance, when property sales or rental contracts have been forced under pressure at the time of flight or escape after long-term pre-war tenancy or possession disputes.

- In some cases, public or social housing properties are privatized (i.e., transferred from the public to the private sector) during conflicts whilst occupied by a secondary resident to whom the official title is transferred without the knowledge or agreement of the original occupant.

To handle these needs and to protect HLP rights of refugees and IDPs, the UN has supported the establishment of housing and property commissions; committees that have been entrusted with "making binding determinations" (Leckie, 2005, p12) to help returnees re-possess of their original houses.

Housing stock

During and directly after an armed conflict, the housing situation is generally disordered with severely damaged housing stock and a shortage of housing. The housing sector thus becomes a source of disputes, especially in cases of different ethnic, religious and political groups. Turmoil in the housing sector arises for many reasons:

- Maintenance of existing houses and the construction of new ones have ceased, leading to declines in housing supply and increased social conflict. If this conflict involves disputes between ethnic groups, the housing sector could be used as a means for ethnic cleansing (as seen in Beirut city, after the Lebanese Civil War lasting from 1975 to 1990) and political favoritism, thereby leading to further conflict (Ibid).

- During conflict and the post-war period, existing or remaining houses are overcrowded.

- Right after the end of the war, there is usually not enough information about the available housing stock.

- Social housing programs are often unavailable after the war due to the absence of government. Thus, in some cases, the

number of homes available through social housing programs is negligible and require public intervention.

These are some of the key HLP rights challenges facing peace operations and post-war reconstruction. The following section outlines the post-war housing situation and reconstruction strategies.

2.3. The post-war housing situation

In order to identify suitable post-war housing reconstruction strategies, it is important to consider the post-war housing situation in general, the role and the importance of post-war housing reconstruction, possible housing reconstruction activities, and some of the challenges that possibly face the post-war housing reconstruction (Bowley,1943).

Assessment of the post-war housing situation requires detailed statistics to discuss the situation in terms of post-war housing. This shortage of housing units (reduction of previously available supply) features after the war for many reasons. Wars stop the investment in housing construction despite an increased number of families that are in need of dwellings to rebuild society after wars.

The upgrading of programs and housing maintenance is delayed during wars. To calculate, the approximate amount of housing reduction through wartime, one multiplies the number of houses planned to be built each year by the number of years in the war, summed with the number of destroyed houses. (Bowle, 1943).

Housing destruction causes negative effects on the income of the family because they have to move to another place and/or rent a new one. At the same time, the ability of people to afford a house is affected by the poverty caused by war. Accordingly, housing provides an indication of the social and economic prosperity of people (Ibid).

2.3.1 The role of post-war housing reconstruction

Post-war housing reconstruction has the important and primary roles of economic development, welfare, and stability of most societies. It provides humans with space to live, sleep and to eat, to be protected from extreme cold and warm weather, and to afford sunlight and ventilation, which are basic needs after water and food. In addition, it expresses the cultural identity, rebuilds governmental, political and legal stability of societies, and restores faith in the future (Barakath, 2003). It is the catalyst for changing societal roles as well. It creates a new role

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for women. (See section (2.1.7)). In some cases, it has the potential to stabilize peace by diminishing the competitive struggle for living place. Based on that, housing reconstruction must be a notable point in post-war programs.

Post-war housing reconstruction can also help in transferring technology, building techniques, and skills training in order to have better housing. (Ibid)

According to Barakath, another reason why relief aid programs should consider the post-war housing reconstruction on the humanitarian agenda (especially the permanent reconstruction) is that for those who have lost their homes, it is not only a physical loss, but also one of dignity, security, and identity. This can lead to psychological shock, disturbance of social structure, disruption of security, and has a negative influence on the economy. In contrast, housing reconstruction activities can strengthen the emotional and physical abilities of the communities and enhance its reconciliation, and the self-esteem and pride of the people through participatory programming. (Barakath, 2003)

The next paragraphs will clarify some points of post-war housing reconstruction's role:

-Rebuilding the economic life of war-affected people Economic recovery, development and poverty reduction are stimulated after an emergency by creating immediate investment (Barakath, 2003). This includes investment in materials, labor, and other construction requirements. (Richard, 2015). Furthermore, the housing sector is important for establishing a productive daily life for the affected inhabitants. This helps them return to their original communities to continue their working activities.

-Solving the reintegration problem of people displaced by war: Displaced people and returnees are in need of houses. For that reason, the reintegration of displaced people with claims for housing reconstruction is conclusive. Housing is used as "a strategy to solve problems of internal displacement due to war" (Richard 2015). Barakath (2003) also suggested that post-war housing reconstruction is a motivating factor to reintegrate communities as part of the efforts towards peace.

- Restoring security, trust, and faith in the future among conflict-affected people and investors: "The loss of a home constitutes not just a physical deprivation, but also a loss of dignity, identity and privacy. It can cause psychological trauma, challenges perceptions of cultural identity, disrupts

social structures and accepted social behaviour, poses a threat to security, and has a significant negative economic impact." (Barakath, 2003, p2).

Housing reconstruction after war helps to restore that identity, dignity, and privacy to war-affected inhabitants.

- Housing reconstruction has significant impacts on the legality and stabilization of the country (Barakath, 2009). In this way, the housing reconstruction enables communities to enhance satisfaction towards the government by providing sufficient and suitable help. Housing reconstruction initiatives may also have significant governance impacts.

2.4 The possible housing provision strategies

Bowle (1943) argued in the context of world war II that the expected end of the housing shortage can be considered as the restoration of the pre-war situation with respect to family and housing numbers, including planned improvements in the quality of the houses. He states in 1943, that there are two alternative solutions to be considered, both are long-term strategies:

1-The first is an attempt to restore the pre-war situation completely as it was, by building the same number of houses of

each type in each place as it had existed, in addition to houses needed for an increase in family number. This depends exclusively on the decision and on the efforts of local authorities and private companies on how to restore the pre-war situation.

2-The second solution is to consider the housing problem from a more distant point of view. Considering the situation regardless of what might have happened if there had been no war. Accordingly, the main focus of this approach of the housing strategy would be using the available housing, considering the poor supply (rebuilding) of houses.

According to Bowle (1943), looking to the post-war housing problem starting from accepting the current situation, presupposes the acceptance of the arguments that 1) the state must assume responsibility for housing in periods of crisis or acute shortage, 2) government policy must prevent people from living below certain minimum standards of housing, and 3) government policy is responsible for providing modern houses for those who need them on terms they can afford.

Bowle (1943) argued also that inhabitants and local authorities are more inclined to opt for the first strategy. They concentrate on the replacement of the destroyed houses and the

continuation of pre-war programs. This requires clear, careful, and accurate plans because the breakdown of such plans might lead to worse disruption and postponement than building without a set scheme.

From another point of view, the two strategies which had been suggested by Bowle can be combined.

Indeed, it is important to recognize the difference between the two terms, shelter and housing. Shelter in this research means a temporary place provided for the harmed communities. Housing refers to building, constructing, rebuilding, or restoring. Housing reconstruction means either to provide permanent housing or to support the people until they can rebuild their houses themselves.

The next paragraph will describe the strategies (approaches) of providing places to live after wars or conflict cases. The first strategy promotes being a temporal shelter or housing construction; the second approach is seeking long-term housing reconstruction from the very beginning.

Within this context, each of the two options has its own challenges, needs, pros, and cons. Every solution is suitable for and can be successful in a different situation. Each situation is

characterized by the extent of the destruction, the extent of the emergency, by factors of time, and the factors of resources (e.g., working power and money).

2.4.1 Temporary construction

2.4.1.1 Temporary shelter

The temporary shelter is a necessity to provide human dignity, security, safety, protection from illness and weather conditions, to the displaced people in the early months following the war. In temporary shelters, food, water, and medication are provided. "temporary shelter has taken the form of plastic sheeting, tents or emergency centres set up in communal buildings or relief camps." (Barakath, 2003, p15).

2.4.1.2 Temporary housing

Temporary housing is different from the temporal shelter. It is expected to sustain for a longer time, and it involves the continuity of the inhabitant's activities for the purpose of reintegration. After the end of the war, it is to be provided at a low cost until a permanent solution can be found. It is a major feature of emergency responses after conflicts, especially where many people need help. The temporal housing can be rental dwellings, small huts, or prefabricated housing imported

and prepared to be used all over the world regardless of climate or culture. For further explanation about the prefabricated housing:

Prefabricated houses can provide shelter for a large number of vulnerable people through a limited period of time. This is very important in situations where many homeless people exist. On the other hand, it is not the best solution. Prefabricated houses usually must be transported, and as such, it is not useful for the local economy and imposes generic architectural design. In addition, usually the construction elements are heavy and difficult to be built without expertise, and this kind of building has a relatively short lifetime.

In some cases, external temporary housing providers may not be needed. The inhabitant might build their temporary houses by themselves or may stay with relatives or friends in their places. (Barakat, 2003)

The main advantages of temporary housing are:

-The immediate solving of life needs of privacy and protection (in a short time).
-Providing protection from illness and weather conditions.
-Strengthening the people's social being together, if they build the temporal houses by themselves.

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Nevertheless, there are significant arguments against temporary housing provision, for instance:

-The supply of temporary housing reduces the need for constant housing. Accordingly, the priority might not be given to permanent housing projects. Thus, temporary houses often turn into permanent homes, resulting in fewer quality houses for poor people. Indeed, (Ibid) states that affected communities may "fear that temporary housing will become a long-term measure and prefer permanent rather than temporary housing because they feel more secure and are able to resume normal life more quickly. Conversely, where ostensibly temporary housing becomes effectively permanent, it may be difficult to persuade people to move". (Barakat, 2003, P16)

-The temporary houses are as expensive as permanent ones and thereby reduces available funds for permanent projects.

- Temporary housing expenditures do not contribute to local economic development, as the temporary house's materials are mostly imported. In addition, it might delay the long-term recovery process.

-The temporary housing solution can take time, due to import procedures of materials such as transport and customs clearance.

-Temporary houses have to follow legal procedures and are prepared to provide shelter for the short term. This means that they should be built on different sites from those allocated for permanent housing, which maybe agricultural or previously untouched lands.

-Moving inhabitants into temporary houses and again into permanent ones increases post-war trauma and weakens community connections. (Ibid)

In some cases of immediate emergency temporal shelter is the solution, but in situations where millions of people are affected over time, the counterargument is weighted heavier.

2.4.2 Long-term reconstruction

Long-term reconstruction means housing reconstruction and development strategy. Deciding what to do depends on the scale of damage. In some cases, the cheapest and fastest method of providing suitable housing is to repair the damaged ones, if possible. Repairs are mostly limited to essential works related to roofing, load-bearing walls, windows, doors,

plastering, water pipes, and kitchen. Barakath (2003). It is less traumatic for people than moving to temporary shelters because they can reoccupy their own houses. In the heavily damaged areas, there are two possibilities: either to build houses for the pre-war inhabitants in new locations (constructing) or to rebuild in the original places of living (reconstructing). In the following sentences the three possibilities are described in more details:

2.4.2.1 Repair of the damaged housing

Repairing is always a good start but sometimes it doesn't work as a general strategy, because the degree of destruction varies from place to place, even within the same city. Evaluations of buildings are important in determining the required materials and the level of skill needed for repairs. Depending on the degree of damage and existing skills, people may assume their own repairs and return to normality quickly using their sources or using relief funds. Dwellings may be rehabilitated by contractors using relief funds.

2.4.2.2 New housing (rebuilding and building)

New housing has two possibilities:

1- To rebuild in the original places of living.

2- To build houses in new locations.

On one hand, rebuilding destroyed areas to their previous state or even better is preferred, where possible. However, clearing out rubble and resolving property issues can be a long process. On the other hand, building houses in new locations means relocation. As people are connected to their original places of living for economic, social and cultural reasons, relocation is not considered the best solution for many people. (Barakath, 2003). Nevertheless, it is necessary in some cases. For instance:

-Where there exist many unexploded mines in destroyed areas and their removal is very difficult.

-When there is a trauma or psychological impact of events that took place in, or relate to, the original place of living.

-When the disruptions caused by the war forced people to move to another area in search of job opportunities. (Hovey, 2001)

Relocation requires more effort than other housing reconstruction strategies and requires the highest level of investment (Ibid). In addition, it is important and difficult to determine suitable locations for new housing, the materials,

and methods to be used, and the contextual designs of construction and reconstruction.

The location and site selection:

The selection of new housing locations usually depends on property rights, land use plans, infrastructure, and employment opportunities. By observing where displaced people move by themselves, a lot can be learned about the new location selection. In the post-war situation, in addition to security, access to job opportunities is the most important factor in determining where people live, particularly in cases of internal displacement. Generally, these places are in suburban areas surrounding the big cities which might be slum areas or in safe cities. Usually, there are three possibilities for the new house's location:

1-New houses on the self-settled locations. In this scenario, people settle down in a dispersed way that is dependent on the willingness of the hosting community to share resources with others and on the availability of lands. This choice has some challenges and problems.

For instance, there may be legal problems related to land property as well as land use, and it is possible that the

government is unwilling to create settlement facilities there. In addition, there may be a lack of infrastructure or an overload of the existing one. (Hovey, 2001)

2-New settlements as an extension of the existing settlement. If the government and the local communities accepted this solution, there will be more possibilities for integration within the hosting community and for more expected live means fitting the new inhabitants. Furthermore, an extension of the existing settlements will make the existing infrastructure more efficient. (Ibid)

3- A new location for the new settlement. In this option, it is important that the new homes are close to job sources so that people have access to local employment markets. Planning for small-sized settlements with their own infrastructure is more effective and manageable. In some cases, the chosen location of these settlements can be isolated, thus in this situation, a bigger settlement may be better, and the inhabitants can create their own sustainable job market. However, in the case of planning bigger settlements, cultural, religious and intertribal structures should be taken into consideration to ensure greater social success and less tension between the inhabitants. In

addition, big settlements can increase problems of maintenance. (Ibid)

In this third case, when new locations are chosen, it is important to consider what the land use plans were prior to the war. Reconstruction strategies may be considered as one possibility for reviving these plans, but they should have been based on more comprehensive and detailed researches.

Depending on the situation, the first and second solutions are preferred for internally displaced peoples because the inhabitants have long-standing traditions and relations to the site and community that stabilize their tenure there. The third solution -a new location- is preferred if there is a large number of displaced persons seeking accommodation.

The construction method and material selection:

Local materials, techniques, and construction methods are the most suitable for housing restoration, building and rebuilding for the following reasons:

-They provide greater opportunities for maintenance and sustainability, as local construction skills stay within the community even after completion of building projects.

-In addition, the use of traditional techniques provides opportunities for the involvement of owners and local builders in the rebuilding process, thereby increasing the local economy.

-Traditional materials and techniques are normally better suited to the local culture and climate (environment). This is especially important in the case of houses to be built that have architectural or historical value.

-Re-establishing the traditional style of the building helps the community in the post-war phase by providing a sense of continuity.

-Furthermore, using recycled material from the rubble allows for the use of traditional materials at low-cost prices.

At the same time, significant counterarguments can be made:

-Local construction materials and techniques may have become associated with a lack of modernity or memories of death.

-They may even be associated with the threats that resulted in war in that place.

-Furthermore, obtaining significant quantities of the local materials can increase prices to levels that prevent the people from buying the needed materials for rebuilding.

The contextual designs of housing

The contextual design implies that in addition to the reconstruction of houses, there are important factors influencing the design of houses. That should be considered:

1- Economic factors: the average of family income per month, number of employees, general domestic program, low-cost housing construction

2- Demographic factors: the average number of family members, annual population growth rate, immigration from the inside (displacement) or outside the country (returning refugees).

3- Functional factors: the possibility of the future extension of the apartments, the need for indoor space during the day and at night (especially the placement of the lavatory). The need for space can differ between urban and rural areas. In rural areas, houses may need a place for cattle and storage space for equipment and food. In urban areas, space may instead be needed for a small workroom.

4- Social or cultural factors pertaining to religious or ethnic norms: For example, privacy issues in Islamic culture warrant special needs such that guest rooms

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should be separate from the living room and the sleeping room of the sons should be separate from that of the daughters. The openings to outside the house should be partly covered.

5- Climatic factors such as ventilation, solarization, and weather that affect the type of housing.

The required sizes of housing space, functions and types are different depending on the needs of the inhabitants. It should be suitable economically, socially and demographically considering the location of this house climatically. The house's size should consider the number of family members, in addition to the economic situation of the inhabitants. The cost of the new house is always related to:

- The cost or price of the piece of land.
- Construction costs.
- The construction types and materials.
- The infrastructure costs.

The land use and the type of the houses are highly related to each other considering the width of the building, the height of the building, the height of every floor and the number of the floors. The required land area is smaller when the number of floors is more. When the construction height of the room space

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is 10 cm less, the cost of the construction is 1.5% less. (Al-absi, Abdeh, 2004). The multi-floor (multifamily) buildings cost less than the other types in general especially when there is no elevator used (up to five or six floors) and it achieves a high density of people 300-400 persons/m² as it was mentioned before.

For the same area of a single house and the flats having common walls and surfaces as row buildings, the second one costs half that of the first one. This is because single houses require more covering materials for the free faces of the building and more area of land for the entrances.

The use of module construction design affects the acceleration of the construction because it makes the building simpler. The standardized facades with similar opening sizes make the costs less.

The design of new houses should consider these factors because their acceptance by the inhabitants is more likely to be guaranteed. (Barakath, 2003)

By definition, the temporal shelter and housing during or directly after the war are considered as a place for living until permanent houses are ready to move in after recovery.

Considering the above possibilities and the particular situation at hand, decisions to either rebuild or repair housing will be made. Building new houses in new places is recommended if there is a large mass of displaced people and the need for a large area. Repair and rebuilding of damaged houses in sites of destruction are preferable if there are fewer people expected to come back.

However, housing reconstruction after wars faces many problems that impede its success. Before addressing the problems of post-war housing reconstruction, it is important to identify the implementing agencies. These actors' types also clarify some of the problems of housing reconstruction. Thus, the section below presents the main actors of housing reconstruction.

2.4.2.3 The concept of social housing

In general, the economic situation of most post-war inhabitants is below the poverty line. Therefore, it is difficult for them to afford the houses they need. At the same time, there is a high shortage of houses. Moreover, adequate standards of living should be provided. This situation requires governmental support (loan, subsidy or international relief) to afford shelters or houses, and/or international support. In this case, the

solution is to provide affordable and adequate housing. In other words, social housing programs are one of the existing solutions in history dealing with post-war situations. Social housing is a concept that contains affordability and adequate quality standards at the same time.

2.4.3 The main actors of reconstruction

There can be made rough principle destruction according to the actors, between a contractor-driven and owner-driven model.

2.4.3.1 The contractor

The contractor-driven model for construction is considered by Barakath. The fastest and the easiest way to build a large number of buildings by professionals and experts, not by the community. In this model, the relief agencies design and rebuild post-war housing using construction companies (Barakath, 2003). In addition, the contractor-driven model is suitable when people are vulnerable and there is a lack of skills, money and construction materials.

At the same time, construction firms mostly build standard houses that do not involve the inhabitants in the reconstruction and are not personalized to their requirements. As the

construction materials are not local, there may be difficulties in performing future repairs and maintenance.

2.4.3.2 The owner

The owner-driven model involves the inhabitants themselves rebuilding their houses, using financial and technical assistance provided by relief agencies and government. In this case, workers and materials are available locally, housing design is mostly simple, and there is no time constraint to finish the construction. There is also a possibility that the owners don't take benefits from external technical assistance, and this is referred to as the self-help model (Barakath, 2003).

The success of the owner-driven model is based on three main requirements:

- Participatory approaches in decision making: The inhabitants are authorized to make decisions regarding housing reconstruction such as the construction technique, materials, workers, and finance.

- Suitable technical support: This includes design and building agreements, financial management, and vocational training.

- Sufficient financial support: The financial donations should be sufficient to construct a completely finished house with

sanitation and water extensions. Financial support changes in accordance with fluctuating prices.

On the one hand, inhabitants in the owner-driven model can control the house reconstruction process, which strengthens local capacities and enhances the cultural identity of the community. Furthermore, this model allows people to occupy the houses before it is fully finished as well as uses traditional construction materials that support the local economy and reduce costs (Barakath, 2003).

On the other hand:

-The owner-driven model could result in construction delays if the financial support, from the non-profit organization or from the government, is not spent as planned.

-Furthermore, if inhabitants are too busy working in paid jobs affording their livelihood, they will not be able to participate in the construction process or control construction, and the lack of control leads to poor quality housing.

-Moreover, this model requires offered support for vulnerable people, as they lack access to expert builders and construction materials owing to their inability to buy materials in advance due to their poverty and shortage in time.

Thus, Barakath (2003) proposes a mixed model between contractor-driven and owned-driven models for poor and vulnerable people such that "Such a model would include the construction of a solid foundation and frame by professional contractors and the provision of grants to enable owners to finalise the home by designing the layout and including culturallyrelevant aesthetic touches according to their own specifications". (Barakath, 2011, p151)

Narayanan indicates that a common misconception is to associate the owner-driven model as synonymous with housing reconstruction in the original locality and contractor-driven model with relocation or building new housing areas. These models make no implications regarding location. (Narayanan, 2008)

After having identified the contractor-driven housing reconstruction model and owner-driven housing reconstruction model with their strengths and weaknesses, the section below expands on the desirables and the postulates associated with housing reconstruction.

2.5 Desirables, postulates

There are some desirable outcomes and postulates that should be met in part or fulfilled by measures or activities in the provision of housing after the war: (Seneviratne, 2017)

1- Among these postulates is the adequate standard of living, which, according to OHCHR (1994), the Universal Declaration of Human Rights (1948) and the International Covenant on Economic, Social and Cultural Rights (1966) include consideration of accessibility, affordability, habitability, facilities, and location:

"Accessibility refers to the availability of housing for those who are entitled to it while habitability refers to the adequate space and protection from structural hazards, weather and disease. Affordability ensures that the costs associated with housing should not threaten or compromise the attainment and satisfaction of other basic needs. Location should facilitate access to employment, health care services, education facilities and social facilities. Furthermore, location of housing should not cause any threats to health of the inhabitants. Facilities refer to the access to safe drinking water, energy, sanitation and washing facilities and to disposal and drainage facilities while cultural consideration refers to the cultural identity and

diversity in housing design, construction material and construction method. Finally, security of land tenure refers to the legal protection against forced evictions, harassment and other threats." (Seneviratne, 2017, p7).

The United Nations Center of Human Settlements, further expanded upon the definition of the term adequate in their publication:

"Adequate shelter means more than a roof over one's head. It also means adequate privacy; adequate space; physical accessibility; adequate security; security of tenure; structural stability and durability; adequate lighting, heating and ventilation; adequate basic infrastructure, such as water-supply, sanitation and waste-management facilities; suitable environmental quality and health-related factors; and adequate and accessible location with regard to work and basic facilities: all of which should be available at an affordable cost". (Habitat, 2000, Annex 2)

Affordability depends not only on the price but also on the family's income as Bratt argued. In other words, the newly built home should not cost more than 30% (Alkhalaf, 2014), in cases where income exists. This number differs from one

country to another because there are no universal criteria to classify those belonging to low-income groups.

2- Housing should contribute to local economic development. In post-war housing reconstruction, when local inhabitants contribute to reconstruction activities using local materials and techniques it promotes long-term local economic development (Seneviratne, 2010).

3- Housing should be suitable for the local cultural, socio-economic conditions of the inhabitants. Ignoring the local conditions, such as the culture or the socio-economic situation of the affected people, in post-war housing reconstruction projects, which mostly are planned and implemented quickly, leads to change the dwelling. Sometimes it even leads to abandonment (Seneviratne, 2013). In such a way of reconstruction, the inhabitants will have a feeling of being imprisoned in those houses.

4- Housing reconstruction should contribute to social integration in the community. Generally, emergency leads to physical housing reconstruction. This can contribute to the loss of community participation which usually helps in rebuilding war-destroyed social networks (Burde, 2004). In the meantime, Seneviratne (2013) points out that refugees and displaced

people will gain a full sense of home only when a positive relationship starts to develop between housing and the surrounding local and national environment and such lack of community linkages will lead to lack sense of home.

5- There should be a greater guarantee of security for land tenure. (Barakat, 2003)

6- There should exist a developed strategy for housing reconstruction. (Ibid)

These features could contribute to the acceleration and success of housing reconstruction after the war. However, complications in housing provision activities can hinder the addressing of housing postulates or needs:

1- Lack of governance (organizations and coordination): It is notable, that in the twenty-first century, there is no specified agency for housing reconstruction after wars, and only a few NGOs working in relief would like to work in this field. When reconstruction programs set, planning is mostly poor and the assortment between agencies is difficult. (Barakat, 2003)

2-Poverty: One reason why it is difficult to focus on post-war housing reconstruction in relief aid projects is the lack of currency because this field of work is considered as

development business. Reconstruction of houses tends to provide better and more durable accommodation than that which existed before the war. However, from another point of view, there is a clear humanitarian need to provide vulnerable individuals after the war with basic housing, the same need as for other relief items such as access to water, food, sanitation, and healthcare. (Ibid)

3- <u>Lack of strategies</u>: The effort to promote social housing for post-war recovery is generally ignored, and no distinction is made between the provision of shelters and houses.

-What makes the successful implementation of housing reconstruction programs difficult is the long-needed time and the complex process. This may not be available directly after the war. (Ibid)

4<u>- Lack of actors</u>: The absence of expertise in themes of planning leads to assessments that do not give the necessary information. Thus, reconstruction programs are often not sustainable because houses are either redesigned by their inhabitants, or they are abandoned. (Ibid)

The previous sections dealt with the post-war situation in general and with various strategies to provide housing independent of the historical situation unique to Syria. The next

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section provides an analysis of the post-war situation of Western Germany and its contribution to the solution of the housing problem.

Chapter 3. *Post-war social housing in the West Germany (BRD)*

The following chapter deals with the experiences of post-World War II rebuilding of housing in West Germany. This German social housing strategy was a successful one. Although already considered as history, it is enlightening to analyze the former situation in terms of legislation, programs, and case studies. It ends with a list of the strengths of the social housing strategy that was implemented in Germany.

3.1 Social housing as a kind of housing policy

To understand social housing as a tool in the peace-building process it is important to look at it in any situation of scarcity

and consequently mainly in post-war cases, from a theoretical point of view. As social housing is a solution for the housing problem in the post-war case, it is useful to know its history and definitions.

3.1.1 General definition of housing policy

Housing policy refers to all political and associative activities as well as state measures that deal with the housing supply of the population, including the construction, modernization and preservation of housing. (Klein, 2011)

The combination of the terms "supply" and "state measures" already indicates that public housing policy is a policy field that is largely handled by the state itself. In fact, since the first years of the Weimar Republic in 1918 - and the post-WWI housing shortage problem - housing policy in Germany has been a key component of social policy (Egner, 2004).

Housing policy can be defined as all governmental and legislative measures aimed at providing housing for the population, and thus sets the framework conditions for housing construction (Selle, 2012). Thomas Halder points out that the provision of sufficient, affordable and decent housing is the goal of a state housing policy. (Halder 2011, 1906).

The Federal Republic of Germany (FRG) defined housing policy (1949) according to article 20, paragraph 1 of the Basic Law (GG) as a "socially committed community". „Aus der verfassungsmäßig verankerten Sozialstaatlichkeit der Bundesrepublik Deutschland und der besonderen sozialen Bedeutung der Wohnversorgung ist der staatliche Auftrag für wohnungspolitisches Handeln – obschon explizit nicht fixiert – abzuleiten." According to Kühne-Büning (2005, p235) as cited by Selle (2012).

Social housing policy is a special form of housing policy. Thus, "social housing" and "social housing policies" are not synonymous, but "social housing" is rather only one of the instruments for implementing "social housing policies".

3.1.2 Social housing definitions

There is not just one definition of the term social housing, rather it is a floating term. Its definition internationally differs from one country to another as well as across time within the same place. This can lead to misunderstandings. (Lundgren, 2018)

For this reason, in this research different general definitions of social housing and their criteria will be presented. Thereafter, a

description of social housing in Germany following the Second World War will be given because it was a successful solution for the housing crisis at that time.

"Social housing" in general, is defined in the Oxford dictionaries with the following features:

1- The targeted group: low-income people or those with particular needs.
2- It is subsidized and provided by government agencies.
3- It is subsidized and provided by non-profit organizations (e.g., municipal housing companies and cooperatives).
4- Its aim is to provide affordable housing of good quality.

In the Cambridge Dictionary, social housing is defined as: "Houses and flats that are owned by local government or by other organizations that do not make a profit, and that are rented to people who have low incomes: More than half of those of working age in social housing are without paid work more than double the national average."

Social housing limits increases in rents by law, so rent remains affordable. It is distributed according to the local authority's allocation plan and not by the discretion of landlords. It can be considered as a possible means to overcome housing inequality for those who struggle with housing costs (Heywood, 2013).

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The author Lundgren gave another definition of social housing: "Temporary, income-dependent or ongoing tenure of belowmarket rental housing provided by public, private non-profit or private for-profit entities according to a government defined social mandate, in return for state-provided 'object subsidies', guarantees, tax concessions or other forms of financial support" (Lundgren, 2018, p7).

So, social housing in West Germany - as it has been regulated in the German Housing Binding Act (Wohnungsbindungsgesetz, WoBindG) since 1965 is the state-subsidized (grants or tax relief) construction of housing, especially for social groups that cannot meet their housing needs in the free housing market. Additional to the personal requirements, which tenants in Germany have to prove with a residential entitlement certificate, there is a maximum permissible rent.

The term "social housing" is a designation for the system of comprehensive state promotion of housing construction. In the first German housing law (I.WoBauG), in 1950, five years after the end of WWII, the term "social housing" was defined as the construction of apartments, one- and two-family houses and small settlements which are determined appropriately by size,

equipment, and rent for broad groups of people (Von Roncador, 2006).

Social Housing, as defined in the I.WoBauG in the 1950s, was aimed at various groups of people. The income limits applicable to the issuance of a residence permit, as a condition of access, were set high so that about 75% of the population had access to social housing. (Harlander 2012).

3.1.3 The criteria of social housing

The above definitions of social housing present many characteristics of social housing. These characteristics suggest commonalities that fall within the following criteria:

1- <u>The target groups</u>

The target group is a necessary standard to define social housing. In the references, there is always a target group, as the objective of social housing is to provide a solution for specific problems that affect a specific group of people. This group of people faced difficulties in procuring housing in the housing market. As stated in the above definitions, the reason behind this is limited financial liquidity. This group is the poor people in the society, who are insolvent, or in other words the low-income group (quantity is relative in each case) (Oxford Dictionaries, Cambridge Dictionary).

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2- The type of tenure

Hansson and Lundgren, in 2018, identified different types of social housing tenure: 1- owner-occupied housing, 2- social-rented housing, and 3- cooperative housing.

3- The contractor:

Lundgren, in 2018, argued that social housing is provided by public actors (government) or non-profits organizations as well as private actors. Most of these non-profit organizations are housing associations. The public actor's provision for social housing corporations may be in the form of grants, loans granted by the government, interest subsidies or tax reductions. At the same time, the term public housing is not equivalent to social housing.

4- Public financial support and subsidies

Social housing programs are not self-supporting, so they require public or private financial support to reach affordability targets.

Public intervention in the social housing sector may happen in three main forms: legislation and connection to public policies, subsidies and direct supply of social housing through public

councils or public companies. Their financial support (subsidies) to social housing investors happens in many ways, such as debt guarantees, advantageous loans, investment contributions, below-market priced land, etc.

Non-profit organizations can also be financial supporters of the social housing sector. (Lundgren, 2018)

5- Architectural and urban design standards and quality

It is widely accepted that adequate urban and architectural design contributes to the success of housing policies. Social housing can be considered as a way to enhance social cohesion by locative inclusion into larger housing areas. The standard of social housing must be similar to the average housing quality in the area, to avoid stigmatization and social segregation (UN, 2006).

3.1.4 The history of social housing and its first appearance

The concept of social housing first appeared in Ausburg, Germany, where Jakob Fugger the Younger in 1516 founded the "Fuggerei", which is the oldest still-functioning social settlement. Then, in France, in 1793, the rights of man and citizen were declared at the end of the great French Revolution (1789 - 1793). (Kropotkin, 1909, retrieved in 2009).

In the 19th century, in Germany, there were three movements:

1) Private care provided by company owners (eg. Krupp, Bosch)

2) Care by the central state for its employees (eg military personnel)

3) The emergence of cooperative societies with common public interest.

Social housing was further extended in Germany during the 1890s by means of trade unions, workers cooperatives, and some benefactors. It was an improvement on the older tenement accommodation, which was generally affordable to the lower middle classes (Treanor, 2015).

At the beginning of the 20th century, up until the Second World War, public involvement in housing markets was generally weak and temporary across Western Europe. However, in Germany, a comprehensive set of rules was set at the end of the First World War, during the years of the Weimar Republic (1918-1933), which was expanded to permanent rights, eg. in §155 of the Weimer constitution, the right of families to healthy housing was fixed. After World War II, three pieces of housing legislation quickly emerged under the

comprehensive term of the housing-controlled economy "Wohnungszwangswirtschaft"

(Wohnraumbewirtschaftungsgesetz 1953-1968). This was extended into the first years of the Federal Republic of Germany. These legislations provided protection against dismissal, limitations on rents and housing management (Von Roncador, 2006).

The pre-WWII housing situation in Germany

In Germany, in the face of the housing shortage and the difficult situation of the capital markets after the First World War, state housing promotion needed to be established. Two phases of state housing subsidies can be distinguished: the promotion during the inflation period from 1918 to 1923, and the so-called era of household interest tax from 1923 to 1932.

In March 28, 1918, a "Reichsweites" (Reich-wide) housing law was issued. "Deutsches Reich" was the official name for the German nation-state from 1871 to 1945. Section 8 of this housing law announced the provision of 20 million marks of government funds for the promotion of charitable non-profit housing supply. This paved the way for the promotion of housing construction at the Reich level for the coming years (Von Roncador, 2006, p186-188).

The German government became more active between 1924-1932, providing mass housing by building three million new houses, in partnership with cooperatives, labor unions, and municipalities, with the engagement of modernist architects, and using modern materials and approaches of construction. In this context, the "Reichsforschunggesellschaft" was established, in order to do research on new materials and construction techniques (Social housing in Europe II, 2008). Housing supply for the lower middle classes and skilled workers was thereby particularly targeted (Treanor, 2015). Between 1933, when the Nazi party gained power in Germany, and the beginning of WWII in 1939, these progressive approaches and the various initiatives and cooperatives were destroyed by the "Gleichschaltungsgesetz" (law of equalization). Financial resources were also cut off and steered towards armaments and preparations for war. Only some special forms, like "Kleinsiedlung" and "Volkswohnungsbau", were realized, but only in a racist sense, aimed at particular people of German society.

The situation changed after 1945, with severely damaged cities in need of rebuilding. The governments of most European

countries became much more active in the housing area. (UN, 2006).

The following sections, therefore, will focus on social housing in post-war Germany as an example of a country recovering successfully from war devastation.

3.2 Post-war situation in West Germany 1945-1949

Understanding and analyzing this experience is of use and interest to other countries and their specific contexts. As stated in the introduction, this thesis will relay the experience of social housing in West Germany.

3.2.1 The post-war political situation

World War II started on September 3, 1939, and ended in Germany at midnight on May 8, 1945, (Stunde Null). On that day in 1945, the Allied forces penetrated Germany from the west and the Soviet forces from the east. Germany was then occupied and divided into four martial areas, as illustrated in (Figure 4). Each area was controlled by one of the four Allied armies: the USA, Britain, France, and the USSR (the Union of Soviet Socialist Republics). Berlin as the capital was similarly divided into sectors among the four armies. (Kleßmann, 2010).

Figure 4 Allied forces' occupation zones in Germany in 1947. Source: Kunz, 2005

Conflicts between the Soviets and the other Allies led to the Soviets enacting the Berlin Blockade, cutting off all ground access to West Berlin on June 24, 1948. As a response, the

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Allies supplied West Berlin with tons of food per day over thousands of flights with the Berlin Airlift. This action was called "Luftbrücke", until May 1949. (Roesler, 2006)

In October 1949, the occupying countries in both West and East Germany replaced their military governors with civil leaders. Around the same time, the area which had been under USSR control became a separate country, the German Democratic Republic (GDR) or "East Germany". Meanwhile, federal elections were held in West Germany to elect the first Parliament "Bundestag". West Germany, the Federal Republic of Germany (FRG) or BRD (Bundes Republik Deutschland), worked as a social market economy with a democratic government (Leisering, 2000), as illustrated in (Figure 5).

Figure 5 West and East Germany after World War II. Source: Willem, 2015

In the Federal Republic of Germany (FRG), which is in the focus of this chapter, the period 1949-1966 can be generally identified as the time that corresponds to the establishment of the post-war welfare state. Social policy institutions were restored by a government led by the Christian Democrat Party (CDU), backed by the Social Democrat opposition (SPD). The main social policy aims were to promote the construction of houses, to integrate millions of migrants, and to promote the reform of social security and economic reconstruction. The Constitution had introduced the social state as an immutable principle of the new democratic West Germany (Leisering, 2000).

3.2.2 The post-war economic situation

At the end of the war, German's economy was extremely weak. There was no financing and the currency was essentially worthless. (Phillips, 2014)

In June 1947, the American George Marshall declared an "economic recovery program" (ERP) for Europe. This program, called "the Marshall Plan", supported the stimulation of the German economy to speed up the reconstruction process in western Germany. (Lehmann, 2000)

According to the economic historian, Werner Abelshauser and others, the Marshall Plan led to the West German currency reform of 1948 as one of the preconditions for the "economic miracle" of the 1950s and 1960s in West Germany (Roesler, 2006). Figure 6 and Figure 7 show the Gross Domestic Product (GDP) in Germany between 1950-1960 and the gross domestic product per capita in Germany between 1940-1965, illustrating the "economic miracle" through the rapid increase in these numbers. The restoration of transport infrastructure, and the effective management of some companies such as "Volkswagen", were examples of "miraculous" economic achievements.

Year	GDP
1960	154,77
1959	130,31
1958	118,95
1957	110,72
1956	101,58
1955	91,89
1954	80,41
1953	74,92
1952	69,75
1951	61
1950	49,69
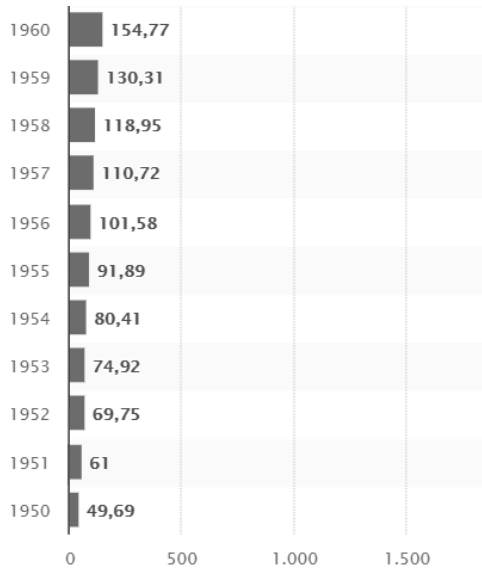
Figure 6 Gross domestic product (in billions of euros) in Germany between 1950-1965. Source: Statisdta.com
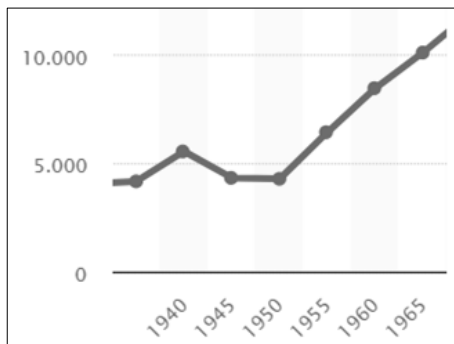
Figure 7 Gross domestic product per capita (US$) in Germany between 1940-1965. Source: Statisdta.com

The rapid reconstruction of West Germany after the destruction caused by the Second World War is colloquially referred to as the "economic miracle". However, high economic growth did not lead to full employment until the 1960s. The unemployment rate rose sharply in 1948 after the currency reform. (Ibid). The rate of unemployment reached its peak in 1950 (11%), then fell to 5.6% in 1955 and to 1.3% in 1960. (Statistisches Bundesamt Deutschland, 2008). Figure 8 shows the post-war unemployment rate in West Germany. The situation regarding the labor market was even more difficult up until the end of the 1950s, with many millions of displaced persons being received into West Germany. After reaching full employment, the need for more workers was so urgent that large numbers of foreign workers were recruited from abroad, mostly Turkish, Italian, and Yugoslavian.
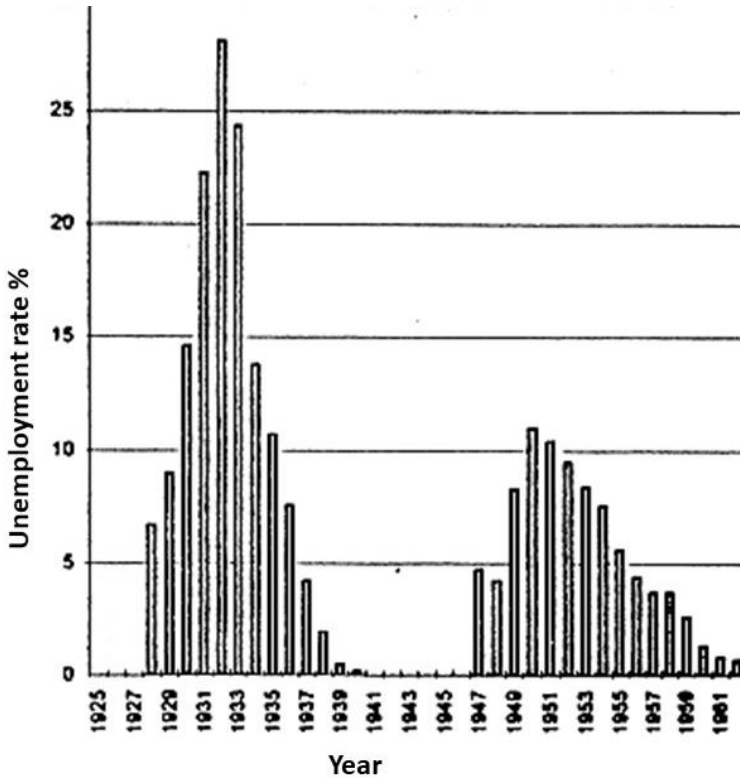
Figure 8 Unemployment rate in Germany. Source: Friedrich Ebert Stiftung, Digitale Bibliothek, http://library.fes.de/fulltext/fo-wirtschaft/00325003.htm#MARK2

Housing policy in West Germany was designed to include most of the population, as previously explained. The housing program provided people with work on construction sites and reduced the stresses of the housing shortage (Phillips, 2014). Social housing was heavily subsidized from the 1950s.

The main reason for the rapid economic recovery of West Germany can be found in the ordoliberal growth model (Roesler, 2006). In 1946, West Germany had a skilled workforce and advanced technology, but its capital supplies and industries had been destroyed during and after the war. This destruction, in addition to converting the German economy to produce civilian goods and some regulatory problems, led to low economic output during the initial years following the war. At the same time, the treasury cut taxes specifically on middle incomes. For instance, for those with a yearly income of about 2,400 Deutschmark in the year 1950, the tax rate was reduced to about a fifth of its former rate (Lehmann, 2000).

3.2.3 The post-war social situation

Under the pressure of the massive airstrikes on German cities during the Second World War, it had been necessary to evacuate about nine million homeless (displaced) people into rural areas. They looked for shelter in the suburbs or the countryside with relatives, friends, or even people they didn't know. Immediately after the end of the war, the de facto loss of former German "eastern territories" (before 1937), and the loss of occupied territories (1939-45) led to twelve million refugees

moving from their settlement areas into Federal Republic territory (Urban, 2011). Figure 9 depicts migration to West Germany after WWII.
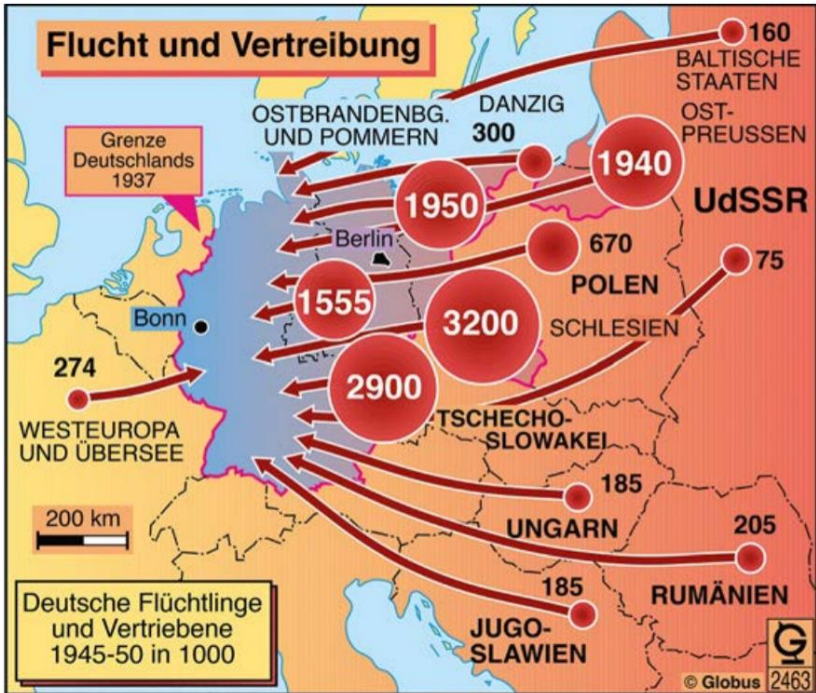
Figure 9 German refugees and displaced persons1945-50 in 1000.
Source: bpb: überarbeitete Neuauflage 2005, Deutschland 1945-1949
Besatzungszeit und Staatengründung

Furthermore, many people wanted to move to the cities as "Wanderungsgewinn" to find jobs, especially in industry, as Germany turned more and more into an industrial country (UN/DESA, 2014). Three million people moved to the largest

57 cities (such as Munich, Köln, Stuttgart, Düsseldorf …. etc) to seek job opportunities between the years 1950-1961.

Later, they moved outside the cities to the suburbs. Forty-two percent of the Western German population worked in the industry in 1950, 48% in 1960, and 50% in 1970 (Harlander, 1999).

The following graphs (Figure 10), provided by Harlander 1999, illustrate the West German demographic changes during and after World War II. They show where people lived, where migrants and refugees settled, and where social housing was implemented in the city regions.
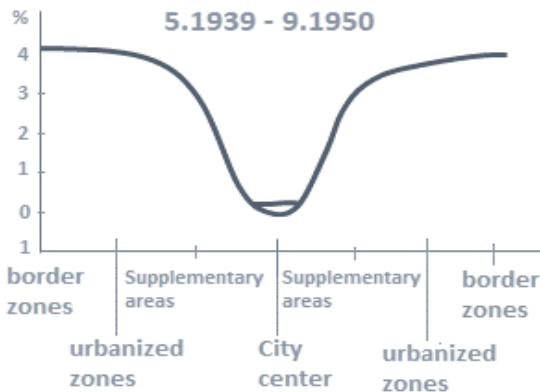
Phase 1: The deep dip in the middle of the curve marks the destruction of the city centers and the evacuation of the population, which took refuge outside the cities.
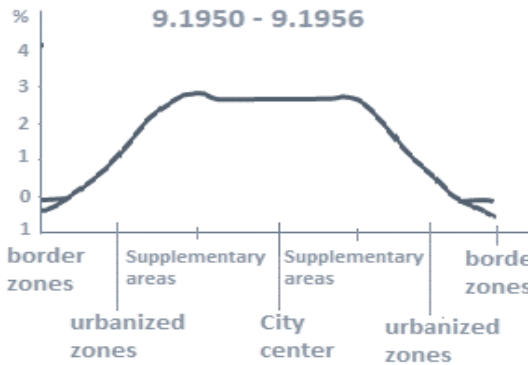
Phase 2: The repair of destroyed dwellings and the rapid reconstruction of cities based on the old parcel structure follows the return of the population and the influx of refugees from the East.
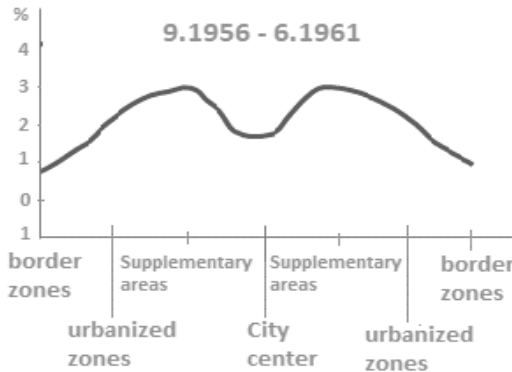
Phase 3: The expansion of the service sector (shops, department stores, banks, insurance companies, etc.) in the city centers is accompanied by the displacement of the inhabitants. As a result of progressive urbanization, the expansion of residential areas in peripheral areas is exacerbated by immigration from rural areas.

Figure 10 Population development in individual zones of the city regions between 1939 and 1961 (Harlander, 1999, p239), translated by the Author

During WWII the destruction of housing was concentrated in the cities. About 7.05 million people (10% of the German Population in 1939) died during the Second World War, (Kellerhoff, 2015), of which 5.3 million were military and 1.75 million civilians. In Germany, this mainly affected the male

population (Figure 11). At the time of the first census after the war in October 1946, there were only two men in the Western occupation zones for every three women - an unprecedented shortage of male population. This was especially true for men of "best age" (Bethmann, 2007). Post-war Germany was a land of women: women living in rubble, refugee women, widows of soldiers, single mothers, black-market vendors waiting for their missing sons and husbands.
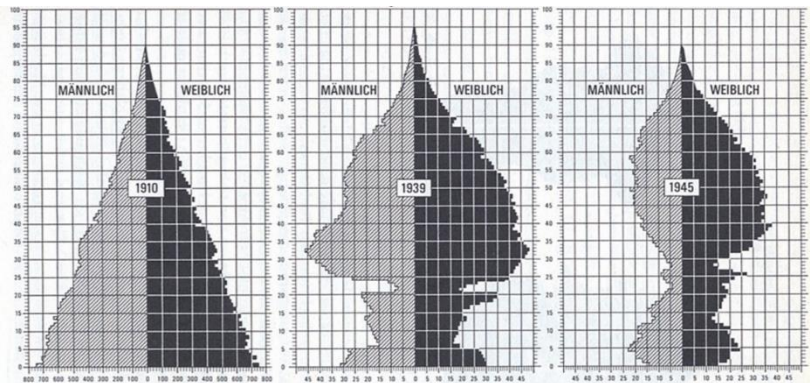
Figure 11 Transformation of the population pyramid in Germany. Source: Lübke, 2007

This was accompanied by a decrease in the founding of new households, by population migration, efforts to repair the damaged houses, and programs of new construction. With low populations in cities at the war's end, existing inhabitants could find shelter. At the same time, foreign occupation authorities had prevented people from returning to the cities to avoid a

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crisis in the availability of housing (Diefendorf, 1993). Table 1 illustrates the repopulation of some bombed cities during the decade after the war. During the first five years after the war, the inhabitants of these cities numbered less than before the war.

City	17.05.1939	29.10.1946	13.09.1950	1953	1954
Number as a percentage of 1939 population					
Hamburg	100	82.8	94.5	101.4	103.2
Cologne	100	63.7	77.4	87.2	89.6
Essen	100	78.3	91.4	99.5	102.1
Dortmund	100	81.1	94.3	108.0	111.2
Bremen	100	87.5	100.1	109.0	111.7

Table 1 Urban population changes, source: (Diefendorf, 1993)

The return of the population after the war

In addition to the return of former residents into the cities, there were large numbers of expelled persons and refugees from former eastern parts of Germany that became parts of the Soviet Union and Poland, and people deserting the Soviet occupation areas for the Western areas. Many of the refugees settled in smaller towns or villages, but plenty of them also found their way to the big cities.

The post-war housing shortage was exacerbated by the occupying Allied armies. Directly after the war, the occupying

military forces occupied German housing that was still in good condition. This forced the residents to quickly move out, leaving their furnishings behind and taking only a few essentials with them. In Frankfurt, for example, the residents inhabited 121,205 dwellings, and Allied military soldiers occupied another 6,262 dwellings. (Diefendorf, 1993). In Hamburg, allied forces expropriated 1,361 single-family homes, 645 apartment houses, and the undamaged big hotels. (Ibid). Such expropriation occurred all over the country.

Furthermore, local officials assigned the empty houses to the homeless. The people who were working in the Nazi regime were the first to lose their dwellings, which were given not only to the military but also to peoples considered as victims of the regime, such as former concentration camp inmates. Overall, the confiscation of housing caused much distress.

3.2.4 The urban situation

The degree of housing destruction

Estimations vary on the extent of the housing shortage at the end of the war, but within Germany's 1939 borders (Figure 12) there were about sixteen million housing units for a population of about sixty million. At the end of the war, around 2.5 million (Diefendorf, 1993) of these units had been totally

destroyed and made uninhabitable. Another 1.6 million (Ibid) were heavily damaged and uninhabitable (except the cellar).

Figure   12   The   Third   Reich   in   Germany   1933–1943
https://www.gifex.com/fullsize-en/2009-12-29-11509/Nazi-Germany-or-the-
Third-Reich-19331943.html

In West Germany and West Berlin, around 2.34 million (Rabeler, 1990) housing units were totally destroyed or uninhabitable. This was about 25 % (Harlander, 1999) of the housing stock of West Germany in 1939. About 4/5 of these losses happened in the large cities (with pre-war populations over 250,000), which lost on average about 50 % of their

housing stock (e.g., Hamburg, Cologne, Dortmund, Münster, and Essen) (Figure 13). The damage to housing was greater in the inner cities, where total destruction ranged from 50 to 90% (Ibid).

For further understanding, the situation of Bavaria will be presented. As shown in Figure 13, each of the largest four cities in Bavaria, namely Würzburg, Munich, Nuremberg, and Augsburg, suffered a greater housing loss than the average for Bavaria excluding those cities. More than 75 % of Bavaria's housing losses were concentrated in those four cities, but they contained only 16% of the Bavarian population in mid-1949. Comparably, Cologne was the worst hit among the big cities, losing 70% of its 250,000 pre-war dwellings. The degree of damage to build structures was important for the municipalities because it was used as a guide for the apportioning of state reconstruction funds (Diefendorf, 1993).

Figure 13 Percentage of destroyed housing in German cities after World War II. Source: Gutschow, 1987.

Most of the destruction in the cities was of multiple-unit buildings rather than single-family houses. These buildings were mostly social housing because this type of housing had

been concentrated in the large cities. This meant that the poorer sectors of the population suffered much more than the richer ones from war damage.

In the first years of reconstruction, the repair of partially-destroyed houses took precedence. To this end, support programs were carried locally out by the state. Social housing corporations had begun repairs. However, these measures were not enough to alleviate the urgent housing shortage. The housing issue, therefore, moved into the center of politics in 1950. (Rabeler, 1990)

In 1949, the housing shortage in West Germany was estimated at 4.8 million dwellings. In addition, only 300,000 dwellings had been constructed in the most productive pre-war years. If Germany could construct 200,000 new house units every year under the existing conditions, it would take more than thirty years to make up the shortfall, even if none of the existing housing units, which were often damaged, were taken out of service (Diefendorf, 1993). It is very important to understand how West Germany managed to cope with this.

3.2.5 The phase directly after the war (1945-1949)

<u>Rubble clearance and the infrastructure</u>

In 1945, there was a large amount of rubble in the bombed cities of Germany (about 500 million m³ in total). The amount differed from city to city and depended on the type of bombs, how often the city was bombed, as well as the density and other characteristics of the city. For example, in Munich, the damage was about 6-7 million m^3 (Harlander, 1999).

The city councils were responsible for removing rubble from public buildings and spaces, which required machinery that was expensive and unavailable. Rubble from private property was removed by the people themselves in an unexpectedly short time. Instead of the twenty to twenty-five years that had been initially estimated, it took only seven and a half years (Ibid), due to efforts of the women ("Trümmerfrauen") and the 'bucket brigade' ("Eimerketten-enttrümmerung") (see Figure 14). They played a significant practical and symbolic role, organizing the use of machines, small trains, tipping gates, and conveyor belts. (Ibid).

Figure 14: Women in Berlin clearing rubble on the Hagelberger StraBe, Kreuzberg, 1949. Source: (Landesbildstelle Berlin, 1 NK, 184 802)

After the war, experts and inhabitants had many ideas about how to rebuild the cities, mixed with hope and energy, as for instance described by Konstanty Gutschow in Hamburg, Karl Meitinger in Munich, Rudolf Hillebrecht in Hanover. However, the reality was different. The first urgent step required was to supply utilities (water, gas, sewage disposal) to the people, rather than build beautiful houses (Harlander, 1999). About 95% (Diefendorf, 1993) of the underground utilities survived the war, whereas only about 70% (Ibid) of the above-ground infrastructure survived. So, it was possible to use the remaining

infrastructure. In addition, it was important from an emotional standpoint to allow people to return to their former homes.

Temporary living space "Behelfswohnraum"

Housing conditions in the cities of Germany were very bad in 1945 (Harlander, 1999). Families crowded into shared dwellings or sublet rooms, while others lived in cellars, temporary huts, and in the backrooms of shops. Others, who couldn't find anything more suitable, were herded into various kinds of emergency houses such as abandoned military barracks. The people simply lived wherever they could. In 1947, about 9.1% of the population lived in refugee camps, some form of temporary housing, or in spaces improvised in the rubble (Diefendorf, 1993). This was the post-war situation, and shelters amidst the ruins were usually cold, damp, and dangerous. The structure of the buildings in every bombed city was unsafe, but people wanted to set up house there, anyway. The winters of 1945-47, especially the "Hungerwinter" 1946/47, were regarded as the most severe winters of the 20th century within the North Sea region, with temperatures as low as minus-28°C. (DWD, 2001 https://www2.meteo.uni-bonn.de/mitarbeiter/CSchoelzel/fortbildung/publikationen/dwd_2001_extreme_20_jahrhundert.pdf#page=5; Maugg and

Häuser, 2011 https://www.hoerspieltipps.net/hsp/22493.html) People were forced to burn wooden shutters and other parts of the damaged houses for heating.

In the first post-war months, the inhabitants applied skills developed during the war to repair whatever they could, creating shelters amongst the rubble and building temporary dwellings. Shelters for people who had left their bombed-out homes were constructed from different available materials, but always to a standardized ground plan. Illegal "Schwarzbauten" or legal dwellings such as "Kleinsiedlungen" (Figure 15) were built especially in rural areas and were sometimes called "BMW-Bauten" (Bauten von Bäckern, Metzgern, und Wirten) and included buildings for bakers, butchers, and innkeepers, and huts. These houses had a "Wirtschaftsraum", a room for working and for storage for the family, a garden for planting fruit and vegetables, and a place for keeping animals such as rabbits, pigs and chickens. With the support of local authorities, property owners slowly also began to repair their damaged buildings. In 1950, there were about 1 million (Harlander, 1999) newly built or restored apartments. For instance, in Hamburg 10,000 new units and 2,000 temporary units were constructed, and 100,000 units were repaired between the end of the war in May and October 1945.
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Konstanty Gutschow had organized this program there, and later the British forces asked him to continue to coordinate the building and planning office in Hamburg (Konstanty Gutschow and the Reconstruction of Hamburg, 1945). The Behelfsheim program, which had been started by the German National Socialist party in 1944, was continued in the form of Quonset or "Nissen" huts supplied by the Allies. In 1946 and 1947 in Hamburg, 40,000-60,000 people were sheltered in these huts (Figure 16) (Hohns,1983).
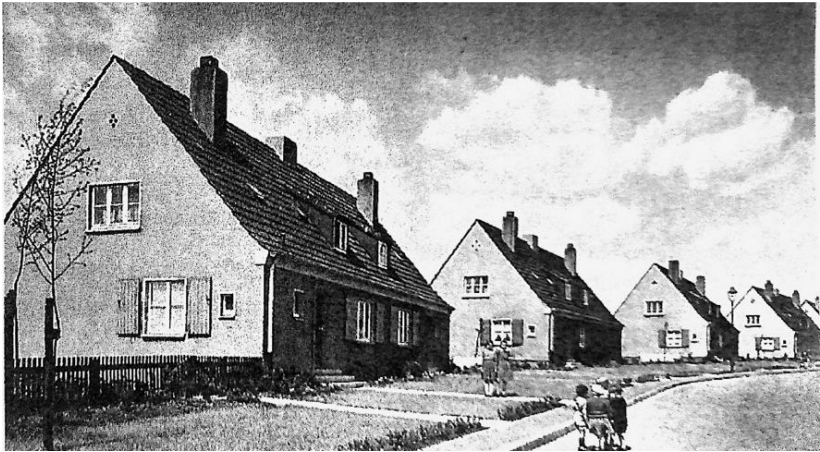
Figure 15 A self-help settlement in Gladbeck, North Rhine-Westphalia (1949-1951). Architect: Jakob Einsfeld, Investor: Rheinisch Westfälische Wohnstätten AG. Source: (Harlander, 1999)

Figure 16 In Hamburg, Nissen huts were constructed in 40 different places, offering more than 40,000 temporary homes after the war. Foto: Uhlig, Manfred, 2019

Overall, about 21 million people sought new homes in the months following the end of the war. In 1946, the census in the three western zones reported 13.7 million households and 8.2 million existing housing units. (Rabeler, 1990). In 1950, about 2.34 million apartments were still identified as destroyed, and about 2.3 million apartments were still required for the refugees. Furthermore, 1.2 million apartments were expected to be required for new families over the next 10 years (to 1960). In total, in 1950, there was a shortage of 4.8 million apartments. (Harlander, 1999).

In 1949, West Germany had special political and economic requirements for reconstruction (the Deutsche Mark was the official currency in the three parts of West Germany), differing from those in the eastern sector. After the first election ("Bundestagswahl"), in 1949, the leading CDU party provided essential information for housing policy. In 1950, funding support from the government was supplied. The federal government took three important steps in the context of social housing: (1) a de facto prohibition on the termination of existing tenants, (2) state-defined rental levels, and (3) state allocation of privately-owned housing to housing seekers. With these fundamental measures, the federal government prevented the feared rapid rise in rents, but the problem of about 5 million missing apartments was not yet resolved (Rabeler, 1990). For this reason, the federal government decided to implement a massive intervention on the supply side of the housing market with the adoption of the First Housing Law (l. WoBauG) in 1950.

3.3 Social housing in post-war Germany (1950-1960)

3.3.1 Post-war social housing policy in Germany

Social housing policies differ from one country to another and depend on several factors such as different tensions in the housing markets and different urban and social contexts. German policies in the eastern part of the country were different from those in the western part. (For details see Topfsteds, Thomas, (1999) Wohnen und Städtebau in der DDR, in: Geschichte des Wohnens, vol 5, p419-562. Social housing was generally considered the main instrument in the West German housing policy.

After the war, all the political parties agreed that the housing shortage threatened the spiritual, moral and physical foundations of national and state life. A lack of housing would impede the reconstruction of the economy. Therefore, the creation of new housing was the most urgent public task.

The resolution of the housing shortage was undertaken by cooperation among the federal government, the Federal States, the municipalities, and the private sector, in a completely different way than had ever happened before. In 1950, the most urgent housing shortage was already resolved in about 10 years. (Rabeler, 1990). Specific affordable architectural

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standards were used that had already been developed during the time of the Weimar Republic and under the Nazi regime, with the focus on a more technical than architecturally ambitious design ("Rationalisierung") (Urban, 2011).

Since then, the public sector has subsidized private, municipal and cooperative companies, as well as private individuals, to develop new social housing (Rabeler, 1990). The goal of the public sector was to produce dwellings of specific sizes and fittings, and mortgage or rent. Maintenance costs were suitable for many social groups of the population. This was achieved by the legal foundation of social housing, the first House-building Law (1. WoBauG) in 1950, which controlled rents for a certain period of time, that was primarily dependent on the level of subsidy. Investors were required to:

1) Hold rents at a certain level.

2) Address specific target groups, defined by income level.

In addition to the provision of rented houses, the 2. WoBauG in 1956 boosted the acquisition of owner-occupied dwellings.

Most rented social housing in West Germany was located in the city centers in large empty areas that had been destroyed and cleared after the war. Social housing was additionally located near the centers of the smaller cities (Urban, 2011). By

1972, there was a balance of shortage and supply in the housing sector, and all housing shortages caused by the war had been overcome (Harlander, 1999).

After the reform of the German constitution in 1949, the federal government adopted legislation on housing. Then in 1950, it enforced the first housing law. After World War II the housing reconstruction processes in Germany can be divided into three major periods, each which featured turning points in policy for post-war housing activities:

- 1945-1950: rubble clearance, reconstruction, provisional housing.

- 1950-1956 ff: The First Housing Law (l. WoBauG)) was enforced. In 1953, a modification of the First Housing Law was enforced. In 1956, The Second Housing Law (2. WoBauG), Housing and Family Home law (Wohnungsbau- und Familienheimgesetz) was passed.

- 1960 ff: the "Abbaugesetz (AbG)" law was introduced, removing rent controls and initiating the beginning of rent inflation (Rabeler, 1990).

In the following paragraphs, the focuses and goals of these laws will be explained in detail.

3.3.2 The First Housing Law (1. WoBauG 1950)

On the 26th of April 1950, the first housing construction law (l.WoBauG) was passed. This law (program) shared some features of that which was subsidized by the German government during the war, and it is similar in some aspects to the housing program of the Weimar Republic, which is not the focus of this thesis.

The parties of the Weimar Republic period that had contributed to housing reform in 1925 (The Centre, the Social Democrats, and the People's Party) returned in 1950 as the Christian Democratic Union (CDU, 1945 im Rheinland, Westfalen und Berlin), the Liberal (FDP, 1948 auf dem Gründungsparteitag in Heppenheim), the SPD (1945 refounded) parties. All of them supported the concept of social housing. Whereas the Social Democrats saw social housing as a long-term solution, the conservative parties viewed it as a transitional phase that would give way to private ownership of homes, when the economy became stronger (Rabeler, 1990).

Throughout the duration of the first housing law (1950-1956), some decisions were made on the national-central level while others were taken on the federation or local level. Thus, there was cooperation on the three levels as a network, effectively refreshing political life (Wagner-Kyora, 2004). Flat sizes and social housing target groups were specified centrally, whereas design and priorities regarding who would occupy the flats were decided locally.

The l.WoBauG 1950 was the legal basis for social housing construction within a specific size, type of fittings and rent price point. Under this law, public funding was directed towards social housing units (Objektförderung), to increase the number of residential units (Harlander, 2017). As a result, the national-central and the federal states committed themselves to build 1.8 million apartments in six years (Ibid).

At the same time, in order to stimulate market forces, the construction of new housing was allowed within three categories: publicly subsidized housing (social housing), tax-privileged housing (Steuerbegünstigte), and freely financed housing construction (Freifinanzierter Wohnungsbau) (Rabeler, 1990). This enormous building activity also had the aim of reducing the unemployment rate and stimulating the weak

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economy. According to the first housing construction law of 1950, houses were subsidized, in principle, within social housing as rented apartments (Zimmermann, 2001). By 1956, 3.1 million homes had been built, including 1.8 million flats in the field of social housing, which had been made available preferably to displaced persons and war victims (Ibid).

The following paragraphs are the most significant ones of the l.WoBauG. They are of special interest in the historical German context and could also hint at future laws for rebuilding war-torn countries like Syria. The following provides translations of the German law texts of l.WoBauG from 1950. The translations are the author's:

(§2) The housing subsidy is enacted:

    a- By using public funds.

    b- By using indirect subsidies (guarantees)

    c- By tax concessions.

    d- By providing lands for construction.

    e- By making the building rules more flexible.

(§3) The public funds provided by the Federal Government, the federations, municipalities, and associations of municipalities

for housing subsidies in the form of subsidized or interest-free loans or grants for post-financing, must be used only for social housing in accordance with (§13 to 22).

(§13) Every year, until 1st October, the states should prepare, according to the housing law, a plan for the support of social housing. Then, they vote for a suitable plan under the control of the federal housing minister, which will be considered the central plan of social housing of that year.

(§14) The federal housing minister (Bundesbauminister) is responsible for determining the target groups of social housing.

(§16) The object of the law is the construction of owner-occupied houses and houses with land ("Kleinsiedlungen") as well as apartments for rent in one- or multi-family houses. The elderly and working single women with children, in particular, should be given priority for social housing support.

(§17, 1) The area of these apartments, which are publicly subsidized, ranges between 32-65 m^2.

Section 2 in §17: the rental price of these apartments is related to average salaries. It can be different from one state to another with the maximum limit of 1DM per square meter monthly, and up to 1.10 DM in special cases ("Richtsatzmiete").

Section 4 in §17: [….] The frame regulations (Rechtsförderung) of the subsidized housing buildings must be set by the Central Government (Bundesregierung) concerning economic feasibilities, living space calculations and maintenance provisions.

(§18) [….] The subsidies given to the people should be linked to conditions that serve to lower the costs of construction.

Section 2 in §18: the subsidies that are given to the people also depend on the municipalities not placing higher demands on the development and the construction of the streets than on the purpose of social housing.

(§19) Dwellings to be constructed based on a heritable building right may only be subsidized by public funds or by the assumption of guarantees (§ 5), if the heritable building right has been set for a period of at least 99 years. In the case of special circumstances, the granting authorities may allow a heritable building right to be ordered for a shorter period, but of at least 75 years.

(§20) 1) [….] The authorities who give the subsidies must ensure that the rent fixed pursuant to § 17 (2) is not increased

during the period of the public loan or the guaranteed loan. It can only be changed with their consent.

The tenancy of the apartments, which companies build for their employees (using the subsidies) remains for 5 years, even if the tenants go on to work for another company, and for more than five years if they have already worked for six years for the company that built the apartments.

(§21) In the case of financial subsidies, city, municipality, community associations, associations, companies, and private individuals must be considered equally, if they comply with the regulations.

Section 2 in §21: The municipality, associations, and commercial enterprises that want to build, can make use of the housing companies or the institutions of the public housing policy.

(§22) 1) [….] Publicly subsidized dwellings which become ready for occupancy after 31 December 1949 should, as a rule, be allocated to persons whose annual income does not exceed the annual earnings limit of the insured employees.

Section 2 in §22: The housing authorities ("Wohnungsbehörde") are requested to compile a list of 3 or 5

suggested names (depending on the size of the city, but at maximum 5 when it has more than 100,000 inhabitants) of the legal apartment seekers, then the landlords decide who the tenant should be. The names on the list must have the same living conditions, especially in personal, family and social terms.

Section 3 in §22: The owner can, on request, be allocated to an apartment selected by him for his own use. The same applies to a home seeker who contributes to the financing of the dwelling himself or through a third person according to his income and assets. The contribution can also be through his work performance. If the contribution is not available, the contribution should normally be considered adequate if it is equal to 20 percent of the taxable annual income of the home-seeker.

Section 4 in §22: The apartments owned by the investor in a commercial, agricultural or forestry business, and constructed for the accommodation of members of the company, are to be allocated to employees according to his proposal under the local occupancy guidelines. This applies to apartments, which are made available to members of the establishment by law or transaction, and to which the owner has contributed

appropriately, and to the housing of cooperatives which, by statute, may only rent apartments to members.

Section 5 in §22: The investor can grant at least one more room that would normally be assigned to him, according to his personal, family and professional needs, considering the density of the community. The same applies to a home seeker whose financial contribution represents a substantial part of the construction costs of the dwelling. As an essential part of the construction costs, the average amount of construction costs attributable to a room should generally be considered.

Section 7 in §22, [….] Further information and details about these dwellings, the structure of the suggested list and the procedure for selecting tenants, the contribution to financing and the allocation procedure under paragraphs 2 to 5 should be provided by the Local Governmental authority (Wohnungsamt).

3.3.2.1 Discussion on the First Housing Law

All parties in the West German government agreed on the concept of social housing as a solution for the post-war housing problem (Harlander, 2007). The motives and main points which have been considered in the first law of housing are:

a) The solution of the housing shortage must be tackled by the federal government, states, municipalities and private sectors in a completely different way than before. In 10 years, the most urgent housing shortage must be resolved. All private and public service forces are called upon to participate in doing so, and they must receive the same support from the state and municipalities for equal benefits. In addition, a solution to the housing question is a fundamental prerequisite for the development of the state and the restoration of decent living conditions. (Rabeler, 1990).

b) The importance of building large numbers of homes for permanent use - new builds as well as reconstructions - if possible with the least amount of money and materials. First, small apartments with socially acceptable rents are to be built for broad sections of the population. In addition to their economical form, small houses (one-family houses and "Kleinsiedlung") should be given preference, where multi-story flats don't fit with the demands of urban planning. Especially in medium-sized and smaller communities, efforts should be made to integrate newly-homed people into the economic process and this can be done through the planned expansion of workplaces and dwellings (Ibid).

c) The use of modern and industrialized construction methods, the application of standards, the need to increase building material production, and the retraining of construction workers were also stressed. In the new legislation on building and land law, the legitimate interests of the owners must be secured with the granting of adequate compensation.

d) The importance of housing subsidies and municipal supervision of housing. In addition, the necessity for the adjustment of rental prices and mortgages according to the economic situation created by the consequences of the war. Furthermore, dividing up large residential estates to provide land for resettled city dwellers, and the transplantation of small and medium-sized enterprises in economically favorable rural districts.

These ideas were mainly featured by the CDU and FDP parties.

They gradually broke away from the principles of strict socialist construction and housing policy and turned towards market-oriented principles. More emphasis was put on private initiatives by the FDP party.

3.3.2.2 The expropriation (land and property rights)

The first housing law (l.WoBauG), passed by the federal government in April 1950, contained no provisions for expropriation. Although it proclaimed that the federal government and towns had to supply land for housing construction, nothing was stated about how this should be done. The aim of this bill was to activate housing construction by providing funds for loans and subsidies for social housing and by giving property tax relief on new private housing being rebuilt or repaired.

In October 1952, the federal parliament (Bundestag), the cabinet, and the council (Bundesrat) petitioned the Supreme Constitutional Court to judge if article §14 of the Basic Law for the Federal Republic of Germany (German: Grundgesetz für die Bundesrepublik Deutschland, GG) was in agreement with the proposal of the housing ministry law and the expropriation provision of the reconstruction law. Based on the law from 1949, article 14 states: "*the use of private property also should serve the public well-being.*" Three categories of land could be expropriated through this law: vacant land; a land where previous buildings had been either destroyed or damaged; and land which was minimally used. The most important feature

was that anyone — an individual, a private organization, or a public agency — could start expropriation procedures. Based on §14 GG the argument for expropriation was that landowners were not able to undertake such building efforts in many cases. The first step towards expropriation proceedings was to try to buy the property at a fair price and to show an ability to begin construction within one year after the expropriation had taken place. But it was also possible that the property owner proved the ability and desire to build and to start construction on his plot.

There was fair compensation when expropriation took place, based first on pre-war regulations "i.e. the October 17, 1936 value" (Diefendorf, 1986), and later assessed at a fair current value. The private owner could claim compensation in many forms, including an equal piece of property, an alternative dwelling, money, or a variety of legal rulings.

In June 1954, the Supreme Constitutional Court of West Germany declared that the federal government did not have jurisdiction over all aspects of building, and ruled that the states themselves had official power over building regulations.

On July 21, 1955, the Court ruled that expropriations that did not grant sufficient compensation were unconstitutional and

void (invalid). These court decisions not only existed to rule out a comprehensive national building law, but they also undercut the existing reconstruction laws (Ibid).

3.3.2.3 The renting policy

One of the most important milestones in social housing was already set in 1942 (during wartime) by the "Mieterschutzgesetz". It was a regulation to keep rents stable until 1960, and thus to protect tenants from eviction during this time. Rents could only be increased twice (by 10%) during this period: in 1952 and in 1955 (Wagner-Kyora, 2004).

Between 1945 and 1947, the housing management (Wohnraum Bewirtschaftung) in Germany offered empty privately-owned houses for rent to the families in need of houses.

After the reform of the currency in 1948, the possibility to rent social housing was offered to people who lost their properties during the wartime, regardless of their income. The new social housing rents and mortgages (Hypotheken) were high, with mortgages of 10,000 DM (Rabeler, 1990). This meant that higher-income people were able to move to the new houses while those on lower incomes stayed in their old rented houses (Altbauwohnungen) where the rent was less.

In 1955, a new renting law (Erste Bundesmietengesetz) was passed restricting the rents of new houses from being more than one-third higher than previously paid rent (Wagner-Kyora, 2004). Rents for old houses stayed fixed until 1960. After that, the housing market was opened, and rents increased.

3.3.2.4 Social housing target groups (l.WoBauG)

There were two criteria for targeting recipients of social housing in the first housing law (l.WoBauG 1950).

1-Displaced people, bomb victims, and others. People in need of a house registered their names on a list at the offices of the municipalities. There was a special program for refugees, including re-settlers and Soviet-zone refugees, as well as miners, the displaced elderly and other displaced groups, military personnel and federal employees. Several settlements (social housing programs), known as ECA, were built by the US Economic Cooperation Administration.

2- Income ceiling (Rabeler, 1990). According to Georg Wagner-Kyora, the ceiling for family income was between 6,000 and 9,000 DM per year, depending on the category of housing. Georg Wagner-Kyora criticized this, claiming that, in order to concentrate on the poor, this ceiling should be lowered

to between 3,600 DM/year and 4,800 DM/year (Wagner-Kyora, 2004).

About 70% of the population fell into these target groups.

3.3.2.5 Architectural standards

The houses constructed in 1950 were generally small (3.25 rooms per unit on average). Apartments were at least 32 square meters in size, up to a maximum of 65 square meters of living space. In some circumstances, they could be bigger, but 80 square meters was the limit (Rabeler, 1990). Up until 1954, most were between 40-50 square meters. The number of rooms per person increased from 0.9 (10-15 m^2) in 1950 to 1.0 at the end of the 1950s, to 1.5 (30 m^2) at the beginning of the 1970s, to 2.1 rooms per person in 2014 (Harlander, 2007).

Some design concepts changed in the post-war period. For instance, the living room became mostly open to the kitchen space, creating the "Wohnküche" that had already been introduced in the 1930s. This was a new concept to centralize living and eating spaces while surrounding them with other functional spaces, to afford light and ventilation throughout the flat (Harlander, 2007) and save space.

In 1950, 255,000 social housing units were built; in 1951, 295,500 were built; and in 1952, 317,500 were built with a fund of 500 million DM each year from the government. (Figure 17). The percentage of social housing within these three years was about 2/3 of all housing built. (Wagner-Kyora, 2004).
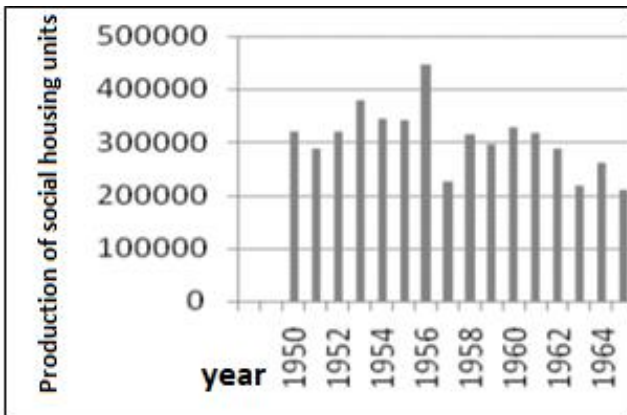
Figure 17 Production of social housing in post-war (West) Germany. Source: Federal Ministry for Labour and social affairs (2010)

3.3.3 The modification of the First Housing Law

On the 25th August 1953 a "Novelle" of 1.WoBauG was published as a modification of the first housing law. It had more details and definitions, and one of its core parts dealt with social housing.

The priority in this law was people who wished to own a house or to build their own house by themselves (Eigentümer). In this
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law, the standard apartment size was 40 - 80 square meters, depending on family size.

Every year, from 1953 to 1956, 300,000 social housing units, single-family houses, and apartments were built within social housing programs. This was about 50% of housing built (Wagner-Kyora, 2004). Table 2 shows the number of housing units built every year between 1949 and 1959 in addition to the number of social housing built during the same years. Figure 18 illustrates the percentage of social housing to the total amount of housing units built from 1950 to 1960.

Year	All the number of houses	Social housing subsidized from the government
1949	315500	-
1950	550000	319400
1951	469800	287700
1952	495300	318700
1953	574900	362200
1954	607400	326000
1955	612600	320700
1956	554500	423300
1957	510700	211200
1958	556400	294800
1959	587900	258800

Table 2 Housing construction in West Germany from 1949 to 1959, (Rabeler, 1990)

1950 - 1952

1953 - 1956

2/3

1/2

1956 - 1960

37%
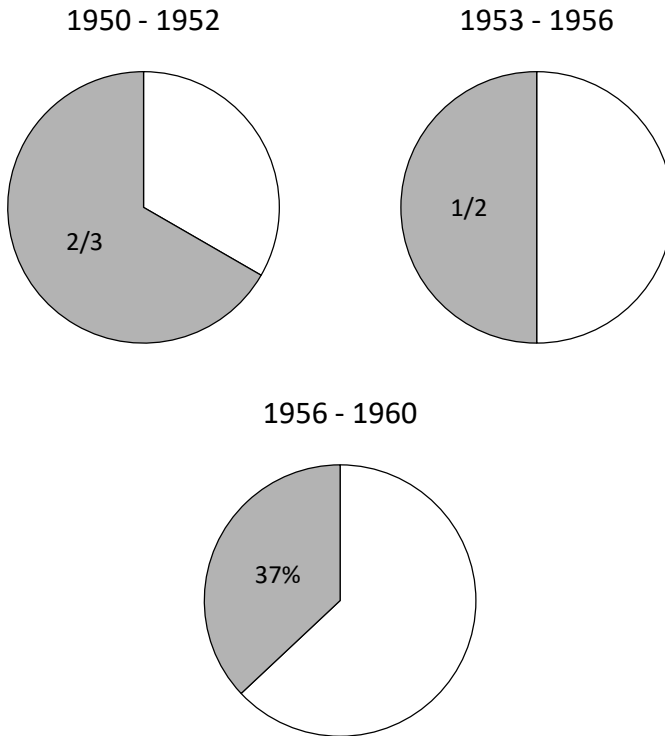
Figure 18 Percentage of social housing (grey area) in relation to the total housing constructed in the same period (Wagner-Kyora, 2004)

The percentage of social housing units was the highest in the first two years of the social housing program. After that, the percentage gradually decreased.

3.3.4 The Second Housing Law (2. WoBauG 1956)

In 1956, the second housing construction law (2. WoBauG) (Housing and Family Home law, Wohnungsbau- und

Familienheimgesetz) was passed, to deal with problems encountered by the first law from 1950. The 2. WoBauG (1956) law destined a sufficient supply of flats for low-income people under three new categories: family homes (Familienheime), condominiums (Eigentumswohnungen), and rental apartments ("Mietwohnungen"). The means of funding support changed under this law. In contrast to the first housing law of 1950, low-income people were no longer required to pay the entire rent of the social housing units. This was made possible by subsidizing certain categories of tenant ("Subjektförderung"). This kind of subsidizing was not so relevant at the time, but grew more so in the sixties. At the same time, the government provided a subsidy to those who built their own houses. Preferential support was provided for self-help where one's own contribution was at least 10% of the construction costs (Rabeler, 1990). In addition to the provision of rented houses, the II. WoBauG 1956 also boosted the numbers of owner-occupied dwellings. An important feature of the second law was the concept of "Kostenmiete", rent related to all types of costs, including capital costs and usage and management costs. This enabled risk-free investment (which later was criticized).

The second housing law was either complemented or substituted by the "Abbaugesetz". This was activated in 1960 and removed the former rent controls. This was the starting point for a rising in rents (Rabeler, 1990).

Another complement to the second housing law was introduced in 1965 when the so-called second way of funding (Zweite Förderweg) was introduced by the West German government. It allowed families with above-average incomes to have access to state-subsidized housing, in order to encourage people to buy or construct their own flats. The housing market then went into the recession (1966-1967) and the economic crisis in Western Germany (1974-1975) began (Hanauske, 1995).

3.3.4.1 Target group in the second housing law
The main beneficiaries of the II WoBauG 1956 were low-income people, large numbers of young married couples, persons older than 60 years and the homeless. This was a response to Wagner-Kyora's claim that the first housing law specifically targeted displaced people and not low-income ones.

3.3.4.2 Architectural standards of social housing

In contrast to the I WoBauG 1950 in the social housing sector, family homes were subsidized to a maximum of 120 m^2. Apartments for families had a maximum of 85 m^2 and a minimum of 50 m^2. Apartments for older couples were 36 m^2 and 26 m^2 for single persons (Rabeler, 1990).

3.3.5 Funding process

Social housing in Germany takes a very specific form. According to the First and Second German Housing Laws (I WoBauG in 1950 and II WoBauG in 1956): the specificity of social housing in Germany is that it was defined as financing policy with distinct regulations and responsibilities including the possibility of transition to private ownership or rent once the subsidized loans have been paid off.

During the 1950s and 1960s, there were three forms of governmental or public subsidies provided by the local, state, and national governments. The first two were provided to build units (Objektförderung): (Table 3)

From 1950 to1956

1 -Direct financial support for the householder to build his own house or for the investor to build housing units. The Federal

Republic of Germany shared a wide agreement on housing construction. Individuals were supported with institutional help to do as much as possible by themselves to mend their homes and make them fit to live in.

2-Loans offered to investors with low or no interest. The investor was then obliged to take low rent (cost-price rents) for a specific period. The public sector paid and bridged the gap between cost-price rents and the amount received in mortgage repayments or rent. The period of lock-in time depended on the size of the subsidy and the type of program. In 1980, the plan was that this period would last up to 100 years, but after changes in repayment and interest rates of state loans the usual duration was 40 to 50 years (Busch-Geertsema, 2000). The period of repayment obligations could also be shortened by the early repayments of state-subsidized loans.

Between 1950 and 1956 financial assistance was provided with public money. "The public cofounding was mainly realised by the federal government and the state governments, which – within the framework of a cost-sharing model – could pay up to 80 per cent of both the costs of site development (Erschliessungskosten) and construction." (Egner, 2011, p5)

In exchange for subsidies, such as tax relief or grants, mortgages as first-rate mortgages from the capital market, home savings loans, and subsequent public loans, companies or investors were required to treat housing as a social contribution. In other words, there were enforced rent ceilings and income limits for a specific period (Ibid). After its expiry, the owners of the houses were free to sell or rent the properties at market prices. However, many of the developers were firms owned by the municipality, which in practice continued to operate the units as social housing (Scanlon, 2007).

Personal Subsidy started in 1956

-This kind of subsidy ("Subjektförderung") was mentioned in the second housing law in 1956 and activated at the same time:

3 - Special aids or subsidies to certain groups of persons. These kinds of subsidy (Wohngeld) were to be given to people who are unable to pay their house rent, to effectively keep the rent low for them.

Direct support				Indirect support		
Built units support (Objektförderung) 1950		Low-interest and interest-free loans	Personal support (Subjektförderung) 1956	Support through tax reduction in 1950	The prerequisites for the use of dwellings 1950	Further funding 1950
Social housing						
Construction of rental apartments	Construction of owner-occupied apartments					
		Low-interest and interest-free loans		Income tax	Protection from expulsion	Provision of building land by federal /States/municipalities for social housing at reasonable prices
				Land tax	Rental price regulations: (cost rent / rental charge)	Reduction of the construction cost by the offered support
Grants			Special aids or subsidies to certain groups of persons	Property tax	Assignment of entitled persons in case of criteria	Loosening of housing forced economic
				Inheritance Tax		

Table 3 Overview of funding subsidies in the First Housing Law.

A further motivation to participate in the social housing program was created for non-profit housing corporations which had the particular status of (Wohnungsgemeinnützigkeit) "housing welfare providers". "If they could prove that profits which they had made from social housing projects in the post-contract period would be re-invested in new social housing, those profits were excluded from taxation." (Egner, 2011, p5)

Large industrial employers also invested in social housing, but separately from state-sponsored programs. These practices were long-standing traditional forms of paternalism in the German industry. Dating from the 19th century, their purpose was to tie workers to the companies.

3.3.5.1 Dividing the federal funds

Federal funds for housing varied from one German state to another. The rule for dividing federal support money among the states was not simple. The considered formula was that 50% of the amount allotted depended on the population numbers of the state, 25% was based on the amount of destruction, and 25% on the level of industrialization, (Diefendorf, 1993). The weight given to population numbers reflected the high number of refugees. The requirement to home them in undamaged areas created an additional demand

for housing. The financial distribution can be clarified by examining the federal housing ministry's outline regarding the division of funds between the states in 1953. Table 4

West German states	Federal funds for housing in percentage
Schleswig-Holstein	6.48%
Hamburg	4.27%
Lower Saxony	14.85%
Northrhine-Westphalia	28.20%
Bremen	1.34%
Hessen	7.99%
Rhineland-Pfalz	4.55%
Bavaria	16.17%
Baden-Württemberg	10.15%
West Berlin	6.00%
Total	100%

Table 4 Distribution key of federal funds for housing in percentage share of different West German states, 1953. Source: Diefendorf, 1993

Each state's funds were divided between cities, and the money often was mixed with local resources. For instance, in the large city of Munich, in the German state of Bavaria, public housing construction subsidies grew rapidly at the beginning, then, settled after 1950, although the city's housing budget dropped after 1952, two years after the l.WoBauG 1950 was launched. This indicates that state funds were mixed with local funding sources as shown in Figure 19.
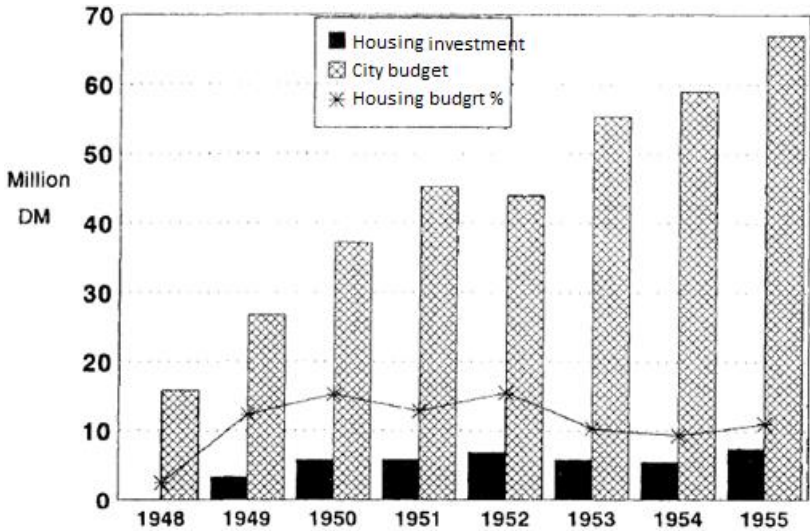
Figure 19 Munich city housing investment, total city budget and percentage of housing investment in relation to the total budget. Source: Helmut König, München setzt Stein auf Stein (münchen, 1958), p. 120, cited in Diefendorf,1993

The privately-financed housing sector grew more quickly than both the social and the subsidized housing sectors, because of the recovery of the German economy during the mid-1950s (Wirtschaftswunder) and because of the gradual relaxation of pre-war and wartime controls on property values and rents. The relation between publicly and privately financed housing differed from city to city, with northern cities preferring public subsidies and social housing more than southern cities. Figure 20 illustrates the increase in privately-financed housing in

Munich as a city in southern Germany, during the post-war era, which was linked to the improvement in the German economy.
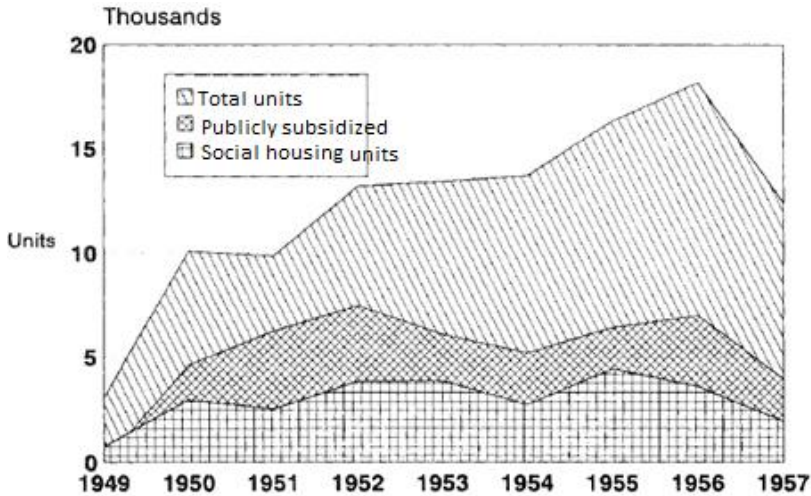
Figure 20 Development of total, publicly subsidized, and social housing units newly build per year in Munich from 1949 to 1957. Source: Helmut König, München setzt Stein auf Stein (münchen, 1958), p. 120, cited in Diefendorf, 1993

3.3.5.2 Funding sources

Government support in the housing sector took different forms. In 1945, a general agreement was reached on the need for government support, especially in the field of construction. The archives include many proposals for implementing this. Various kinds of public subsidies for housing were adopted, including grants, low or interest-free loans, cancellation of property taxes and fees, and minimizing fees for land improvements such as sewer and street construction (I.

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WoBauGe). These exemptions reduced normal city revenues, which might probably have been used in rebuilding the city properties, but the central government gained money from regular taxation too. Taxes were also imposed on undamaged property. (Horn, 1951). People whose property survived the war thereby took on a share of the burden of reconstruction.

One funding support strategy was tax-advantaged savings plans, which encouraged people to save for future mortgages and established contacts between tenants and property owners and investors. The tenants' savings went to property owners and investors to repair or construct apartment buildings. In exchange, the tenants received permanently low rents and long-term tenancy agreements (Siemens 1948). Not all social housing was publicly subsidized, nor was all subsidized housing publicly owned.

There were many sources that provided money to the government. One of these was the KFW Bank (Kreditanstalt für Wiederaufbau), which was established in 1948. In 1949, the bank allocated 34 million DM for housing construction and 400 million in 1950. By these means, it achieved a financing ratio of 12% in housing construction in 1950 (1.4% of all financing of housing reconstruction until 1953).

Part of the funds distributed by the government was provided by international programs. For instance, funds from the European Recovery Program (ERP) or the Marshall Plan were provided according to the Federal Housing Law 1950 (1. WoBauG), under the approval of the Ministry of Federal Housing. ERP-financed housing had to consist of built social housing units with the lowest possible costs in places where the need was urgent. Persons assigned to these units should be working in areas related to economic recovery (e.g., mining, export trades, industry) or belong to categories of persons with special needs (e.g., war disabled, refugees from the east). At the same time, the distribution of money and the assignment of the completed housing dwellings must reflect the social makeup. (Diefendorf, 1993).

1 -The first American-sponsored housing construction program planned to build residential settlements in 15 German cities. It offered the Economic Cooperation Administration (ECA) funds, which were obtainable only if the construction costs were kept low using standardized building methods, and if the participating cities provided suitable land near important industries and took on the costs of improving this land.

In 1951, a nationwide competition was announced by ECA, to encourage participation in the development of advanced designs and construction techniques. About 200 to 300 units for owner occupancy would be built (3,300 dwellings) using 37.5 million DM of ERP funds (Diefendorf, 1994). All should be social housing projects according to the provisions of the Federal Housing Law. The competition plainly achieved the goal of motivating interest in the program, with architectural groups and individual architects submitting 725 designs, which were judged by an international panel.

2- In order to provide housing for people living in the destroyed areas, another EGA-sponsored program was organized by the head of the housing division of the EGA mission to Germany.

3 - The lack of suitable housing for miners in the Ruhr coalfields caused a low level of coal production and prevented a rapid rise in productivity. For that reason, it was suggested to use the ERP funds to support the efficient and standardized construction of houses. 100 million DM in funds were given in order to build nine miners' housing settlements, which was supposed to contain about 5,000 dwellings. (Diefendorf, 1993)

More than 8,000 new dwellings were the result of the American-sponsored housing programs.

The direct impact of the Marshall Plan on housing construction in Germany's bombed cities was negligible, but its indirect effect out of other areas of the economy freed up money in the financial markets of the housing sector: The Marshall Plan provided 5% of the all financing of housing of west Germany in 1950, but by 1952 it contributed almost no funding. Only 1.63% of the 31.6 (Milliarde DM) invested in the housing between 1950 and 1954 was directly derived from Marshall Plan funds. 81.5 million DM of the 1.187 (Milliarde DM) available funds were dedicated to housing construction during the first year of the Marshall aid (Stern, 2006).

Figure 21 indicates sources of post-war financing for the whole German Federal Republic. In 1950, about a quarter of the total investment in all sectors of the economy together (DM 3.8 Milliarde) had been invested in the housing sector (Ibid). Public financing, capital market funds, and private capital sources continually provided the largest proportion of housing funding.
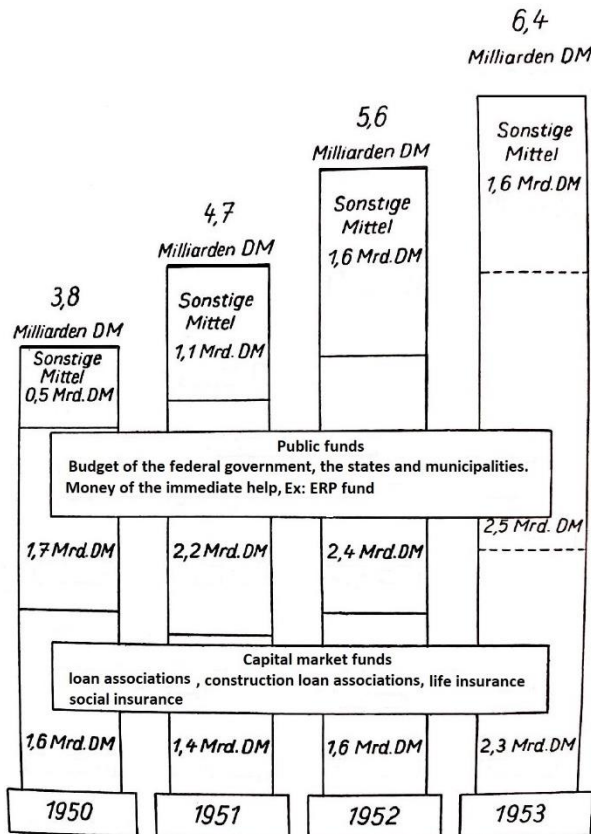
Figure 21 Contribution of capital market funds, public fund and other (sonstige) financing sources to housing construction in West Germany 1950-1953. Source: (Rabeler, 1990), Translated by the author

3.3.6 The investors

In 1950, the combination of direct subsidies and tax exemptions that were available to private, non-profit and public entities boosted housing construction. The majority of new housing units were rentals. There was not much demand from

private buyers because few people had enough money at the time. By 1956, half of the housing shortage had been rebuilt in West Germany. By 1962, the housing shortage had been reduced to about 658,000 units. (Phillips, 2014)

Economists consider the post-war housing policy in Germany as a balance between private investment and government involvement. Social housing was built and administered by very different investors (non-profit housing societies, private housing companies, insurance companies, private investors, etc.). The approach to housing policy considered the role of public policy as a way to achieve a kind of balance between allowing the market the lead the way and imposing government interventions.

At that time there were only a few housing companies, and they were mostly non-profit ones such as Neue Heimat, Gewobau, etc. The Neue Heimat (NH) was the largest German housing and urban development company headquartered in Hamburg. It belonged to the German Trade Union Confederation (DGB). It consisted of the non-profit housing and settlement company m. b. H. "Neue Heimat". In 1969 another part was founded which was profit-oriented and active on an international level; it was named "Neue Heimat

Städtebau GmbH". The NHH (Neue Heimat Hamburg) was confiscated by the British occupying power and handed over to the DGB in 1952. The company initially restricted its activities to Hamburg in the reconstruction phase, but under its first chairman, Heinrich Plett, the NHH bought shares of numerous construction companies in Hamburg, Bremen, Munich, and other cities. In 1954, the DGB decided to subordinate all its own housing companies economically to the "NHH", thus forming the large-scale conglomerate NH Neue Heimat, which had built more than 100,000 apartments by the end of the 1950s.

3.3.7 Architectural types, quality, and urban design

3.3.7.1 Architectural types and the quality

At the beginning of the 1950s in Germany, standardized row construction (Zeilenbau, Reihenhaus) of the 1920s and 1930s was generally regarded as the most suitable basic form of development for residential areas. This was in fact influenced by Ernst Neufert's writings and ideas on the use of standard elements in building. Through economic comparisons of different forms of construction, it was found that row construction was superior in terms of development costs. The

urban form of these buildings may be linear or compact. (Figure 22 and Figure 23)
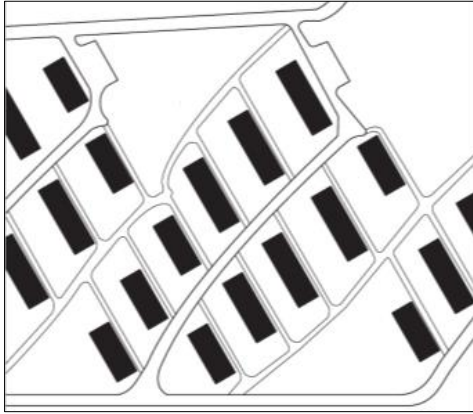
Figure 22 Standardized row construction "Zeilenbau" The concept of the linear urban form. Source: Jabbour, 1991
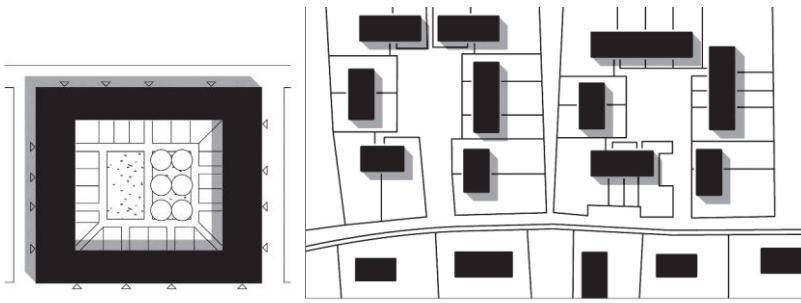
Figure 23 The concept of the compact urban form. Source: Jabbour, 1991

Usually, these multi-story apartment buildings were located along the streets and consisted of three- to six stories. (Figure 24). They could contain shops on the ground floor and were constructed rapidly. These buildings were neither adapted to

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local architectural traditions nor classical modern style. They might fit into the category of "utilitarian building". Later, many of these buildings became "modernized" by adding new windows and floors, or were upgraded by new facades; but they were still referred to as "post-war housing". They were criticized by the media and by architects, as well as by the people living there, who mainly complained about the lack of infrastructure. Nonetheless, they contributed positively to the supply of urban housing after the war.

Figure 24 Berlin, cooperative social housing, Bayrischer Platz in Schöneberg. The photo is from 1955 and the style is typical of West German row construction (though this cannot be seen from the picture). Source: Diefendorf, 1993

Later on, houses in suburban settlements ("Siedlungbau") were mainly of two types: two-story row houses ("Reihenhäuser") (Figure 25) and single-family row houses ("Kleinsiedlungen-Häuser or Einfamilien-Häuser") (Figure 26).

Figure 25 Row townhouse, Constructa-Mustersiedlungen, 1951-1952, Two-family houses, Architekt Ewald Zenker (Hafner, 1993)

Figure 26 single-family row houses (Hörnhang), in Aachen 1950. Source: (Harlander, 1999)

Within cities, the preferred type was the multi-story apartment building (Figure 27). Usually, apartment blocks had three to six stories. The "Grindelhochhäuser" in Hamburg with 15 stories was a notable exception. The Grindelhochhäuser was one of the largest inner-city housing projects conducted in the early 1950s. (Figure 28)

Figure 27 Multi-family houses (Federal employees flats) Reuterstrasse, Bonn 1949-1951, Architekt Max taut. Source: Harlander, 1999

Figure 28 Hamburg, Grindel-Hochhäuser, Bauzeit 1949-1956; Source: Gutschow, 1987

Large settlements ("Großsiedlungen") appeared, such as Britz Buckow Rudow in 1956 Figure 29, and Berlin-Gropiusstadt, in 1962. Housing construction in this phase was characterized by an increasingly progressive and prevalent process of technological rationalization, as well as by high design standards. A new type of building, which from then on was part of the repertoire in almost every city, was high-rise blocks ("Punkthochhaus"), as the Bienenhaus – Junggesellenhaus, in the Hansaviertel in Berlin, 1957.

Figure 29 Gropiushaus, Lipschitzallee Ecke Fritz-Erler-Allee, Gropiusstadt, Britz-Buckow-Rudow, Berlin-Neukölln, 1962. Source: https://commons.wikimedia.org/wiki/File:Gropiushaus-Berlin-Neukoelln-Britz-Buckow-Rudow-Gropiusstadt-Lipschitzallee-Fritz-Erler-Allee-09-2011.jpg

The architectural urban types in the suburbs of the city were mixed. These were single-family houses ("Kleinsiedlungen, Einfamilienhäuser, Doppelhäuser"), the standardized row constructions ("Zeilenbau and Reihenhaus") and high-rise blocks ("Punkthochhaus"). In the cities, there was also a mix of architectural types but in the center, most of the houses were row constructions and sometimes high-rise blocks, but not in the inner city. (Harlander, 1999) (see Figure 30). Apartment blocks of three or four stories were suitable for the city center; two-story row houses were the appropriate model for the suburbs in many cases.
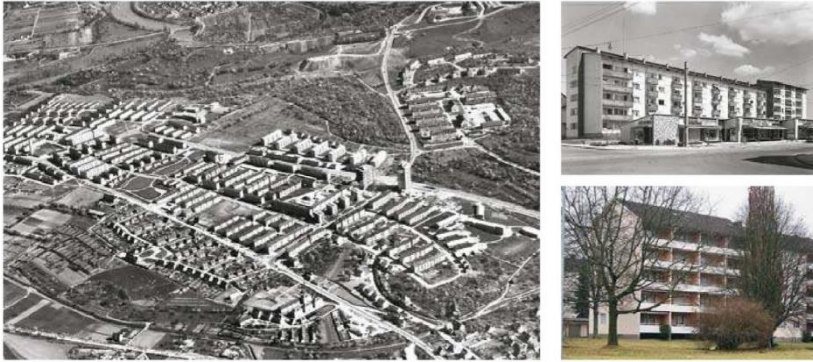
Figure 30 Die gegliederte und aufgelockerte Stadt neuer Stadtteil, Zuffenhausen-Rot in Stuttgart, 1957. Source: (Hopfner, 2013)

Final comments

Overall, housing construction in the 1950s was quantitatively oriented. The housing strategy in the post-war era was the long-term planning of new housing projects, the renewal of legal and fiscal tools to enable poor property owners to rebuild their damaged buildings, and the introduction of changes in housing design of and construction techniques. This is identical to what was argued in Chapter 2. The preferred housing strategy was to build for long-term use, because temporary housing was considered a waste of resources.

Some international housing strategies had recommended temporary housing structures made of wood, and prefabrication as a new construction method, but the local authorities banned the construction of prefabricated units. They insisted in their

opinion that solid masonry construction would last for decades and that the design of individual buildings should adapt to traditional local styles (Stern 2006). However, because of the pressing need for houses, some were built using internationally suggested construction methods. Later, in the 1960s and 1970s, these were demolished and rebuilt to higher standards. (Harlander, 1999).

Aesthetic quality was a controversial issue, but the main aim was to solve the housing shortage and not to decorate the city.

3.3.7.2 Post-war exhibitions of architecture and urban planning

To find an answer to the questions of ideal planning and housing construction, many post-war building exhibitions were held. The first exhibition was in Berlin in 1946 and exhibited five forms of standardized, prefabricated, single-family units. (Diefendorf, 1993)

The second exhibition was the Constructa Exhibition in Hannover in 1951. It presented means and types of advanced industrialized, standardized constructions of housing. Theodor Heuss, the Federal President of West Germany, emphasized in his introductory statement that the aim of the exhibition was to reduce housing costs through standardization, but the main aim

of the exhibition was to overcome the gap between traditionalism and modernism. Constructa was the most important exhibition for architects, planners and housing and construction companies, and the most attractive one in West Germany (Ibid).

In the "Internationale Bauausstellung Wiederaufbau Hansaviertel" building exhibition in Berlin, the "Interbau" of 1957, social housing was prioritized, and the buildings extended to between 7 and 18 floors. It was clear from the quality of the towers of the "Interbau" that the period of post-war reconstruction was finished (Ibid).

3.3.7.3 Post-war urban design

After the war, Germany used the massive destruction of the bombed cities to develop a new urban structure. Many destroyed areas were pre-war mass-housing areas in need of renovation, but in the post-war vocabularies this first meant rubble removal. In other words, town planners did not start with a tabula rasa in 1945. No zero-hour post-war planning was separate from pre-war planning. These earlier planning models were the bases of late propositions, modified or rewritten to suit the post-war conditions.

Many planners believed that their job was not to rebuild the cities of the past, but to lay the groundwork for the cities of the future. This included specifying the best locations for housing construction, keeping to historic street patterns or modifying and renovating old areas, and aiming to reduce population densities in the residential areas of the historic cities. This is illustrated in Figure 31 and Figure 32, which present two neighborhoods in Hannover, before the war, and after reconstruction.
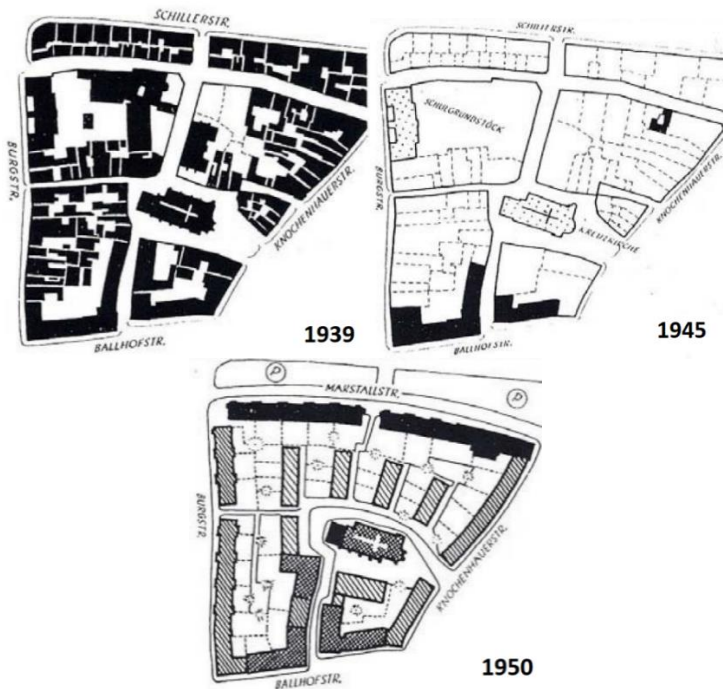
Figure 31 Kreuzkirchen Viertel, Hannover Bebauung 1939,1945 and 1950
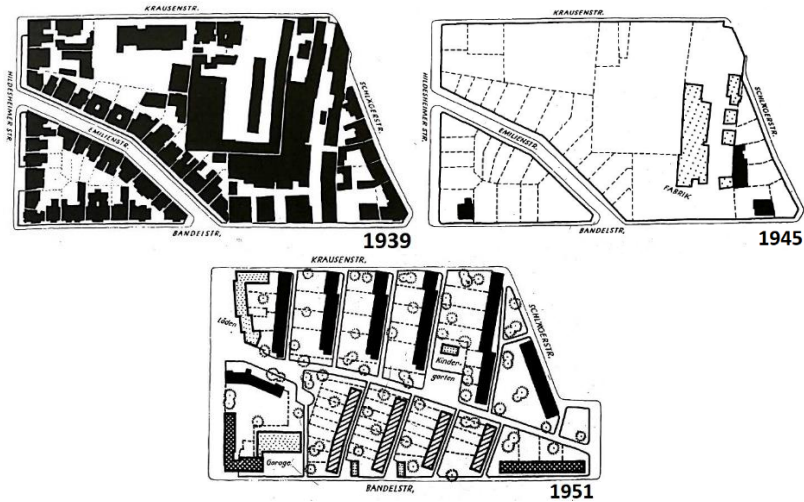
Figure 32 Constructa-Block in Hannover 1939, 1945 and 1951 (Harlander, 1999, p259)

Figure 33 shows how the pre-war and reconstruction plans of Kiel, a West German city, follow the same outlines and borders of the old buildings while constructing new ones with less density.

Figure 33 Plan of Kiel city center 1939 and reconstruction plan. Source:
(Harlander, 1999)

Town planners coming from different political backgrounds
and generations agreed on the main goals and concepts of
urban planning during the first 15 post-war years: up to 1960
houses should be airy, with enough sunlight, and greenery for
recreation. Displaced people should have access and live in
well-planned residential cells, suburbs or settlements. The next
Figure 34 shows a new social housing neighborhood in Bremen
with 10,000 apartments, implemented between 1956-1962.
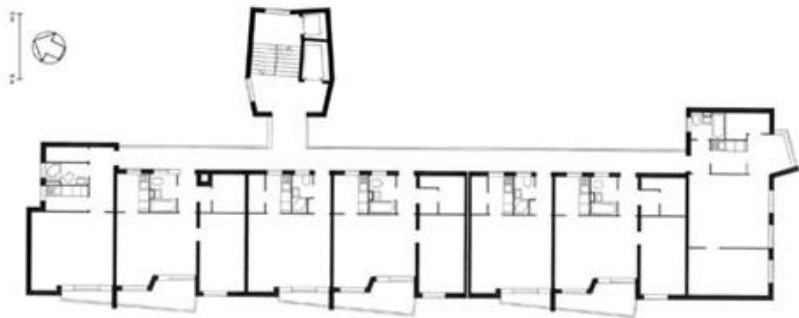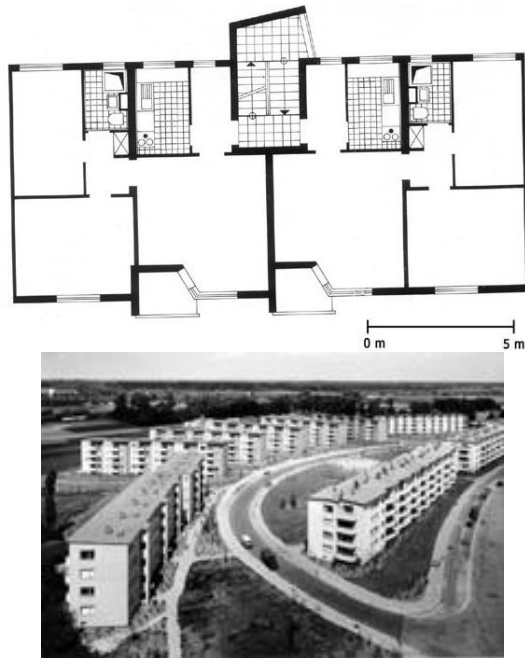
Figure 34 New social housing neighborhood with 10,000 apartments. Architect: Ernst May / Hans Bernhard Reichow / Max Säume / Günther Hafemann / Alvar Aalto, Investor: GEWOBA, 1956-1962, Bremen. Source: http://www.xn--architekturfhrer-bremen-npc.de/n_anzeigen.php?id=174&gig=2

Urban planning after the war showed a great variety of concepts and local phenomena. Controversy arose around Le Corbusier's concept of the functional division of the modern city versus the concept of mixed functions. The latter follows the concept of the European city with corridors and squares.

Over time, different leading concepts came to dominate specific urban plans. The main guiding concepts "Leitbilder" have been:

1) The structured but loosely-ordered city concept that dominated in the fifties.
2) Urbanity by density. The sixties and early seventies were a time of large settlements.
3) This concept was an object of criticism (Jacobs, Bardt, Mischerlich) and ended in 1975. This was the year of protection of the country's historical heritage.

The dominance of traffic planning and the neglect of historic heritage was also part of the spirit of the time after the war.

Traffic design

For post-war city planners, traffic planning meant street planning and making the city ready for the automobile, as a sign of recovery, vitality, and normality. This required many changes in the inner cities, such as cutting new streets through formerly built-up areas and widening streets, which entailed removing historic facades and assigning former sidewalk space for parking or roads.

In order to improve traffic conditions, and to make life easier for pedestrians, the old inner cities would be surrounded by high-capacity ring roads, in many cases. Streets coming from the suburbs to the center would take the form of the spokes of a wheel, or enter the rings on tangents, lowering the number of crossings. Vehicles were preferred to be kept out of the inner old cities, closed within the ring system. Other traffic could cross the inner city on the new arterials for the sake of the economic health of the cities and to avoid turning the old city centers into an isolated island.

The main direction of post-war traffic planning can be illustrated by the example of Hannover. The town planner used a technical approach in this city. Difficulties in implementing these approaches vary from city to city.

Hanover was one of the most heavily-bombed cities in Germany. It is a model of progressive reconstruction planning. It enjoyed a high reputation because of the notable cooperation between the planning department (presented by planner Rudolf Hillebrecht) (Ibid) and its citizens. The third provenance of planning ideas was the Aufbau Gemeinschaft Hannover, which was a private organization created by inner-city property owners. Hanover is a model of the post-war inner-city housing

project, with high consideration for the traffic plan. Rings and tangents streets system was used, such that the traffic goes easily in and out of the city but not through the inner city.

To reduce the amount of traffic entering the inner city, skyscrapers could be built only outside the inner ring road; building inside the traffic ring should not exceed the proportions typical of the historic core, and a shopping street should be provided as a pedestrian space in addition to administrative and cultural buildings (Figure 35, B). Konstanty Gutschow planned in 1949 the "new" city center of Hanover. People still lived in the inner city of Hanover, where streets were widened to facilitate traffic flow (Figure 35, A). The possibility of a subway system was left open.
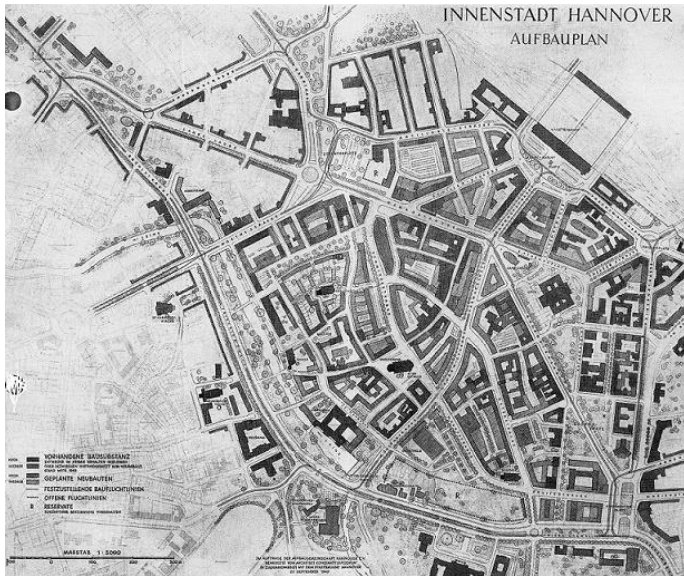
Figure 35 Map of the rebuilt city center of Hanover, in 1949, with less dense building structure and a map of the city center where shops are emphasized. Source: Gutschow, Konstanty (Bearb), Stadtmitte Hannover. Beiträge zur Aufbauplanung der Innenstadt, hg. von der Aufbaugemeinschaft Hannover e. V., Hannover 1949

As a result of traffic planning, many streets were widened, and new arterials were created. This led to the loss of the historical substance of the remaining historical buildings. The early concentration on technical traffic planning sometimes meant that the city's architectural identity was ignored. Debates on the new traffic arterials always included discussions about keeping the historic street plan, which, along with existing historic buildings, shaped the core of the old city.

This thesis will not expand on these post-war urban planning controversies, but will focus instead on the commonly-held aim to provide such features as fresh air, light and green spaces, and the all-important discourse surrounding the location of post-war housing in the urban context.

3.3.7.4 Locating the new housing:

Developers and planners faced two options for the location of new housing: 1) build on the undeveloped land at the edges of the cities, or 2) build on the sites of demolished buildings inside the cities. There were convincing arguments for each option. The first one was based on the experience of 1920s housing projects, which were composed of row housing with suitable site planning, no existing rubble and simple models of land ownership. In addition, this option was cheaper

(Diefendorf, 1986) per square meter of living space (ignoring mobility costs to places of work). At the same time, landowners (within the city) did not have enough money to pay for rubble clearance and start new construction. In addition, the widely-shared opinion was that inner-city areas had become unhealthy and uncomfortable places to live.

The planners, who defended construction on undeveloped land, after 1945 wanted to avoid future concentrations of people within the cities because they believed that high population densities had increased the death toll during the war. New housing with suitable site planning (buildings surrounded by green areas) would decrease the possibility of disasters through war attacks in the future. But this topic was not openly discussed with the inhabitants. Another convincing argument for building new residential suburbs was the decentralization of the inhabitants, an idea supported by the modernists in the Charter of Athens, Ciam 1936. Namely, to separate urban areas according to their functions (housing, work, transportation, recreation, and administration). (Harlander, 1999)

In contrast, there were convincing reasons for rebuilding housing in the inner cities, since some of the inner-city damaged housing was comparatively modern from a structural

point of view (the walls and foundations were usable). Despite the destruction, rebuilding these buildings quickly could produce a large number of housing units at a small cost. Konstanty Gutschow, towards the end of the war, had laid out plans for the immediate reconstruction of bombed cities such as Hamburg (Figure 36). He started implementing these plans when the war ended. Large construction firms were invited to study these areas and submit proposals for effective reconstruction using industrial methods, and architects were asked to suggest ideas on how dwellings could be better located to provide air and light.

In addition, construction in the suburbs was costly and harmful to the cities, because of the costs of establishing roads and infrastructure and other improvements to properties (Ex. tax-exempt). Furthermore, abandoned damaged buildings and ugly open spaces would appear within the cities as a result of using their funds and materials far from the inner city (where no one could afford to build). Moreover, a study showed the increasing need for small housing units for young families and single persons, and this kind of housing fit better in the inner cities than in the suburbs. Another important argument in favor of constructing buildings on the sites of destroyed buildings

inside the cities was that only inner-city housing could restore a city's historic life.
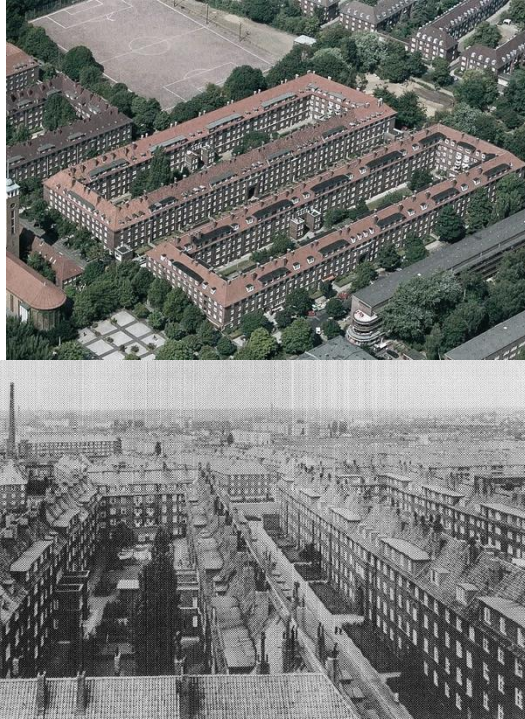
Figure 36 Hamburg-Dulsberg, residential street with social housing. The bombing burned down the brick buildings, but they could be repaired quickly. The photos show the ruins and the finished apartment blocks. Source: (Diefendorf, 1993)

After presenting post-war West Germany's experience of social housing, the next Figure 37 summarizes in an analytical chart the characteristics of post-war housing policy in Germany, imposed by two housing laws set in 1950 and 1956:
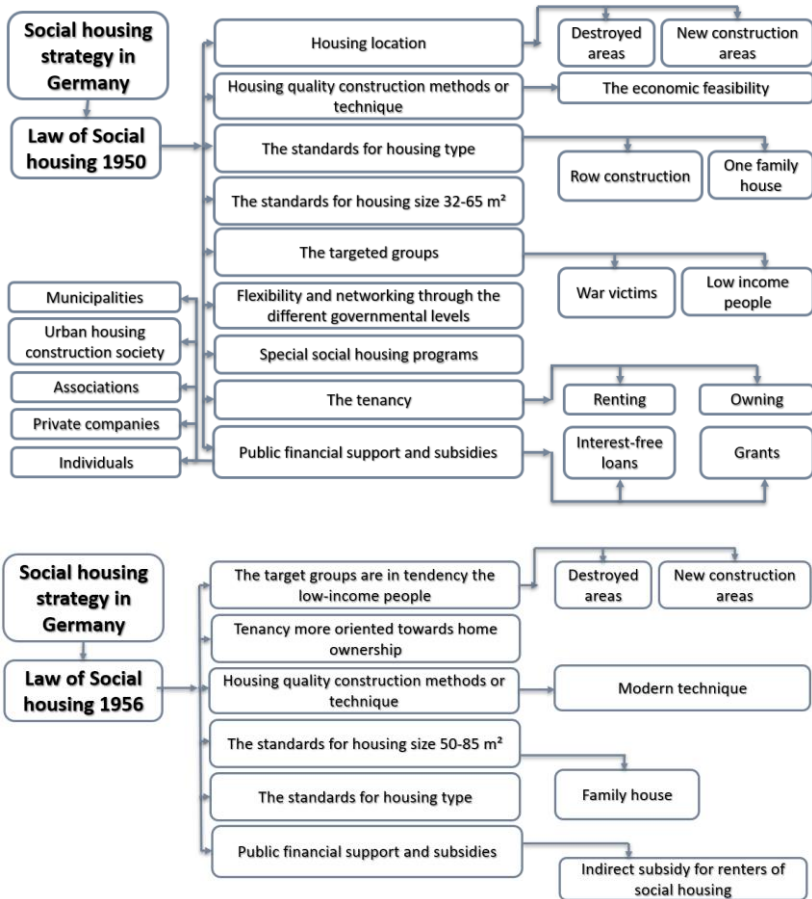
Figure 37 Analytical chart of the two housing laws in Germany, set in 1950 and 1956. Source: The author

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3.3.8 Characteristics of the post-war West German social housing concept

General situation:

After the Second World War cities in Germany, especially large cities and their inner-city districts, resembled a sea of ruins on account of the immense damage caused by Allied bombing during the war. The degree of destruction ranged from 50 to 90 percent. In 1950, the housing shortage was still estimated at approximately 6 million homes. With a few exceptions, building new was - due to the lack of capital and the shortage of building materials - out of question during the early post-war years. Between 1946-1950 only 219,000 new housing units were created. The removal of rubble, provisional restoration and the creation of makeshift housing characterized urban life. The focus was on the reconstruction of damaged buildings until 1950.

With the founding of the Federal Republic of Germany in 1949, and with Marshall Plan aid from the United States, the preconditions were created for tackling the housing problem of millions of bombed-out persons, refugees, and displaced persons also by new building. State-subsidized social housing construction was to become the core element of rebuilding

efforts. Each year, throughout the 1950s and 1960s, between 500,000 and 600,000 dwellings were built. During the 1950s, social rental housing made up 50% of this production. In total, 9 million homes in the social housing sector were built between 1950 and 2000 (as compared to 24 million homes built across all housing sectors). This is an unprecedented success story in German history and makes up an essential part of the so-called German "economic miracle".

Finally, the characteristics of the West-German social housing strategy are represented in a number of statements. They show its most important features, keeping in mind the aim of the present thesis, which is to determine whether these features could be candidates for transferability to the Syrian case.

1. A decisive measurement was the creation of a new Federal Housing Ministry. Thereby, it was the legal anchoring of housing policy as a joint task of the Federal Government and the federal states.
2. The most important step was to create a legal framework. It began with the passing of the first housing law in 1950.

3. In view of the overwhelming housing shortage, the first years were marked politically by an "all-party consensus". The motto was "build, build, build".

4. The leading economic concept was the social market economy, which required a balance of state intervention and market forces. The political forces that dominated in the 1950s (CDU/CSU and FDP) forced a shift towards market forces and a prioritization of ownership promotion after only a few years. The legal framework was adapted to this new situation (2nd housing law 1956).

5. In addition to the construction of social rental housing from 1951 onward, the development of homeownership was promoted. There was tax-deductibility on investments in owner-occupied housing.

6. In 1956, with the adoption of the second housing law, the housing policy emphasis was placed even more clearly on supporting home ownership, including social housing. Social rental housing construction was more and more restricted to supplying low-income households.

7. Networking between the different governmental levels (national-central, federal states, commune) was an

important factor in the implementation of the program. Housing policy in the Federal Republic of Germany has been an integrated field of action that has produced a broad spectrum of instruments and procedures at all levels of administration.

8. The permanent implementation of the housing policy helped people to move into suitable rented flats or to own their houses, that is only after some years following the war.

9. Social housing investors were:
   - Non-profit housing companies
   - Municipal housing companies
   - Freelance (private) housing companies
   - Individual builders

10. Special social housing programs were set. For example, in 1953, the Federal Government's annual report cited the following special programs:
    - Housing for returnees,
    - Housing for Soviet-zone refugees,
    - Housing for miners,
    - Housing for displaced elderly,
    - Housing for displaced,
    - Housing for military personnel,

- Housing for federal employees; such as the ECA and MSA programs.

11. Government financial support for housing was provided through the following instruments:

    In view of the scarcity of capital in the initial post-war period, effective "object promotion" (Objektförderung) in social housing construction could initially only take place through direct state capital subsidies. They were provided in the form of low-interest or interest-free loans or grants. Interest was applied later as the capital market became increasingly productive.

    - Renting law (eviction protection, rent controls).

12. Housing policy principles were set according to the "social market economy", meaning according to the laws of the market, but socially responsible.

13. In exchange for state subsidies, investors had to make temporary commitments until the loans were fully repaid. The "occupancy commitment" defined by the income level of the group of persons, for whom the housing should be provided. A commitment to predetermined rent limits was also required.

14. Initially, the houses were not described as lower-class dwellings, but as affordable. The I. WoBauG provided

a fixed 'reference rent' ("Richtsatzmiete") as the maximum rent. The II. WoBauG applicable up until 2002 provided a more flexible and more market-oriented 'cost rent' ("Kostenmiete").

15. Social housing considered both:

- Highly-subsidized rental flats in urban blocks.

- A considerable amount of owner-occupied housing in smaller peripheral developments and single-family homes.

16. The new construction activity was initially limited to vacant lots and around existing residential areas.

17. The target group was defined so widely that in the 1950s about 75% of the population had access to social housing. At first, social housing was not particularly targeted at poorer groups. Social housing, as defined in the I. and II. WoBauG, was addressed to a broad group of people. Income limits were applicable to the issuance of residence permits, as a condition of access.

18. At the beginning of the 1960s, the pre-war standard of housing provision was restored in most major cities, with an average of one living space per inhabitant.

19. Another accomplishment of the housing reconstruction program in West Germany was the abundance and

speed of construction. Housing law included plans to build about 300,000 housing units a year over the six years from 1950 to 1956, a target that was far exceeded.

20. Standards for housing type and size were specified in housing law.

21. The amount of destruction and the limited economic framework meant that industrial production methods for housing were implemented, especially after full employment was achieved from the end of the 1950s onwards.

22. The use of standardized construction of houses led to better utilization of the construction industry's capacity and to a remarkable reduction in construction costs.

23. Industrial low-cost production methods for housing were used.

3.3.9 Deficiencies

Even if there are overwhelming strengths, there are some weak points to be mentioned:

1-There was some criticism about the uniform and dismal appearance of social housing.

2-The capital (money) was in the hands of a few housing companies.

3-Middle-income people moved to the new social houses while the poor remained in the old badly-equipped rental housing stock (segregation) of the inner cities ("Altbauten")

4-The percentage of constructed houses varied between the federal states, depending on housing policy orientation and the wealth of the community (on the local level, lands, and money).

5- The urban planning of the new social housing areas neglected urban infrastructure. (Elements of infrastructure would have included medical services (hospitals), educational services (schools, kindergartens), mobility services (public transport), consumer, commerce and leisure facilities).

Summary:

World War II started in 1939 and ended at midnight on the eighth of May 1945 in Germany ("Stunde Null"). The four Allied armies divided the country and each one occupied a part. In 1949, the area under USSR control became a separate country, the "German Democratic Republic (GDR)" or "East Germany". The other part of the country "West Germany" operated as a capitalist country with a democratic government, the "Federal Republic of Germany (FRG)". This chapter

focused on the post-war period in West Germany between 1945 and1960. During this time, the economic situation was poor, with high rates of unemployment, a high influx of refugees coming from eastern territories and East Germany, and a large proportion of houses in the big cities destroyed. In 1948, German currency reform was a major catalyst for the "economic miracle" of the 1950s and 1960s. As about 7 million people died during the war and most were men, women were left with the difficult task of removing rubble from the streets. There were not many houses at that time (about 5.5 million houses had been destroyed), so people lived in cellars or shared apartments. Some even tried to build temporary houses. In 1950, the first housing law (l.WoBauG) was passed after the establishment of West Germany.

The post-war period in Germany can be divided into three phases in this context:

1) 1945-1949 the period of rubble removal reconstruction and temporary living space
2) 1950-1956 the First Housing Law
3) 1956-1960 the Second Housing Law

The latest two phases correspond to the dates when the housing laws were passed. The first housing law aimed to build as many houses as possible in the shortest time to provide housing for roughly 70% of the population. Rents for these houses were fixed with a maximum limit and tenants were protected from eviction. The houses were built with financial support from the government in the form of grants or loans with low- or no taxes. They were of affordable design, with specific fittings, size, and mortgages. Such social housing comprised two-thirds of all new housing. In 1953, the law was amended to give priority to those who wished to purchase or build their own houses, in order to encourage home-ownership. The percentage of social housing during this period was about half of all new housing.

In 1956, the second housing law was set. By this time the economic situation of the people had improved with more job opportunities. About 3.3 million houses were built. The target group according to this law were the people with low income; they received direct financial support, as did the investors building the houses. The proportion of social housing during this period decreased to one-third. Then, in 1960, a new law was passed. Through it the cap on rents was eliminated, thus

triggering a rise in rents. By 1962, however, there was no longer a housing shortage.

The housing sector was financed through several means in the post-war period. The most common way was that investors or housing companies or private persons received low- or no tax loans to build houses. The investor was then obliged to rent these houses to low-income individuals. (That was called social housing).

Another way to support housing construction at the time was through privately-built housing that did not target low-income people. The initial source of funding was the Marshall Plan aid given to the West German government to help the recovery of the economy. This helped to boost industry. In 1950, international direct support financed 5% of all housing. In 1952, it contributed almost nothing.

Owing to the First Housing Law and pressure from the current economic situation, new housing neighborhoods were built outside the cities. Many single-family social houses or row (one- to two-story) houses built there were occupied by refugees or displaced people. Others were built near the workplaces of the inhabitants. In addition, social housing row buildings which consisted of three to five stories were built

along city streets. Such buildings were affordable, constructed using industrialized methods, and offered a small area of living space per person.

The German post-war case provides a successful example of the post-war recovery of housing, albeit with pros and cons. Using this example, the author will prove the feasibility of transferring suitable parts of the strategy from the German case to the Syrian one. A precondition is to analyze the Syrian situation and to compare it with the German one.

Chapter 4. *Pre-war housing in Syria*

After analyzing the successful post-WWII social housing strategy in West Germany, this chapter will briefly present the housing policy in Syria before the start of the war in 2011. Before focusing on the post-war situation in Syria, it is essential to know the housing regulations, laws, subsidy types and norms, as well as the main actors in this housing policy, with a particular focus on the social housing experience. Because of the issue of transferability, which will be discussed later, this is, in many respects, dependent on the national situation. This chapter will also layout the administrative, environmental, social/ demographic, and economic conditions in Syria in the pre-war period.

4.1 General information about Syria: location, topography and administrative divisions

Syria is located in the Middle East, in western Mediterranean Asia. It sits at the crossroads of three continents. With an area of 185,180 km², it is approximately half the size of Germany (357.578 km²), as shown in Figure 38. (Statistische Ämter des Bundes und der Länder, 2010).
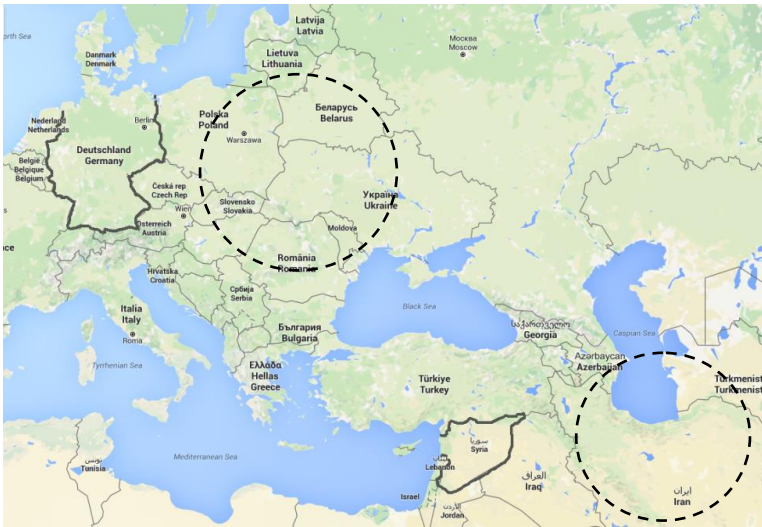
Figure 38 Location of Syria in comparison with Germany. Source: The author from google map.

Syria is bordered by Turkey to the north, Iraq to the south-east, Jordan to the south, and Lebanon to the south-west see Figure 39.

Figure 39 Syrian territory borders. Source: Kassouha, 2014

The topography of Syria, as shown in Figure 40, has played an important role in the development of its institutions, as well as in the urban, architectural and demographic situation there. The Syrian landscape contains enormous deserts with stretches of cultivable land along the coastline as well as steppe, rain-fed agricultural lands of the major cities, including the Basin of the Euphrates River. Population densities vary considerably between the desert and cultivable areas. (See Figure 41).

Figure 40 The topography of Syria. Source: Kassouha, 2010

Cultivated land with livestock, emphasis on grains, cotton, fruits and olives
Forest area
Steppe land with nomadic herding (sheep) and scattered cultivation.
Desert and steppe lands with some nomadic herding

Figure 41 Land utilization in Syria, Reference: Source: Kassouha, 2010

Before the war began in 2011, Syria was heavily urbanized, with more than half of the population (55%) (Kassouha, 2010) living in urban centers. The most densely populated cities are the big cities. Moreover, about 70% of the population of urban centers lived in one of five cities with populations above one million. The inhabitants of the two largest cities, Damascus and Aleppo, represented nearly 37% of the urban population and 20% of the total population (Figure 42). The third-largest city in Syria is Homs. (Kassouha, 2010)
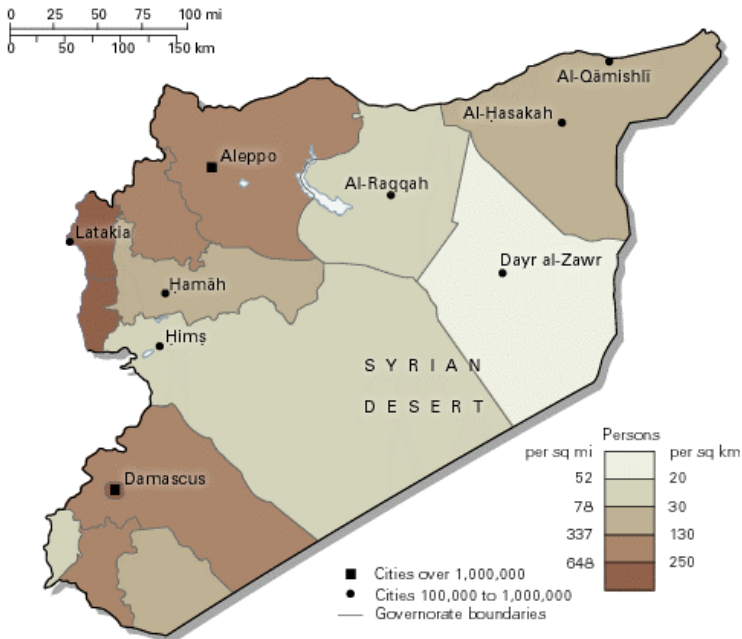
Figure 42 Population density in the cities, 2009. Source: Kassouha, 2010.

Syria is a republic that consists of fourteen governorates, (Figure 43). The political capital is Damascus, which is the oldest continuously inhabited city in the world – there is evidence of human habitation in Damascus dating back to 9,000 BC. (Kassouha, 2014). The cultural capital is Aleppo. Damascus and Aleppo are the largest governorates in Syria, followed by Homs (Hims) which dates back to 2500 BC. when the citadel of Homs was built. The city was built during the years 193-211 BC. (Ibid). Later, the cities of Deir Al-Zor, Al Rakka, Hama, and Idlib were established.
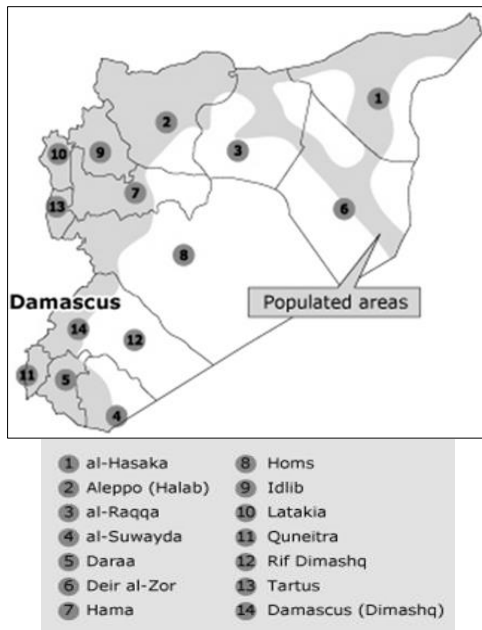
Figure 43 Syria governorates or Muhafazat. Source: Kassouha, 2010.

Most of the major Syrian cities have a similar urban structure but differ in social, economic and environmental aspects. The cost of housing also varies between the cities and is generally more expensive in bigger cities than in small ones. Studying the urban structure of one or two of those cities provide a deeper insight (see chapter 5).

4.2 Pre-war administrative situation

Syria is an unitary republic in which the president is the head of the country and the prime minister the head of government. The president, ministers, and parliament are all located in the capital, Damascus. Each of the 14 governorates has a council to address issues related to the cities in their respective regions (provinces). Every city also has a local council to preside over laws and matters related to the city (the commune). The administrative hierarchy in Syria is the central government, the province, the commune.

The Ministry of Local Administration and Environment has the responsibility of the urban planning institution. The Ministry of Public Works and Housing is responsible for the types of housing, for land areas and dimensions, and for the number of stocks in a building. In 2011 Syria had 1,461 civil associations

(Syrian Ministry of Social Affairs and Labour, 2012), and had made great strides in terms of social development. Tourism, trade, and banking grew rapidly before 2011.

4.3 Pre-war social situation

The inhabitants of Syria present a mosaic of cultures and religious and ethnic groups. The religious groups include Muslims (Sunnis, Alawites, Druze, Isma'ilis, Shiites) and Christians, respectively accounting for about 90 and 10 percent of the population in 2010. (Kassouha, 2014).

According to the civil affairs records of the governorate of Syria, in 2011 the population was 21,124 million, with an annual growth of 2.45% between 2000 – 2010 and an average age of 20 years. (Figure 44). (Central Bureau of Statistics in Syria)
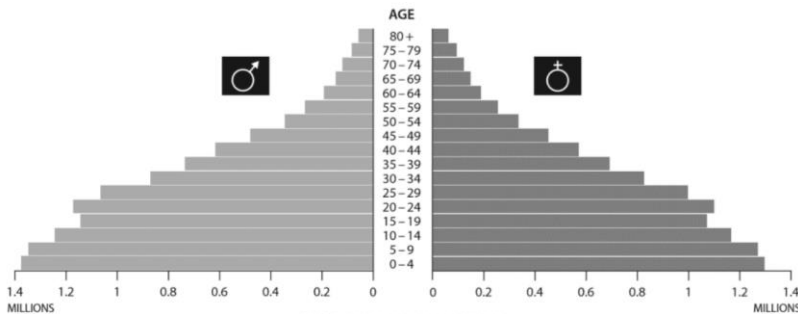
Figure 44 Pyramid of the Syrian population in 2010. Source: The Washington Institute for near east policy, 2017.
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According to the central Syrian Bureau of Statistics, in 2010 most Syrian inhabitants were young, with 36.3% below 15 years old and only 3.4% older than 65 years (see Table 5).

Age Structure	1960	1980	2000	2004	2010
Under 15 years	46.3%	49.3%	40.5%	38.6%	36.37%
15-64 years	48.9%	46.3%	56.4%	58.2%	60.16%
65 years and over	4.8%	4.4%	3.1%	3.2%	3.47%

Table 5 Age structure in Syria between 1960 and 2010. Source: Central Bureau of Statistics in Syria.

In addition to the natural annual population growth rate, a large number of immigrants came into the country. UNHCR, in 2011, recorded (p158 of its report) 1,306,000 refugees, the vast majority of them Iraqis fleeing violence in their country. Many of them are Kurds, from the area near the Syrian-Turkish border.

Refugees registered with the United Nations High Commissioner for Refugees (UNHCR) do not include Palestinian refugees, who fall under the aegis of the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA). According to UNRWA, in 2011 about 438,000 Palestinian refugees were registered in Syria, in

nine official and three informal camps, many of them located in and around Damascus. They fled to Syria at different times as Figure 45 shows.

Since 1946, the population had grown rapidly, as previously shown, doubling every twenty years (see Figure 46) and creating overpopulation in areas where agriculture did not offer enough jobs.
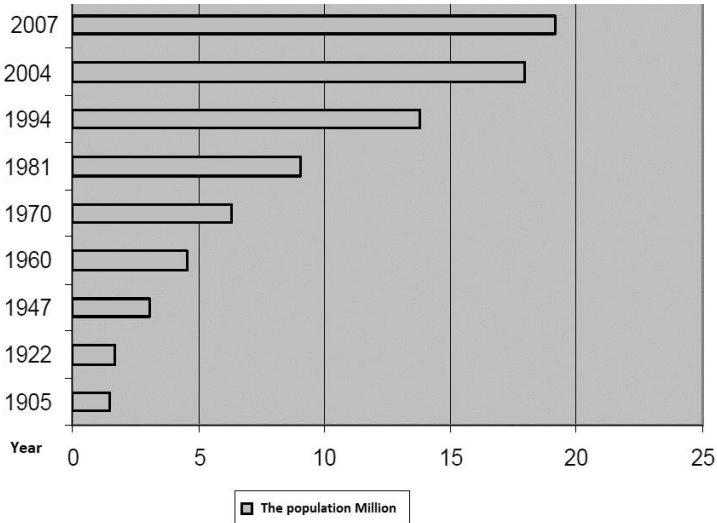
Figure 46 Population growth in Syria between 1905 and 2007. Source: The author (Central Bureau of statistics in Syria)

In the 2000s, rural migration driven by the drought that afflicted the country between 2006 and 2011, resulted in the formation of informal suburbs near the cities, further burdening their already-strained economies.

As a result of the above, the growth of the Syrian population was high, especially in the biggest cities. That put pressure on the housing sector and led to an increase in the informal settlement phenomenon.

4.4 Pre-war economic situation

In 2014, Syria was described as a developing country (UN/DESA, 2014), which essentially means economically

under-developed and with a poorly-developed industrial base. The Syrian economy depends mainly on agriculture and the oil industry. There are four industrial zones near the major cities of Aleppo, Homs, Damascus, an Der Al-Zor. The main industry-related agricultural resources are olives and cotton.

The macroeconomic environment between 2000-2010 was stable, with low national debt and a transition in progress toward a "social market economy" after four decades of socialism. In 2004, the stock market was opened and private banks operated in Syria. In 2005, Syria embraced "social market development" in its Tenth Five-Year Plan. However, there were challenges in economic policy and several risk factors that may have contributed to the commencement of the war. (Syrian center for policy research, 2013)

Before 2011, the different economic levels in society and the big variations in living standards and quality of life, were mainly depending on regional differences. Significant variations in income, health, life expectancy, and education existed between urban and rural populations, with the urban population on average enjoying higher incomes and better education, sanitation, and health conditions.

In 2011, Syria was a fast-growing, lower-middle-income country. Living costs for a family in urban areas were twenty times higher than in rural areas. According to (Fiorillo, 2003), in urban areas, the average monthly expenditure was 185 dollars (9,250 S.P.) while in rural areas it was 10 dollars (495sp).

The National MDGs Progress Report in 2010 shows that poverty reduction in Syria has been concentrated mainly in urban areas, where it fell from 12.6% to 9.9% between 1996/1997 and 2006/2007, but only from 16% to 15.1% in rural areas during the same period.

According to the World Bank, the average Syrian monthly income in 2011 was about 29.64 dollars (13,844 S.P.) per capita; less than $1 a day, ($1= 46.7 S.P.). (Abu-Ismail, K, 2011/15). The Central Bureau of Statistics in Syria reports that unemployment in 2010 was 8.6% (see Table 6). This figure was influenced by the extremely low and decreasing role of women in the economy: female unemployment in 2010 was 21.9%. (see Table 6). (Central Bureau of Statistics in Syria, 2017).

Unemployment rate	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001
Males	10.4	6.2	5.7	8.3	5.2	5.3	5.9	10.4	8.2	8.3	7.4
Females	37.1	21.9	22.3	24.2	25.6	23.8	20.1	21.8	21.9	24.1	22.5
Total	14.9	8.6	8.1	10.9	8.4	8.2	8.1	12.3	10.8	11.7	10.3

Table 6 7 Unemployment rate from 2001 - 2011 (%). Source: The Central Bureau of Statistics in Syria.

During the period 2001-2010, the Syrian economy achieved high economic growth rates of about 4.45%. Nevertheless, per capita GDP growth, given Syria's high population growth, was lower than 2.0%. (The National MDGs Progress Report, 2010).

The international financial sanctions imposed upon Syria in 2003 played a major role in preventing foreign investors from creating new jobs. Therefore, the contribution of investment to GDP growth remained low in comparison to other developing countries.

Moreover, the cost of military interventions in Lebanon and Israel had reduced Syria's ability to provide for its poor. (Al Khalaf, 2014)

The high rate of unemployment in Syria and the low household monthly income contributed to problems with population growth and uncontrolled urbanization, including housing affordability.

4.5 Pre-war urban situation

Before presenting the pre-war housing situation in Syrian new cities, it is essential to note the similarities of urban structures in the old cities, especially the major ones. The following paragraphs will show that the size of housing units and the type of housing blocks have largely been dictated by economic, social, cultural, and demographic changes throughout the centuries. Consequently, any housing strategy needs to consider the inhabitants' needs as much as the architects' aesthetic ambitions.

Most old cities grew over centuries within their city walls and gates, at least till the end of the 19th century. In the 20th century, new urban approaches were adopted both to accommodate a Western lifestyle and local needs. In the 1950s and 1960s, urban expansion led to the employment of an international modern style of urban structure. Neighborhoods in the new urban textures were mostly residential areas for middle and upper-class residents. Later, high-density social housing and informal settlement areas grew up around the cities, creating a different kind of urban fabric than their two predecessors (the old districts and the modernist expansions).

These expansions of the urban structure led to wider streets for cars in the old part of the city and the new districts.

In the 1960s, it was even suggested that the ancient cities should be destroyed and replaced by residential blocks while keeping the historical monuments, but this was never implemented.

Residential areas in Syrian cities were usually classified according to the regulatory charts of the construction standard system as follows: historic district, popular housing, villas, connected housing, modern accommodation. (Ministry of Local Administration and Environment in Syria, 2010.) Chapter 5 will provide further information on this classification through the case studies of Homs and Aleppo.

The residential areas have a direct impact on the city's identity and its urban character as they constitute the bulk of the city's area.

A brief overview will be presented here of the three biggest Syrian cities, whose history dates back to centuries before Christ. Damascus, Homs, and Aleppo, in particular, suffer from problems in the housing sector.

Damascus

The historical city of Damascus continued building until the end of the eighteenth century (Figure 47). In 1936, Michel Ecochard, the French urban planner, prepared a master plan for Damascus (Figure 48). Ecochard also provided new plans for Damascus in 1968 (Figure 49) (Massouh, 2008).
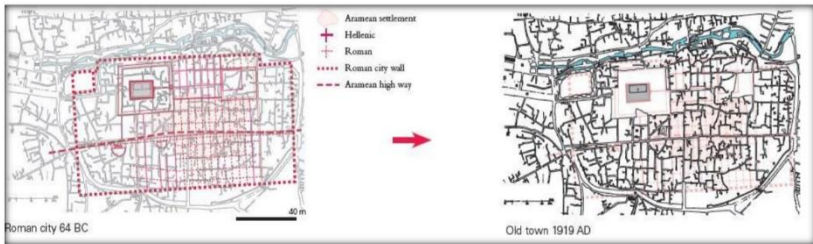
Figure 47 Damascus city planning changed between 64 B.C. and 1919. Source: Eissa, 2015

In the master plan of 1936, Écochard suggested a radial road system starting from the city center and extending outward to the urban perimeter. These roads created a ring around the old city, to reduce overcrowding problems in the city center and to provide easy access to all parts of the town.
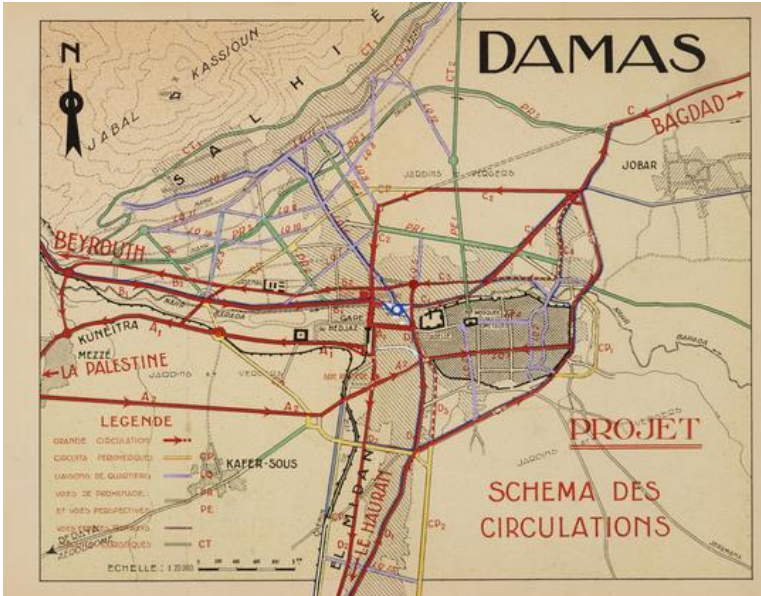
Figure 48 A plan of traffic patterns in Damascus by Michel Ecochard. Source: Massouh, 2008

In 1968, Ecochard developed a new master plan for Damascus, expanding the road network and creating new areas. Later, new areas of social housing and informal settlements surrounded the city. As previously mentioned, Damascus's urban structure presents a variety of urban textures and the rapid expansion that occurred after 1960.
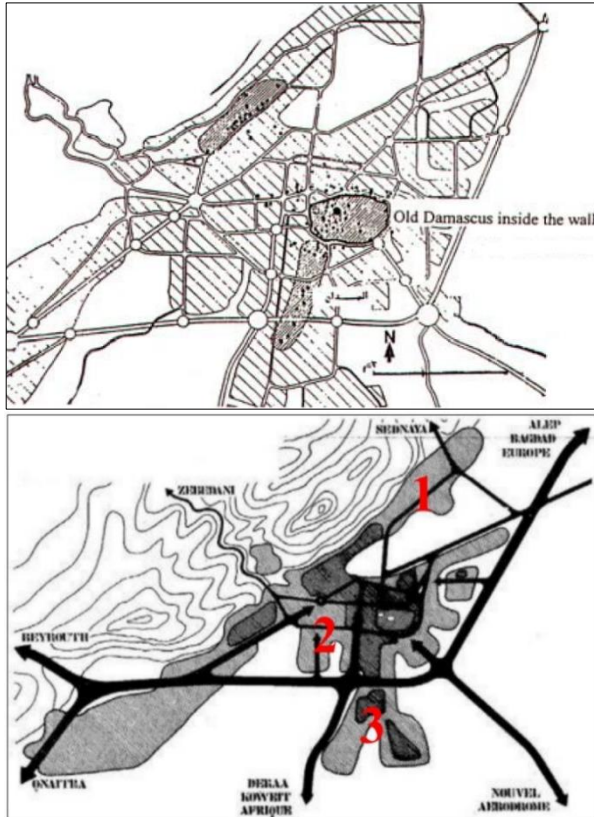
Figure 49 The master plan of Damascus in the year 1968, illustrating the impact of western models on contemporary development patterns of Syrian cities and showing expansion areas. Source: Écochard, 1973

The next figure presents the development or expansion of Damascus's urban structure from 64BC up until 2015. (Figure 50).

Roman 64BC: Started with the rectangle shape of Roman city the with main street 1,500 metres long, connecting the eastern and western gates

Ayyubid 1054 AD Increased security abled Damascenes to develop. suburbs as Salhiyeh, Maiden, and Saroujah develop on roads leading out of the city

Mamluk 1260 AD fast growing city, with all the expansion outside the city walls

Ottoman 1516 AD the city kept developing with direction in the two axes the northern and southern

In 1960 AD after the independence from the French mandate

In 2015 current situation

Figure 50 Master plan of development in Damascus city from 64 BC to 2015. Source: Eissa, 2015

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Administrative centers such as ministries are located in Damascus in addition to many buildings serving, trade, and industry.

Homs

The city of Homs dates back to 2300 BC. After it had been destroyed by an earthquake, a new city was constructed during the Ottoman period (1516-1916). In 1946, the planning of Homs city was executed by the Greek urban planner, Constantinos Apostolou Doxiadis. Figure 51 shows the development of the Homs city urban plan. (The city council of Homs, 2009).
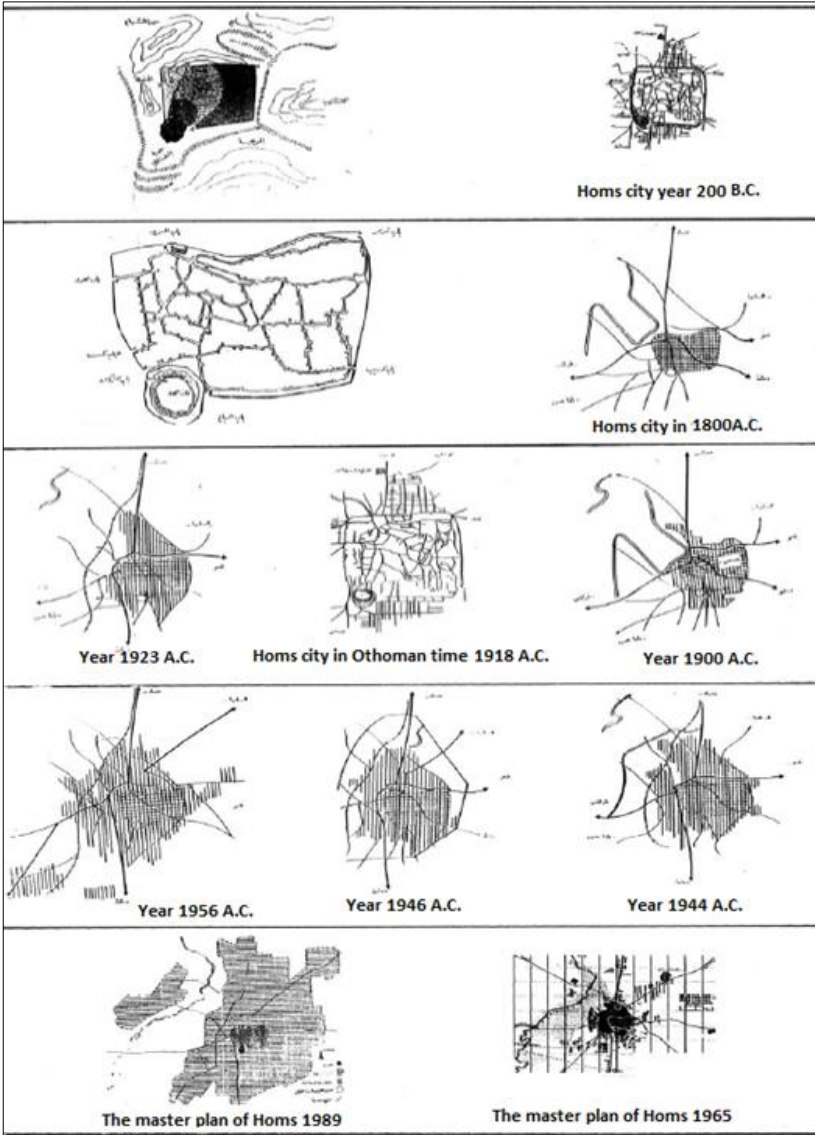
Figure 51 Master plan of development of Homs city from 200 BC to 1989, demonstrating the impact of different cultures on the development patterns of Syrian cities. Source: The city council of Homs, 2009

Figure 52, demonstrates the differences in the urban fabric of the different neighborhoods in Homs city. It is similar to the urban fabric mixture of Damascus.

Figure 52 Homs's 2009 master plan, illustrating the urban fabric of different neighborhoods. source: Hom's municipality, 2009

In Syria, as a developing country, most urban projects in the big cities come about in reaction to current housing problems. As a result, the designed master plan of the city of Homs was not realized as it was planned, particularly with regard to the transportation network.

Later, in the 1970s, new suburb areas were implemented in Homs, such as the Al-Waer district, shown in Figure 53.
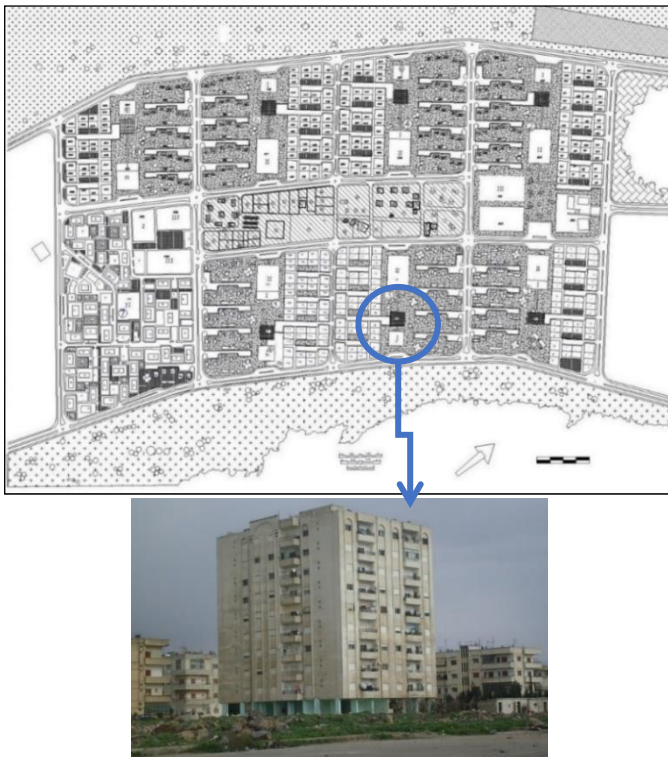
Figure 53 The master plan of Al – Waar district in Homs, Syria, 2007 with a photo of tower and four floors housing in the same area. Source: Kassouha, 2010

Aleppo

Syria's third city is Aleppo. The following figures show the phases of development of the city, from an ancient town (Figure 54) to a city planned in 1930 (Figure 55) by the French planner André Gutton.
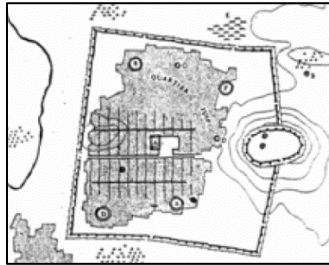
Figure 54 Aleppo old town (BC), the castle and historic walls. Source: Kendakji, 2001

Figure 55 Aleppo city in 1930 planned by Gutton. Source: Bianca, 2000

From 1930 until 1980 as Figure 56 shows, the city continued to grow, with more European (modern or non-traditional) urban fabric.
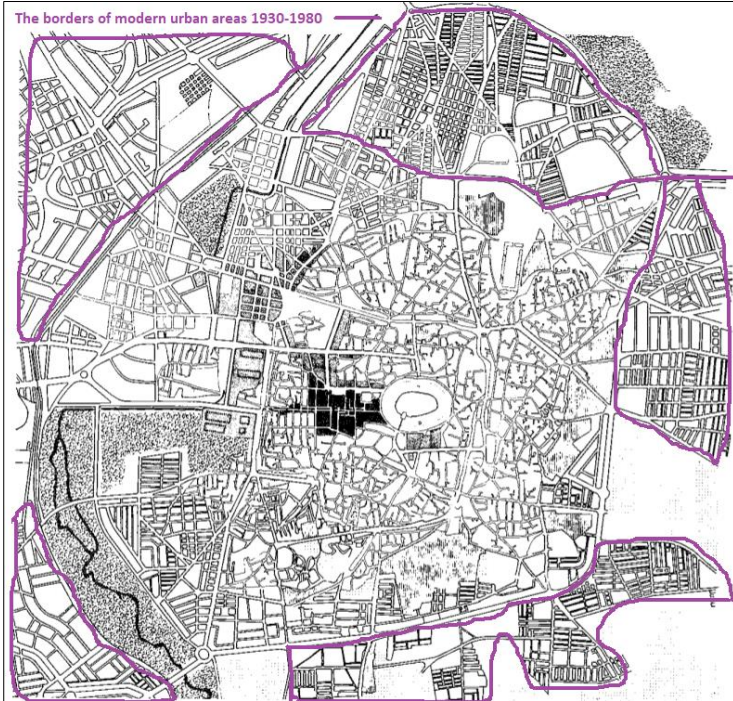
Figure 56 Aleppo city in 1980. Source: Bianca, 2000

A spontaneous urban expansion took place in the big cities, giving them their current image.

The above examples illustrate the typical development of Syrian historical cities in the early 20th and mid-20th century under the influence of European planning theories. Before the

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outbreak of the war, the cities faced planning and housing problems, so it can be argued that the destruction resulting from the war provides an opportunity for the country to improve the urban housing sector.

4.6 Pre-war housing situation

4.6.1 The development of housing type

In order to understand what is specific to the Syrian context, a brief historical overview of the development of housing texture would be useful. This will help clarify the priorities influencing housing location, type, and size. In Syria different eras have influenced the present housing situation:

1- The first houses to be built in Syrian cities (from 2000 B.C.) were traditional houses with a courtyard. Known as "the old" ones, these exist in the historical centers of the cities. Construction of these traditional houses continued until 1916. In days gone by, they housed two or three generations of a family, all living together. This was an essential aspect of social culture. For privacy, the walls of the house were closed on the outside while opening on to an inner courtyard, thereby separating the private life carried on inside the house from that carried

out in public (Figure 57). Privacy was also an important religious concept. The role of a woman was to work at home. These houses mostly consisted of two floors. The second floor was considered the "Haramlek," the women's place. Figure 58 and Figure 59 show traditional houses dating back to that time and the materials and design used.
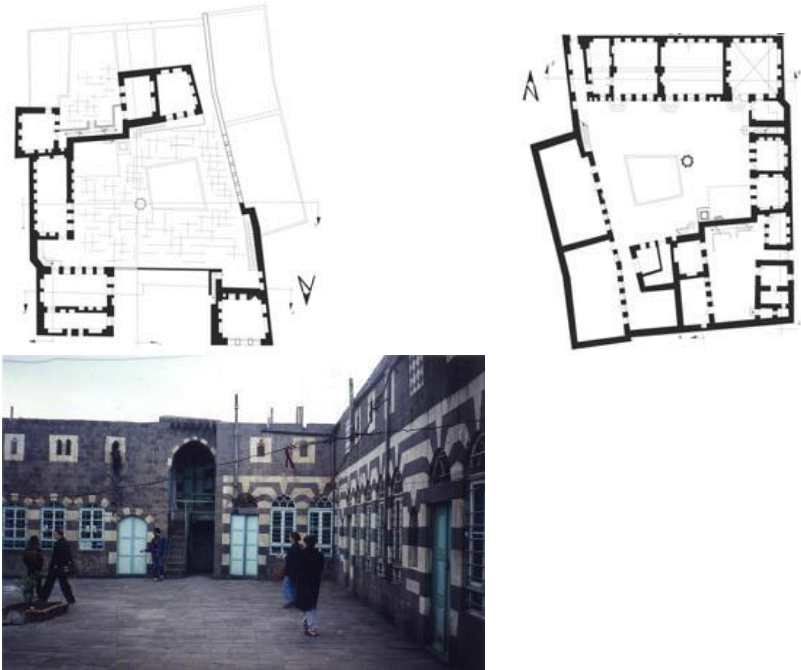
Figure 57 Plan of Mhesh home in 1800, in old Homs. source: Council of the city of Homs, (2013)

Figure 58 Basha Al-Housaini home, in old Homs. source: Massouh, 2008
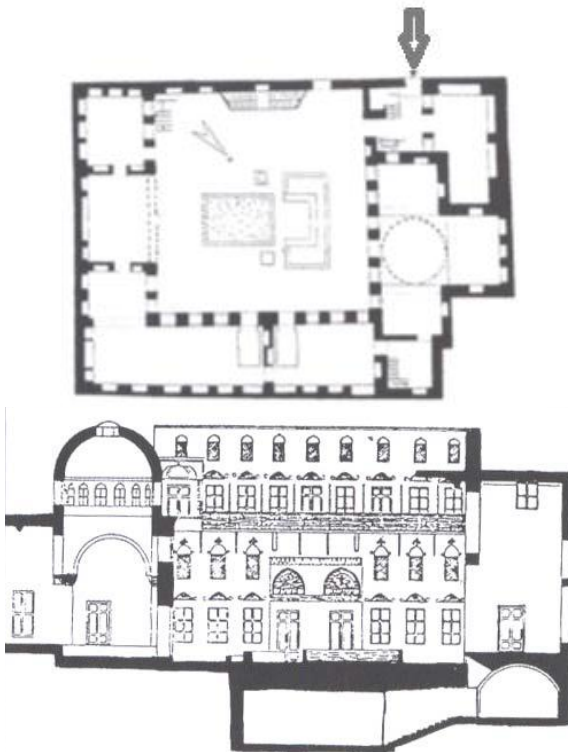
Figure 59 Al-Wakil house in Aleppo. Source: Kndakji, 2013

Figure 58 shows the design of this house, achieving privacy through the indirect entrance to the house.
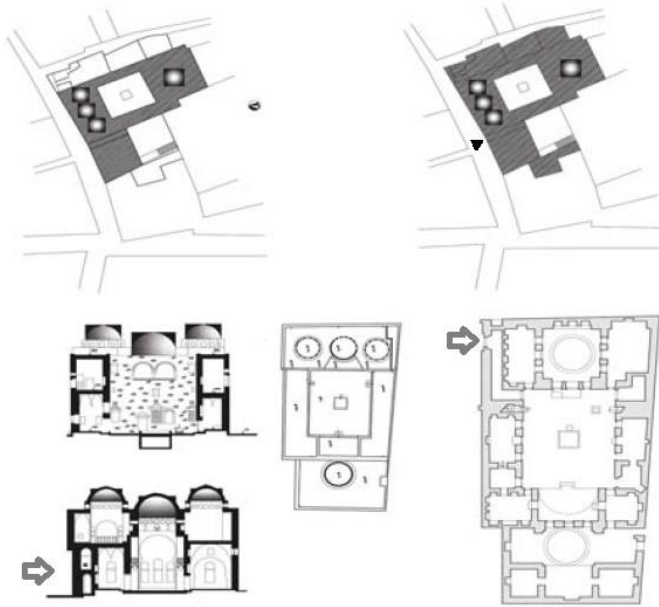
Figure 60 Al-Zahrawi home, in old Homs, shows privacy through the indirect entrance. Source: Massouh, 2008

- This traditional Arabic type of housing and the compact urban planning of the city suited the inhabitants' needs. It addressed the need for privacy by separating private life from public life on an urban level. This is apparent from the open spaces in the urban fabric of the whole neighborhood. (Figure 61). The private space was the courtyard of

the house, and the street and closed alleyways between the houses were semi-public (Figure 62). The need for privacy is also demonstrated through the similar heights of the buildings in the city. This prevented houses from being overlooked by one another.
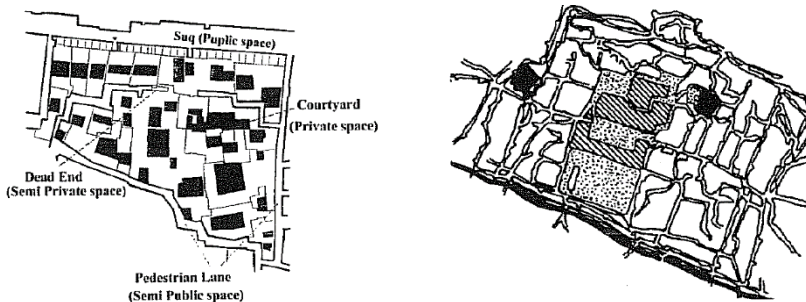
Figure 61 Traditional Syrian urban fabric clarifying the different levels of open spaces. Source: (Jabbour, 1997, P34)

Figure 62 Traditional semi-public Syrian urban spaces. Source: Kassouha, 2014

- The different neighborhoods in these cities were built in consideration of economic, social, and religious factors. However, the economic factor was the most important one. Rich people lived together in the city center while the poor lived on the outskirts. (Mikael, 1996.) This is also clear from the size of the houses, with the rich living in bigger houses and the poor in smaller ones.

2- The era of modernity, or the French Mandate (1920-1950): During this time, the population increased rapidly, creating the need for more houses. New neighborhoods with a modern design appeared. At this time, society in Syria changed and became influenced by French culture. Young families began to live independently of their parents' houses. Women began to work outside the home. These social changes meant that there was less need for large spaces inside the house. So the surface area of houses became smaller. The design of these new housing types was influenced by French and European architecture. New construction methods and materials, such as steel-frame techniques and concrete, were adopted. Multi-floor dwellings were constructed with direct openings to the outside and

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small courtyards in contrast to historical buildings. (Figure 63). But the area of the house was still related to the economic status of its inhabitants. (Figure 64, Figure 65 and Figure 66)

Figure 63 Multi-unit apartment building with commercial function on the ground floor and a small open space. Source: Kndakji, 2013

Figure 64 In Aleppo, Al-Azizieh residential building for high-income families (1920-1950). Source: Kndakji, 2013
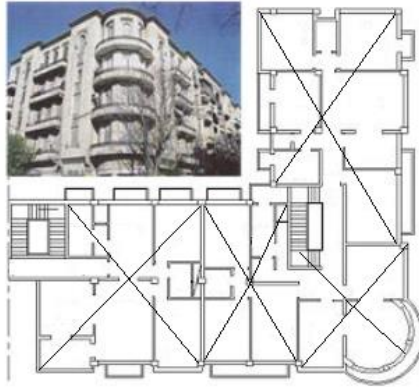
Figure 65 In Aleppo, Al-Jamilia, a residential building for middle-income families (1946-1965). Source: Kendakji, 2013

Figure 66 In Aleppo, Al-Hamidia, a residential building for low-income families (1946-1965). Source: Kendakji, 2013

3- Social and modern housing after 1970: Contemporary modern life and technology influenced house design. Syrian houses became modern, Western-oriented, and

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smaller than traditional ones. Houses became functionally separated between daytime use and sleeping quarters (Figure 67). The homes of this phase are open to the outside with large balconies. The facades are simple compared to those of former eras, thanks to a modernist understanding of design without motifs. In addition, the concept of social housing, which was influenced by Western architecture, was implemented at this time (Kuhzam, 2009). Examples of these social housing designs will be presented later.
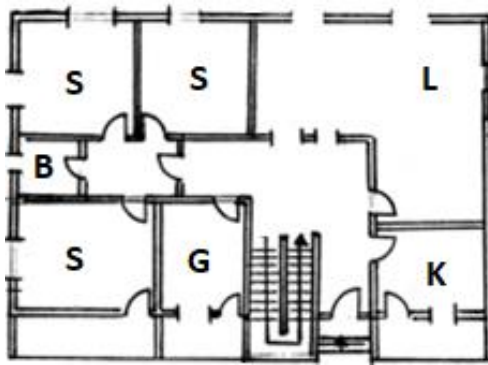
Figure 67 Detached multi-story house. Source: the author

Based on the above information, economic and social issues always influenced the housing sector in the Syrian context. Dwellings in Syria consisted of three types: traditional houses with courtyards, detached houses, and apartments in blocks. In

1971, housing types were categorized by the government as follows: (Table 8)

	Housing type	Area per person (m²)
1	Detached housing	26-21
2	Twin housing	26-18
3	Multiple family social housing, detached	24-18
4	Multiple family social housing, attached	21-16
5	Popular social housing	21-16
6	Attached housing	18-11
7	Traditional housing with courtyard	16-11
8	Traditional housing for cities	16-11
9	Traditional housing for rural areas	14-11
10	Housing for rural areas	20-11

Table 8 Housing types in Syria, Source: Ministry of Housing and Utilities in Syria

Housing types 3-6 are social housing types that achieve high density while remaining formal buildings. The housing types are either detached/ semi-detached, three to five-story blocks, or high-rise blocks.

4.6.2 Assessment of the housing shortage up to 2010

In the 20th century, the economies of developing countries generally slowed down more than their urban growth rates, and the demand for houses exceeded their availability. From the 1950s onwards, this housing shortage was one of the main problems facing big cities in developing countries, including Syria, especially for low-income groups. As a consequence,

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there was a dramatic rise in house prices and an increase in informal settlements. (Al-Rabdawi, 2012.)

As a developing country, Syria has experienced a huge need for government-funded affordable housing, particularly for low-income inhabitants in the major cities where most of the population lives. Although, in 1960, the government committed to providing good quality and affordable housing through the housing programs implemented in successive five-year development plans (Al Khalaf, 2014), up until 2011 there was still a shortage of houses for low-income people. (Table 9) (Figure 68). This situation arose as a result of:

- Rural to urban migration, international migration
- The influx of Lebanese, Iraqi and Palestinian refugees
- A natural increase in population growth rate
- Slow procedures of commercial banks providing loans to low-income people
- The high price of houses compared to incomes
- Deficient housing policies and strategies for low-income people
- The system of implementation

This housing shortage produced a dramatic rise in house prices and an increase in the construction of informal settlements

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around urbanized areas by those of insufficient income. Table 8 sets out the difference between the number of housing units built yearly between 1990 and 2010 and the number of new families in need of a house. The numbers show that there were not enough houses. The gap between supply and demand decreased over the years but in 2010 there was still an estimated shortage of 739,554 housing units.

Housing shortage	The new families	The number of housing units built yearly	Year
-56550	76200	19650	1990
-58957	79400	20443	1991
-58303	82600	24297	1992
-53915	85800	31885	1993
-45222	87000	41778	1994
-28628	77800	49172	1995
-35898	74200	38302	1996
-66270	93200	26930	1997
-75971	96200	20229	1998
-82919	99400	16481	1999
-42805	58800	15995	2000
-71699	85800	14101	2001
-62523	80000	17477	2002
-54897	82000	27103	2003

-25177	84000	58823	2004
32330	48600	80930	2005
-10457	95200	84743	2006
13793	89600	103393	2007
14493	91000	105493	2008
6642	94400	101042	2009
23379	96200	119579	2010
-739554	1757400	1017846	Total

Table 9 The shortage of housing in pre-war Syria. Source: Central Bureau of Statistics.
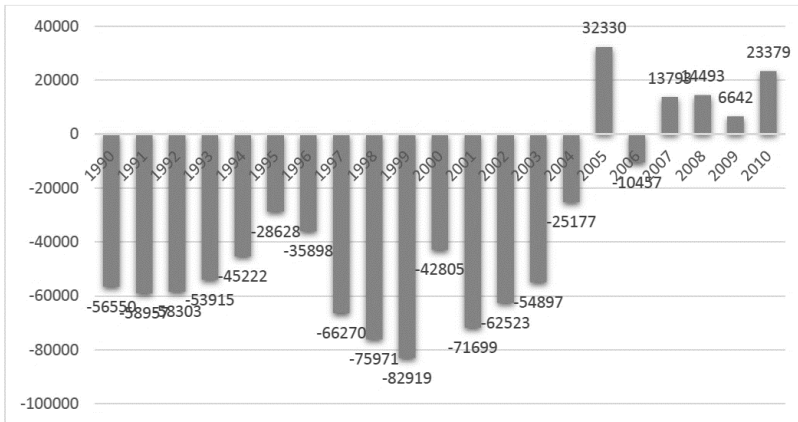
Figure 68 Shortage of housing in pre-war Syria. Source: the author

To further demonstrate the problem, (Table 10) shows the number of units needed compared with the number of existing units. It demonstrates that between 1970 and 2007 existing units were sufficient to provide homes for all families in Syria.

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	2007	**2004**	**1994**	**1981**	**1970**
Housing	3740	3368	2458	1539	991
Household	3705	3450	2187	1423	1028
Housing/ Household	35	-82	271	116	-37

Table 10 Number of existing housing units /(in thousands), to the existing household/thousand. Source: Syria Central Bureau of Statistics, 2007

However, the problem was that low-income people were not able to enter the housing market to buy a house.

As a result, the percentage of empty houses was about 8-23%. (Table 11).

The number of empty houses / the whole houses number	**The year**
8%	1970
15%	1981
16%	1994
20%	2002
23%	2006

Table 11 Percentage of empty houses among the total number of houses in Syria. Source: Kuhzam, 2009

Low-income people need houses to be affordable in order to have access to them. The empty units were too expensive for them, due to location, size, and house type.

In 2010, the residential housing stock amounted to 4,066,114 housing units distributed among different housing typologies.

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(Syria Central Bureau of Statistics, 2011.) The percentage of houses owned was about 88.4%, with houses for rent around 11.6%. (Central Bureau of Statistics, 2008.) The percentage of empty houses refers also to a cultural aspect. Many families own more than one house; they live in one and keep the other one for the next generation.

4.6.3 Formal and informal affordable housing

Social housing in Syria falls into two categories: informal and formal. Informal social housing has not been regulated by the government. It exists because of the shortage of housing for low-income people who are not able to obtain formal, affordable solutions, especially in areas where there is a lack of affordable private-sector options. In 2010, the informal sector accounted for 40-50% (Haddad, 2018) of national housing in the main cities. The developers in the informal sector intended to accommodate young people unable to afford houses available in the open market (Clerc, 2015). In Syria, the term "informal settlement areas" refers to houses that do not adhere to urban planning regulations (illegal settlements). In other words, the ownership of this land is not legally registered, the settlements breach master plan zoning regulations, and the

buildings do not meet building regulations and standards (Figure 69).

Figure 69 Informal housing near Damascus. Source: The author

In fact, the government paid more attention to formal affordable social housing. This sector in Syria was supplied by the public sector because the private and co-operative sectors did not participate in the provision of affordable housing until 2011. The public sector contributed through the General Establishment of Housing and the Establishment of Military Housing.

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4.6.4 Housing units' size standards

The average Syrian household size was 5.5 people per family before 2011 (Central Bureau of Statistics in Syria). In 1981, the area per capita in the housing unit was 13.46 m², and 17.3 m² in 2010. (see figure 70)
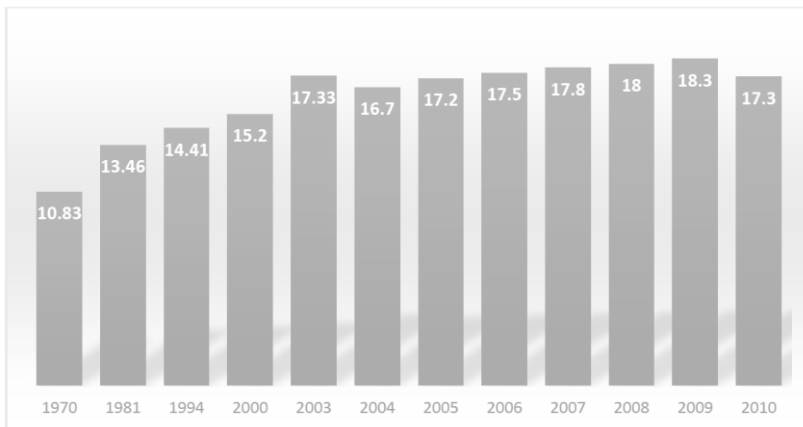
Figure 70 Area per capita in housing in pre-war Syria. Source: Ibrahim, 2014

4.6.5 House prices

During the 21st century, house prices increased because of Iraqi, Palestinian, and Lebanese immigration (eg., house prices in Kafr Soussa Damascus rose by 50% between 2007 and 2008 (OBG, 2009)). The cost of land and raw materials, in turn, escalated. (For instance, the cost of a ton of cement jumped from 50 dollars (2500 S.P.) in 2005 to 120 dollars (6000 S.P.) in 2006 (OBG, 2009)). Thus, the shortage of social housing

increased. Prices rose very quickly and continuously between 1970 and 2010. To further demonstrate the problem, (Table 12) shows the average price of a social housing unit compared with the number of months of work needed to own the house.

Year	The price of social housing (S.P.)	The price of the house calculated with how many months of work needed to own the house
1970	10,000	50 months
1985	200,000	100 months
2000	1,000,000	250 months
2010	4,000,000	400 months

Table 12 House prices (in Syrian pounds) in Syria between 1970 and 2010. Source: Haddad, 2018

Although prices decreased by 20% in 2008 (Central Bureau of Statistics in Syria), there was still a social housing shortage. This was due to the disparity between the average monthly income and the cost of houses. Table 13 shows salaries in Syria across different sectors between 2001 and 2011. Low-cost (social) housing was still needed for low-income people.

Sector	2011	2010	2009	2008	2007	2006	2005	2002	2001
Governmental	17044	13375	12730	12378	9931	9750	8364	6386	4923
Private	11268	9793	9634	9249	8040	7630	7304	5629	4782
Collective/ Cooperative / Domestic / Family	18158	16545	14836	10675	7593	7462	6520	7468	5898
Total	14069	11344	11096	10719	9017	8696	7756	6017	4859

Table 13 Salaries (in Syrian pounds) in Syria across different sectors between 2001 and 2011. Source: Central Bureau of Statistics in Syria

According to the Central Bureau of Statistics, the cost of construction per square meter, and consequently also the price of houses, varied between governorates. A Housing Affordability Index (HAI) needs to be introduced in Syria. This is a standard measure of hardship in accessing the housing market, as a house price/income ratio. This is particularly necessary for large cities such as Damascus, Aleppo, and Homs, where prices are higher than in the other cities.

4.6.6 Main actors

The process of housing development in Syria involves developers, professionals, the government, financiers and contractors as main actors.

The government

The government has an important role in the administrative steps to developing the process. The Ministry of Housing and

Construction, which has different departments, is responsible for approving all infrastructure and building plans through:

- Councils of the cities and municipalities
- General Establishment for Housing
- Social Insurance Corporation
- Military Housing Establishment

<u>The developer</u>

There are three types of housing developers in Syria: public, co-operative and private.

-Public developers work through the General Establishment of Housing and the Establishment of Military Housing (public sector), which is responsible for providing formal housing for low-income people (social housing). They provide the market with 15% of the housing stock in Syria. (Ministry of Housing and Utilities in Syria.)

- Co-operative developers are comprised of housing associations that are responsible for 20% of housing units, mainly for city workers like teachers and doctors. (Ibid).

-Private developers work for-profit and are represented by the private sector, which is comprised of private companies owned

by individuals. They are responsible for both formal luxury housing and informal affordable housing. (Ibid).

Developers are required to work within planning standards and regulations to provide high-quality projects, but in practice that only happens in the implementation of formal housing. There is poor coordination among the three types of developers.

Figure 71 shows the percentages of the co-operative, public and private housing sectors, in addition to the social housing programs implemented by governmental companies.
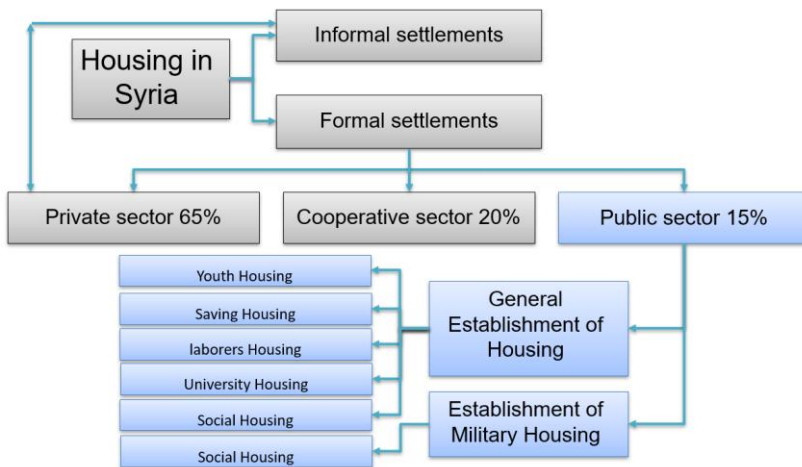
Figure 71 Social housing in pre-war Syria. Source: the author

The contractor (investor)

There are two types of contractors in Syria: private and public. Private contractors construct and deliver the completed plants

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provided by the co-operative and private sectors and contribute to the General Establishment of Housing. Public contractors are responsible for constructing housing for low-income people provided by the Establishment of Military Housing. Administrative requirements should be completed by the contractor to be able to work.

The professionals

In the housing development process, the professionals involved are planners, architects, surveyors, and engineers.

The financer

Loans offered to individuals in Syria to buy houses through the co-operative and private sectors are provided by commercial banks who charge interest. Part of the financing for low-cost formal housing is provided by the Ministry of Defense and the Ministry of Housing and Construction, which fund housing projects offered by the Establishment of Military Housing and the General Establishment of Housing. Other financial contributors are real estate banks and subscribers who typically make monthly repayments for their houses through mortgages from real estate banks or personal funds.

4.6.7 Land tenure system

For the housing development process, the land tenure system is very important; it is considered as an instrument for regulating land allocation and acquisition. In Syria, land supply for low-income housing is a problem. The decline in available land is the main reason for the slowdown in low-income housing development and for the emergence of informal settlements around cities.

In Syria, there is a strong emphasis on legal structures such as laws and decrees. Therefore, land acquisition and allocation are made through legal plans announced by the municipalities. Land allocation for residential use is arranged through the laws enacted to increase the amount of land specified for residential use. However, these laws have not been very successful in providing an adequate amount of land for housing development.

In terms of land use, about 62% of the total Syrian land area is state land and the remaining 38% is privately owned and includes both uncultivable and cultivable land (Food and Agriculture Organization of the United Nations (FAOUN, 1999).

Land acquisition for residential use is managed by the central and local government councils according to state land acquisition laws. These laws are:

· The organization and construction of cities law number 9, issued in 1974

· Urban expansion law number 60, issued in 1979

· Legislation on urban planning number 5, issued in 1982

· Expropriation law number 20, issued in 1983

· The amendment to the urban expansion law number 26, issued in 2000

. Real estate development law number 15, issued in 2008.

These laws were expected to provide more land to the market, but the misinterpretation of law number 9/74 led to a decrease in the area of land set aside for residential use. Law number 9/79 also led to a bottleneck in the land market as land acquisition for residential use came under the command of the municipality. The municipalities became the providers of land in urban areas, and private developers were able to obtain much of the land, because they have more financial resources. Moreover, landowners also prefer to sell land to private developers, who can pay more than individuals. Thus, low-income people were pushed out of the housing market.

Laws number 5/82, 20/83, and 26/2000 enhanced the role of municipalities and extended their power to preside over areas that existed in the master plan as well as in projected plans for expansion. They are the providers of residential land in the market.

4.6.8 Pre-war social housing policy

This section will provide a short introduction to pre-war social housing programs in Syria, which were the solution offered by the government for low-income groups. Social housing programs remained the solution until 2011 when another major problem appeared concerning housing.

The Syrian government considered the provision of housing for low-income people an important social agenda. This was apparent from development plans since the 1960s, when the current central planning apparatus was established with the supreme planning council. The first five-year development plan was from 1960 to 1965, with the aim to build 60,000 residential dwellings in the main Syrian cities. However, the actual number of finished dwellings was only 12,000. Similar outcomes were repeated in the 2nd, 3rd, 4th, and 5th five-year plans because of the use of traditional approaches in the production process. (Ministry of Housing and Utilities in Syria)

Since the 1980s, the Syrian government has promised to provide adequate and affordable housing for its population, especially low-income groups, but in fact provided only 15-20% of new housing set out in their five-year plans, less than the rising demand. The 2011 real estate investment law Nr.25 was designed to address the issue of private investment. It can help deliver completed houses but is not a sufficient measure as social housing does not attract the main real estate developers. This is due to delays in obtaining planning approval from state agencies, the high-interest rates demanded by the banks, and complicated laws that allow foreign developers to carry out housing projects. In Syria, there is a clear policy for housing, but a gap between the framing of the policy and its implementation. This is due to:

- The absence of an affordable (social) housing definition

- Lack of understanding of how different actors can be involved in the housing market

- The way the housing market works

- The way housing policy affects and is affected by the housing market situation.

-In addition, Master Plans for Syrian cities are not properly equipped to respond to the need to allocate land lots for residential use, and this is not regarded as an efficient means of meeting social housing requirements. This has been caused by the lengthy official procedures involved in releasing new Master Plans for the development of cities. In the wake of these delays, there is an increasing demand for both new affordable units and land lots to build on. There is always a big need for houses for low-income people because the Master Plan does not provide the required amount of land for residential use. This issue causes a big challenge for all sectors in Syria, including the public sector.

In order to decrease the accumulated housing shortage and provide housing for low-income people, in 1982 the Establishment of Military Housing and the General Establishment of Housing were provided with a large percentage of the state's budget distribution (Alsafadi, 2009). In spite of this, there continued to be a shortage of low-income housing because of the high cost of developing the land, lack of access to land in urban areas, the bureaucratic state procedures and the rising costs of construction materials. Meanwhile, the need for houses for low-income people increased as this project targeted only a small proportion of the population.

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In addition, the government supported the co-operative housing sector, but it again failed to provide the sufficient and desired number of residential dwellings in the 8th five-year development plan (1995-2000), although the percentage of co-operative sector contribution to supply was 20-25%. In contrast to the failure of public and co-operative sectors, the private sector was successful in developing projects, but the houses were expensive relative to per capita income and impossible for low-income people to purchase. (Ministry of Housing and Utilities in Syria.)

Later, the commercial banks offered loan schemes to civil servants and allocated capital for affordable housing projects. This helped the growth of the housing sector in the 9th five-year development plan (2000-2005). However, the resources were insufficient to increase the supply of housing and to cover the shortage in the housing market, given the low level of capital in the banks, the difficulty of getting loans, and the limited lending rate.

In the 9th Five-Year Development Plan (2000-2005), 39,000 dwellings were expected to be provided by the public sector, 75,000 dwellings by the co-operative sector, and 158,000 by the private sector, but none of the three sectors achieved these

expectations. The same occurred in the 10th five-year development plan. In the 11th Five-Year Development Plan (2010-2015), the housing shortfall was about 800,000 dwellings. (Ibid)

The problem of providing houses in the formal sector for low-income people increased in general for several reasons:

- Contractual and institutional issues that impeded the provision of houses in the market

- The complexity of the instruments of the housing policy

- Deficiency of funding and appropriate public investment

- Insufficient coordination between the different actors in the government and bureaucracy. All these factors participated in exacerbating the problem of housing.

Based on the above information, it is clear that the government's housing policy did not achieve the expected goals to increase housing stock for low-income people or to make up for the previous shortage of housing. The housing problem became graver due to the continuing growth of the Syrian population and because of the political and military situation after 2011. There remains a need to find an efficient means to supply housing for low-income groups.

4.6.9 Implemented social housing programs in Syria

In this section, some of the social housing programs which have been implemented in Syria will be presented. Social housing programs in Syria implemented for low-income people usually concern a specific group of people. For instance, the "social housing program" implemented by the Establishment of Military Housing aims to assist in the resettlement of informal sector inhabitants in urban areas, cities, and major towns. In this case, the subscribers pay 25% of the total sales price of the housing units upfront with the rest paid through monthly repayments (4,000-6,000 S.P., depending on the project). The size of the units is between 75 and 90 square meters. (Military Establishment for Housing.)

The General Establishment of Housing oversees five different programs. They are implemented in accordance with formal standards: four-story buildings with an area of 65-90 square meters per unit. These programs target low-income people in different categories (Social housing programs in the General Organization for Housing in Syria):

1- Social housing program: This program started in response to governmental decision Nr. 1570 in 1984. The apartments can be owned by their inhabitants, as decreed by law Nr. 39 in

1986. The subscribers must pay 10% of the house value upfront, then monthly repayments for the remainder over 25 years (as per law Nr. 39 in 2002). The loan can be taken with a maximum of 5% interest. (General Establishment of housing in Syria.) Figure 72 shows, as an example, the plan of a social housing program in Aleppo.
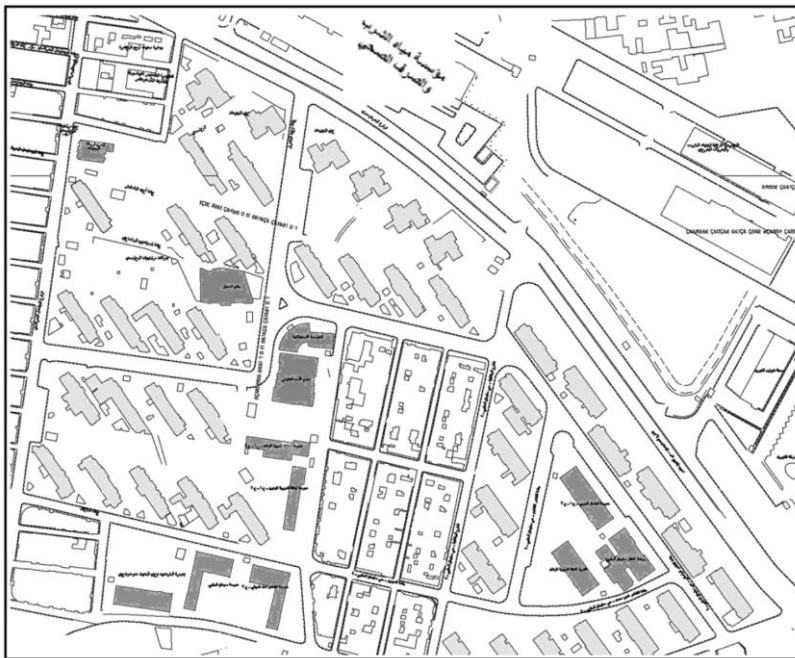
Figure 72 The social housing project, Ard-Alajouz area in Aleppo, using a linear form of planning. Source: The general establishment of housing in Syria

2- Saving (deposit) housing program: This is similar to the social housing program, with the difference that it starts with a

bank deposit. The amount of money in the subscriber's bank account needs to reach the requested value. (Deposit law Nr. 38 in 1978), (Ibrahim, 2014)

3- Labor and employee housing program: This program started in 1988 to cover employees in the public sector, a low-income group. It provided rental apartments until 2002 when law No. 46 allowed tenants to own the units. Ownership is achieved through monthly repayments for 25 years and a loan at 5% interest, as per law Nr. 39 in 2002. (Social housing programs in the General Organization for Housing in Syria.) Figure 73 shows the row housing type in a labor housing program near Damascus.

Figure 73 Workers' housing in Syria, Adra near Damascus. Source: Taken by the author

4- University teachers' housing: This program started in 1990 to allow professors at public universities ownership of a social housing unit. It follows the same regulations of social housing mentioned in number one. (Ibid).

5- Youth housing: This program started in 2002 under law Nr. 1940 and targeted young families (over 18- under 35). The type of building is a four-story block. The down-payment is 10% of the total selling price of the dwelling, with 25-40 years of monthly repayments of 1500-2000 S.P. on a 5% interest loan. It includes governmental support of 30% of the cost without interest. The size of the units varies between 60 and 80 square meters. This program is the most successful and requested one, as young families make up the greatest proportion of Syrian society. This program was considered the most successful social housing program in Syria until 2011. (Ibid). Figure 74 and figure 75 show youth housing program housing types in Latakia and Homs.

Figure 74 Youth housing in Latakia Syria. Source: Taken by the author
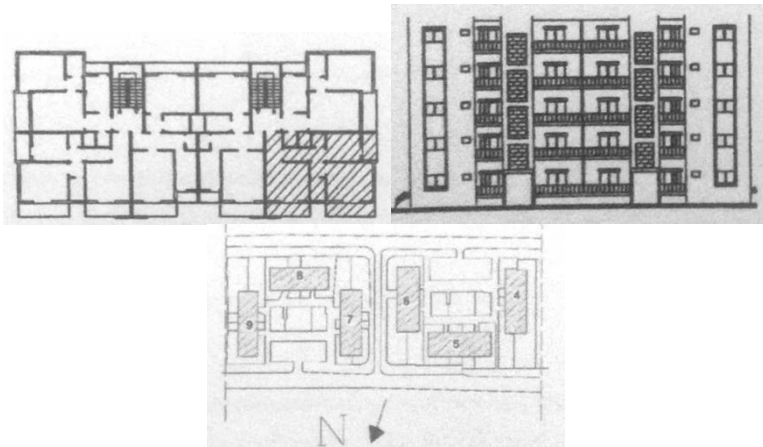
Figure 75 Youth housing in Syria, Homs, Waer, 1977, five floors, multifamily row housing, every flat is 40m². Source: The general establishment of housing in Syria

Social housing is supported by the government to allow low-income people to enter the housing market. Social housing funding sources in Syria are the Ministry of Treasury, the Real

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Estate Bank and the money collected from the subscribers (see Figure 76).
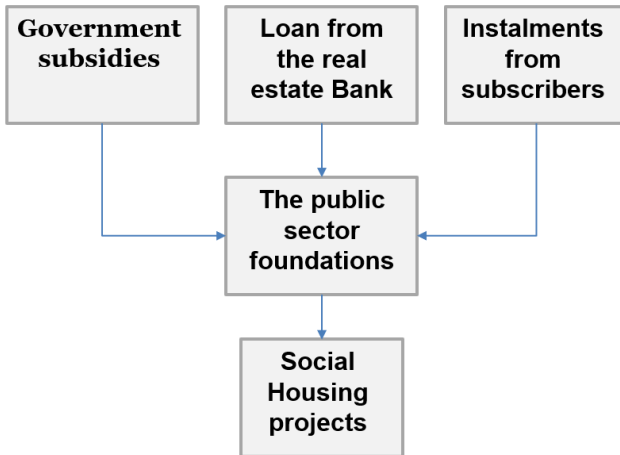
Figure 76 Funding sources of social housing in the public sector in Syria. Source: The author

The municipalities are responsible for the implementation of the infrastructure of social housing projects. The General Establishment of Housing implements social housing projects by private investors. Through tendering evaluation processes, the size and cost of the project are considered as main factors in determining the winning contractor by the Ministry of Housing and Construction.

The Syrian government developed a set of laws to provide the public sector with a specific number of dwellings. For example, in 2002 law number 36 was passed to extend the time

of payment from 15 to 25 years and to decrease interest from 7% to 5% (Ibrahim, 2014). The gap between the supply and demand of housing for low-income people was related to the difference between the planned and the implemented number of dwellings that are provided on the open market during the same period.

4.6.9.1 Examples of implemented social housing programs in Syria

Prior to 2011, there was a housing shortage of about 800,000 units for low-income people in Syria. In addition, there was the problem of lack of cooperation between housing developers. This caused a slower construction process. There was a strategy of social housing, with support from the government, to build affordable houses for low-income groups (e.g., employees, young families, etc.). Many programs were executed but not completed in the planned timeframe. The buildings varied depending on the program and the target group, but they were generally affordable and included small flats and multi-family houses. They suited the economic situation and income of most people in Syria, a developing country where about 70% of the population were low-income and young, as mentioned at the beginning of this chapter. Figure

77 illustrates an implemented social housing project in Homs city as an example.
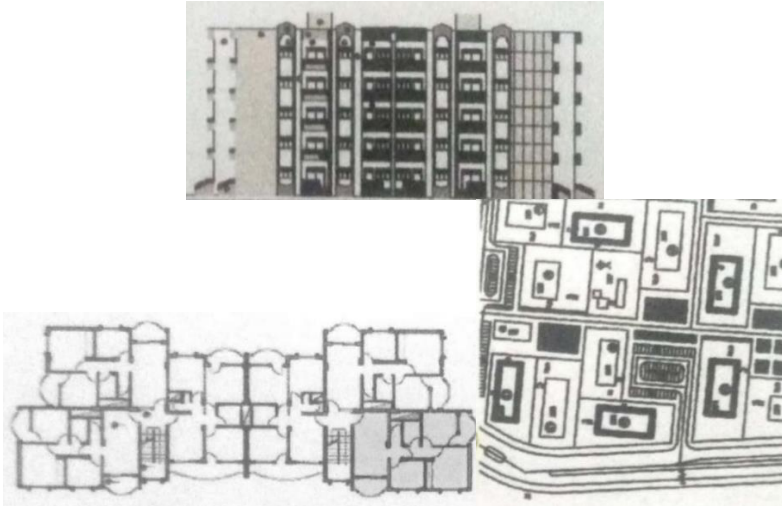
**Figure 77 Multi-family housing, Young family housing in Homs, five stories, 75m².
Source: The General Establishment of Housing**

These buildings were not really the best solution for the environment though they could be made suitable through good quality construction and isolation techniques, as well as the inclusion of green spaces. Figure 78 presents a social housing project using the compact urban form which offers green spaces on different levels.

Figure 78 Youth social housing project using the compact urban form in Masarania, Aleppo. Source: The General Establishment of Housing

Some families, for religious or cultural reasons, prefer to have a separate sitting room for the "privacy" of guests, but there was not enough space for that. This created an urban problem, as those families tried to make their flats bigger by enclosing the balcony with glass (Figure 79) or even cement to create an additional room. Alternatively, privacy could be achieved by separating the living space from the sleeping space, even in a small apartment (Figure 80).

Figure 79 Multi-family housing, young family housing in Damascus, Kudsia, four stories, 69m², the sleeping area of the house has privacy. Source: The general establishment of housing in Syria
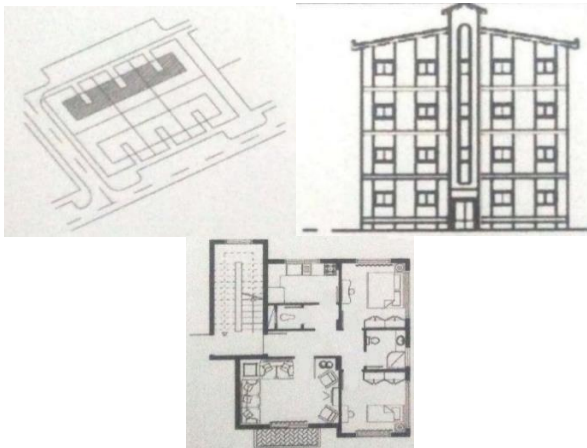
Figure 80 Multi-family housing, Young family housing in Damascus, Kudsia, four stories, 69m², the sleeping part of the house has privacy. Source: The general establishment of housing in Syria

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4.6.9.2 Obstacles that faced social housing projects in Syria

This section lays out the deficiencies of social housing policy in Syria before the 2011 war and presents the reasons why it was unable to achieve the desired goals:

Housing laws

Housing law, the framework regulating the housing sector, had many weak points. These included:

- Over-complexity and a lack of clear and detailed drafting. In some cases, this led to misinterpretation of the law.

- The social housing programs did not correspond to their practical application. This was due to a lack of coordination between actors. For instance, specific laws issued to each of the housing establishments created a kind of mismatch between them in terms of their results.

- Bureaucracy, standard operating procedures, and corruption may have played a role in obstructing the process of supplying social housing.

- The absence of clear criteria (e.g., income limits) for choosing target groups for social housing opened the way for false applications.

- No clear definition of social housing or a review of income eligibility to determine the amount that low-income households could afford.

- In spite of the fact that plots of land are widely available in Syria, serviced land released into the market through legal processes was not readily available.

- The absence of the private and cooperative sectors' participation in social housing provision because of low revenues. The Real Estate Development Law was set in December 2011 to allow private investors to provide social housing to low-income groups. If the private sector had participated in providing social housing in addition to the public sector, the number of social housing units would have increased and the gap between demand and supply would have decreased. However, the high-interest rates imposed on private developers by the banks decreased their motivation.

- Municipalities in Syria were the main buyers and suppliers of land, providing all sectors with land lots for residential projects.

Financial problems

-   The public sector had financial problems due to a lack of funding. One of the reasons for this was the delay in collecting monthly repayments from subscribers. This, in turn, was due to tenants' inability to pay and to the difficulty of getting mortgages from the Real Estate Bank. High-interest rates and fixed mortgage structures created further barriers. The lack of government subsidies for the public sector also impeded setting foundations for future plans.

Building quality

-   Traditional methods of construction were used in social housing projects. These ignored advances in technology and prefabricated systems and resulted in slow construction.
-   Social housing units in Syria were not of as high quality as other units provided by the private and the cooperative sector and had minimal design standards.

Housing market

-   There were large gaps between demand and supply in the social housing sector.

All the above were, and continue to be, obstacles to achieving a successful social housing strategy in Syria. They have increased and continue to increase the country's informal settlement phenomenon. In order to come up with a better strategy, these obstacles need to be overcome and this could be done through a study of successful experiences such as the German one, which could be applied to the Syrian context.

4.6.9.3 A study conducted by a Syrian university in 2009 in order to present new ideas for a social housing strategy in Syria

Many development studies and arguments about the social housing policy were underway before the start of the war. One of those studies, conducted by the University of Al-Baath in 2009, came up with the following recommendations:

- Location**:** The study showed that social housing projects should be built on the edges of cities. Housing costs are linked to land prices, which are many times higher inside cities than outside. (Kuhzam, 2009)

- Form of urban planning: Considering the Syrian social, economic and environmental contexts, compact forms of urban planning should be preferred to linear forms, and they should take into consideration construction and isolation materials. (Barakat, 2000).

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- Type: The preferred type of housing should be multi-family houses, specifically the attached type since they cost less than other types.

- Target group: The target group should be individuals who plan to have a family (40% of Syrian society) or young families of two to four people who are mostly low-income.

- House size: In specifying a suitable house size for the above groups it is important to consider their income level. In 2009, about 42% of the population earned 3,600 S.P. per month (75$) and 21% earned 11,000 S.P. (229$), with an average of 8,800 S.P. (183$) (Ibrahim, 2014). The cost of 1 square meter is 8-11,000 S.P. This means that it is more feasible for this group to acquire a small (minimum area) house. Size specifications are based on international, UN and local standards as follows: 50-55m^2 for two-person families; 55-65m^2 for three-person families; 65-70m^2 for four-person families.

These suggestions offered an acceptable solution to the social housing problem before the war when informal settlement housing accounted for 40-50%. In the wake of the destruction caused by the war, other and additional steps in the social housing policy are needed.

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Summary

In this chapter, an introduction to the history and development of the master plans of some Syrian cities was provided. In addition, the different types of housing in Syria were introduced, in order to illustrate the relationship between housing type development and the economic and demographic changes. One modern model is social housing, a solution allowing low-income people to gain access to the housing market. This kind of housing program is supported financially by the government. Social housing programs mostly consist of apartments at a reduced price. The subscriber can register for one after paying a percentage of the price. Thereafter, they make monthly repayments on a loan to cover the rest. This sort of social housing policy started in 1980 and has continued to represent 15% of the total yearly housing provision. The reality of such housing programs has not been exactly as was anticipated. Many social housing apartments have been taken by rich people, then sold later for a profit. This is a misuse of the law. In addition, the implementation process of these projects is very slow as they depend on the use of traditional, outdated techniques. This is a major weakness in the implementation of social housing policy. A different experience of social housing, like the German one, needs to be

looked at. New social housing programs are needed urgently in Syria, to increase the supply of apartments. Price and location are also important. About 30% of apartments in Syria stand empty because they are too expensive to be either rented or owned and are therefore inaccessible to low-income people who remain the biggest social group in Syrian society.

A new, better-organized social housing program is needed. More loans with reduced taxes are also needed to attract investors to increase the percentage of social housing above 15%. Such changes are needed to overcome the informal settlement issue in the biggest Syrian cities, where they represent about half of the housing stock.

Chapter 5. *The Post-war situation in Syria*

To assess the suitability of transferring post-war social housing principles in Germany to the Syrian context, it is important to present the housing situation in Syria, where the war continues to take its toll. The term "post-war" cannot be accurately applied to the situation, as war activity is still ongoing in some cities. However, the degree of destruction has decreased in recent years. During wartime, it is not possible to know the exact number of damaged units. These numbers can be estimated from satellite photos taken by international organizations at different times over the course of the war; the most recent one was taken in 2017. In addition to the amount of physical destruction, it is important to understand the accompanying social, economic and demographic "changes".

These changes influence the urban sector in general and the housing sector especially. For example, the housing market depends on the income level of the people, demographic changes, and other variables like the situation of the housing industry.

As mentioned in chapter 1, more focus will be given to the cities of Homs and Aleppo as every city in Syria has similar urban structures, especially the most significant cities. In addition to that more information are available for these cities than for others, allowing the problem of post-war housing to be examined in more detail.

5.1 The status of Syria in 2017

The war in Syria started in 2011. Sites of conflict have alternated among its cities. The war started in certain cities like Homs, then spread to other areas including Aleppo and the Damascus countryside. In 2014, active destruction essentially ceased in Homs while continuing in other cities.

The war caused vast damage to the physical infrastructure of Syrian cities like Homs, Aleppo and Damascus, as well as many smaller cities (Figure 81), with catastrophic humanitarian consequences. Over time, the war has caused the collapse of

urban systems in many cities, by destroying houses, schools, hospitals, roads, bridges, grain silos, and other economic targets. For instance, more than 1out of 3 schools are either destroyed or damaged. The collapse of economic activity has occurred in many areas. (UNHCR, 2018.)

Figure 81 shows the different degrees of destruction in the Syrian governorates, the damage being more extensive in the big, industrial and important governorates.
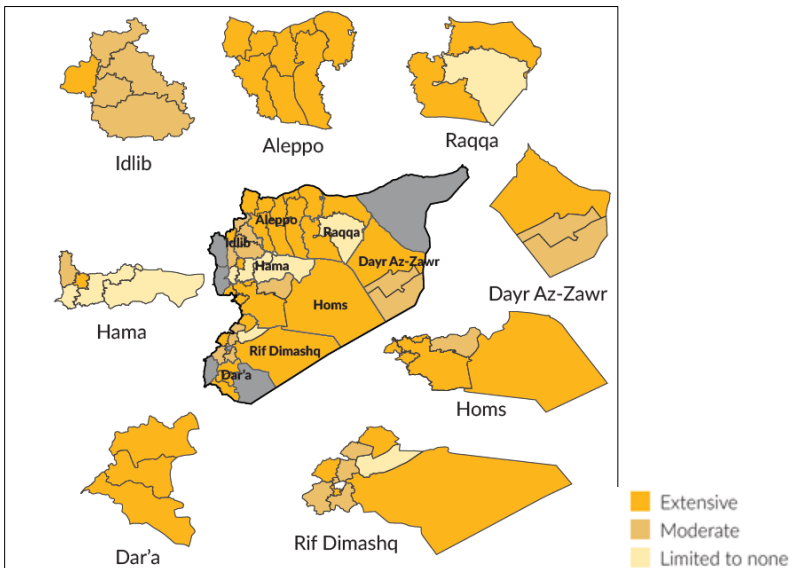
Figure 81 Incidence of war in Syrian cities Aleppo, Dayr az-Zawr, Raqqa, Dar'a, Idlib, Damascus countryside, Homs, and Hama (2011-2017). Source: World Bank, 2017

Following eight years of war, an estimated 13.1 million people across Syria have been in need of humanitarian aid, including groups afflicted by particularly high levels of poverty. (UNOCHA, 2019.) Most people have seen a total depletion of their life assets. Many are exposed to such social risks as early marriage and child labor. (Al-Saleh, 2018.) Figure 82 shows different groups of people in Syria, in 2018, in need of aid.
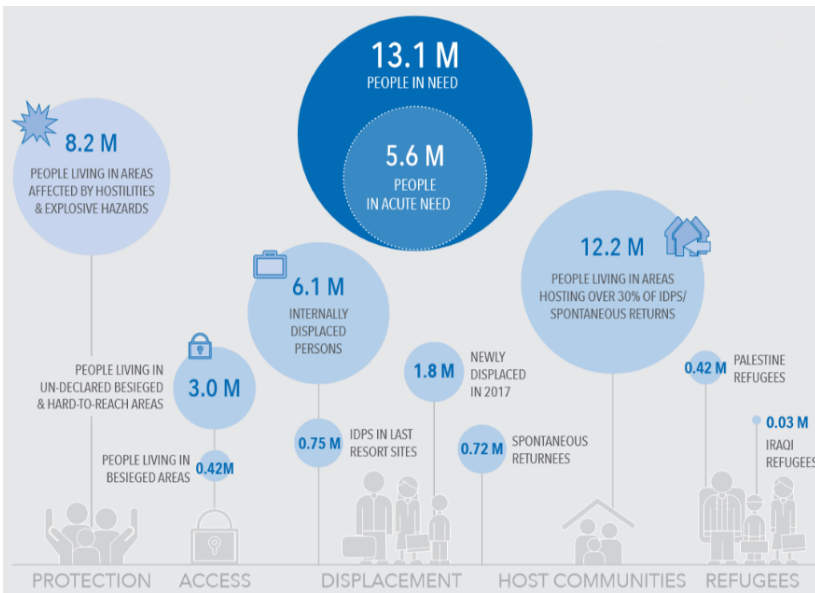
**Figure 82 Number of people in need of humanitarian assistance in Syria in 2018.
Source: Al-Saleh, 2018**

The lack of access to housing, health care, schools, and food has exacerbated the impact of the war and pushed millions of people into unemployment.

The lack of fuel has led to a sharp decline in the public power supply. There has been severe, though not complete, destruction of the physical electricity infrastructure. All the hydroelectric dams and 6 out of 18 power plants are still working, with only one destroyed. However, the decrease in electricity supply has had a major effect on the delivery of other services such as water and gas. (The World Bank, 2017.)

The following paragraphs present the demographic, social, economic and urban changes which happened in Syria because of the war, and which influence the housing sector.

5.1.1 The demographic situation

Of all the consequences of the war, demographic displacement has been the most dramatic. The Syrian war has caused the largest displacement crisis in the world since the Second World War. Syria is urbanizing rapidly. It is estimated that in 2010, 56% of the population lived in an urban environment, and this number has increased by more than 2% each year.

During the past eight years of war, rural-urban migration increased. In 2018, around 72.6% of the population were living in urban areas in Syria. Inhabitants in cities directly impacted by the war, such as Homs and eastern Aleppo, have fled

violence, destruction, and the breakdown of basic services in rural areas.

About half of the Syrian population has been displaced. In 2017, over 5.6 million were officially registered as refugees and 6.2 million as displaced within Syria. (UNHCR, 2018.)

The United Nations High Commissioner for Refugees (UNHCR, 2018) registered the total number of Syrian refugees outside the country as 4.9 million, predominantly in Jordan, Egypt, North Africa, Turkey, and Lebanon (Figure 83). Furthermore, more than 800,000 Syrian people are estimated to have sought asylum in Europe in 2015 and 2016. In addition, there were an estimated 0.4 million to 1.1 million unregistered Syrian refugees in Lebanon, Jordan, Turkey, and Iraq. (UN, 2016.)

An estimated 56% of internally displaced persons have remained within their own governorates. Those people are likely to return to their original areas, but up until 2017 only 0.56 million had returned to their communities. (Ibid)
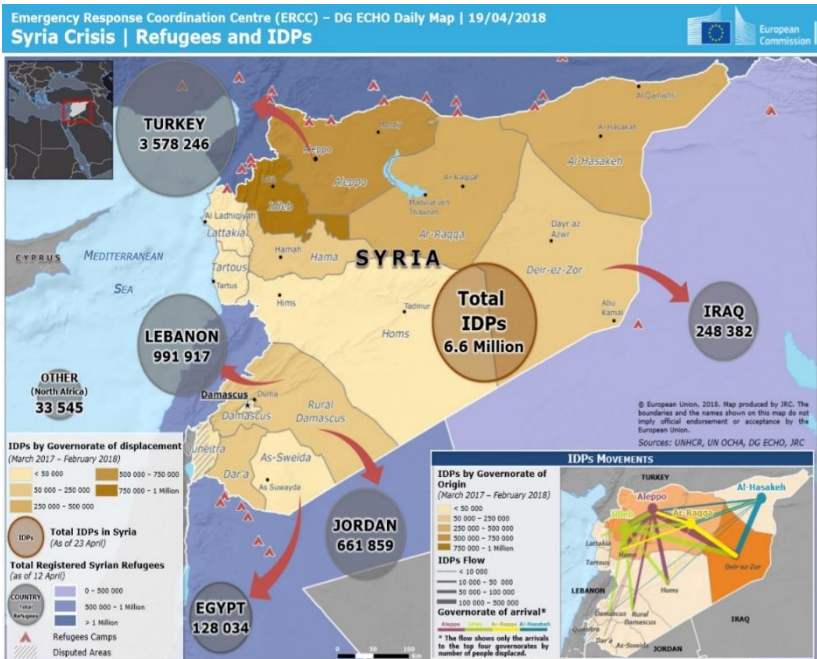
Figure 83 Syria crisis refugees and IDPs. 04.2018. Source: DG ECHO

The pre-war population of Syria was estimated at 21.1 million in 2011. (Central Bureau of Statistics in Syria). Since 2011, the conflict has imposed much pressure on the country's population. War affects age structure and life expectancy alike. Table 14 presents the age structure of the Syrian population in 2010 and 2017, which has been changed because of the war (see section 4.3). There are fewer people in the 15-64-year-old age group and more children and old people.

Age Structure	2017	2010
Under 15 years	43.9%	36.37%
15-64 years	50.8%	60.16%
65 years and over	5.3%	3.47%

Table 14 Age structure in Syria in 2017. Source: Central Bureau of Statistics in Syria, 2017

The high number of outward refugees reduced the housing problem temporarily. However, there will be a housing crisis when the refugees go back to Syria. Furthermore, rural-urban migration increased, creating a high demand for housing construction in urban areas. In addition, the decline in working-age people has reduced labor availability. All these changes influence the housing industry and the location of new housing construction.

5.1.2 The social situation

Up until February 2016, more than 470,000 people have died in the war, with 1.2 million people injured. Many men of military service age took refuge in another country to avoid military service. The percentage of men that have died or been injured is high. (Figure 84). Thus, the number of women who became responsible for their families is high. As previously mentioned, the percentage of working women in Syrian society before the war was not high, but women must now work outside the home

to provide economic support for their families, especially if they are widows. These changes make it challenging to start a new development strategy.
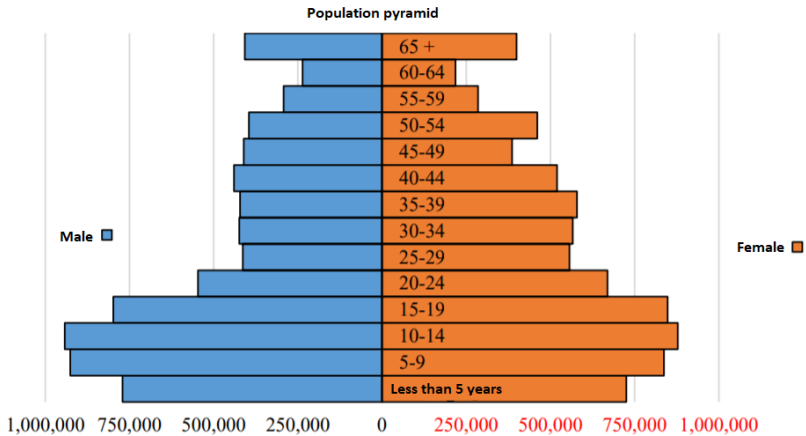
Figure 84 Population pyramid. Source: Central Bureau of statistics in Syria, 2017

The social structure of the family is changing. The average family size dropped to 4.7 people between 2011-2017 (Central Bureau of Statistics in Syria, 2017) from 5.5 in 2010. The relationships among families have changed such that multiple generations no longer live together in the same home. Everyone is searching for a job opportunity to earn enough money, which may be in another city. Women spend more time outside the home. These factors influence the functional spaces of the housing units.

The average family size and percentage of men to women have decreased because of the high death date and migration. Consequently, the role of women in society and the family has changed. These factors have a direct influence on the housing sector, for instance, the size of the housing unit.

5.1.3 The economic situation

In the course of the war, most people lost their jobs because of the destruction. This affected living standards and the ability to rebuild destroyed houses or even to afford a place to live. Therefore it is important to show the living standards of the Syrian population during and after eight years of war.

The industrial sector was affected by the destruction of factories and the theft of laboratory equipment.

Losses in the gross domestic product (GDP) between 2011 and 2016 was about four times the size of the Syrian GDP in 2010. Syrian exports reduced by 92% between 2011 and 2015 as a result of international sanctions and disruption caused by the war. (countryeconomy.com) (Table 15).

Evolution: Annual GDP Syria		
Date	Annual GDP	GDP Growth (%)
2017	15,183M.$	1.9%
2016	12,377M.$	-4.0%
2015	19,090M.$	-6.1%
2014	23,114M.$	-14.7%
2013	27,016M.$	-26.3%
2012	73,672M.$	-26.3%
2011	67,293M.$	4.6%
2010	60,043M.$	3.4%
2009	53,939M.$	5.9%
2008	52,631M.$	4.5%
2007	40,488M.$	5.7%
2006	33,824M.$	5.0%
2005	28,881M.$	6.2%

Table 15 Evaluation of the annual GDP of Syria. Source: countryeconomy.com

Losses in GDP per capita between 2011 and 2016 were about 46.8%, but things improved in 2017 when the decrease in annual growth in GDP per capita stopped. Table 16 shows the estimated changes in GDP per capita between 2005 and 2017. (countryeconomy.com)

Evolution: GDP per capita Syria		
Date	GDP per capita	GDP P.C. Annual Growth
2017	890$	25.4%
2016	709$	-33.1%
2015	1,061$	-14.1%
2014	1,235$	-10.5%
2013	1,379$	-61.7%
2012	3,604$	12.9%
2011	3,192$	13.7%
2010	2,807$	9.8%
2009	2,557$	0%
2008	2,557$	26.8%
2007	2,016$	16.8%
2006	1,726$	14.3%
2005	1,510$	10.9%

Table 16 Evaluation of GDP per capita Syria. Source: countryeconomy.com

As a consequence of these losses, in 2017 the proportion of Syrians living below the poverty line was 13.1 Million (earning less than 1.90 euros per day), according to the World Bank. The average income of government employees was between 30,000-39,000 S.P. (142-185$, in 2017) per month. The average income of private employees was between 60,000-65,000 S.P. monthly (285-309$, in 2017). (Central Bureau of Statistics in Syria, 2017.) The required monthly expenditure for a family of 5 is about 230,000 S.P. (1095$, in 2017) (Syrian Center for Surveys and Studies.)

In addition to the above, according to the World Bank report of 2017, job opportunities decreased. This caused a rising

humanitarian crisis. Since the start of the war up until 2015, jobs were destroyed at an estimated rate of approximately 538,000 per year. Unemployment among youth reached 78% in 2015.

The unemployment rate increased from 14.9% in 2011 to 48.6% in the second quarter of 2013, according to the Central Bureau of Statistics in Syria. In 2017, this number decreased to 15.2%, with most of the remaining population in employment.

Due to the financial problems facing the Syrian government, subsidies were dramatically decreased. The value of the Syrian pound (S.P.) against the US dollar decreased more than tenfold during the war years (Figure 85), with the price of fuel oil increasing tenfold between 2011 and 2015. During this period, the World Food Programme handed out more than four million food baskets each month.
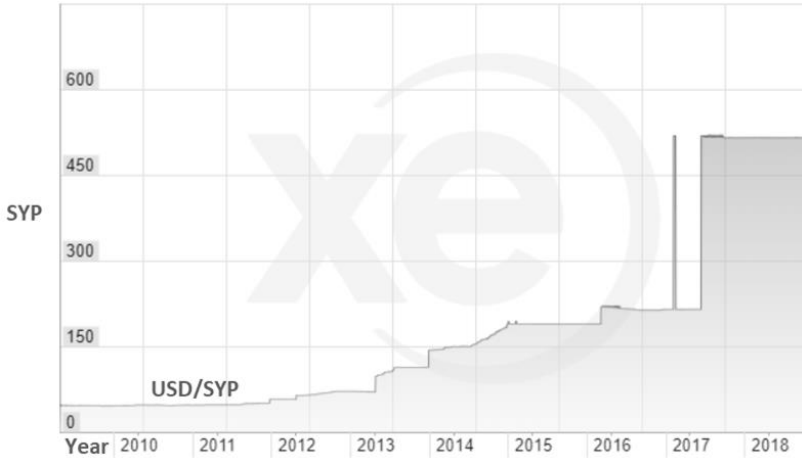
Figure 85 Value of Syrian pound against the dollar USD/SYR, 2010-2019. Source: XE Corporation

All this means that the country is suffering from high levels of poverty, with the economic situation directly reflecting on the housing market. A wide swathe of the population is not able to enter the housing market. Other issues concerning the economic situation in a developing country are given in chapter 6, in 6.2.2.

5.1.4 The urban situation

In this section, the focus will be on presenting the amount and location of physical destruction in Syria in 2017, both in general and with particular emphasis on damage in the housing sector.

5.1.4.1 The amount of housing destruction in the Syrian governorates

Physical destruction percentages vary among the Syrian governorates. (Figure 86) Most houses are located in the largest Syrian governorates, where most of the population resides. According to the World Bank report of 2017, more than 22% of houses (870,000 out of 4,120,000 units) have been destroyed or severely damaged.
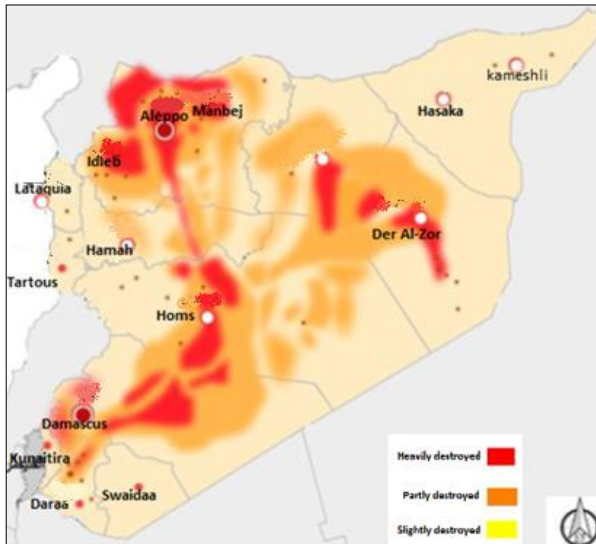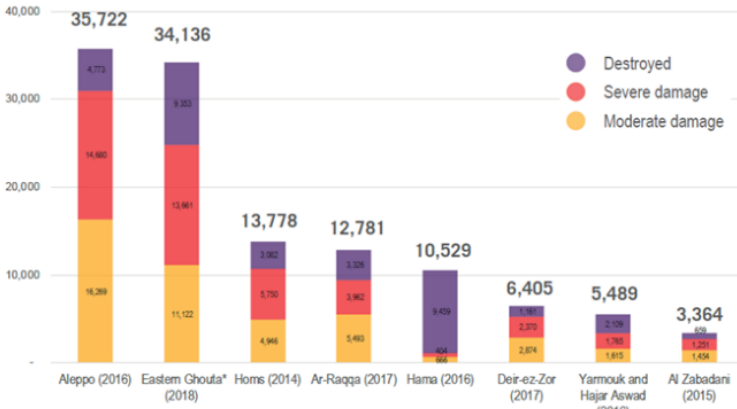
Figure 86 Estimated physical damage in the Syrian governorates. Source: UNOSAT photos

As mentioned in the World Bank report, in 2017 this percentage ranged between 3 and 10 percent of the housing stock, while the percentage of partially destroyed housing units ranged from 3 to 31 percent. (Figure 87). Aleppo (31% destruction), Homs (23% destruction) and the Damascus countryside (23%) have been seriously affected as a result of concentrated fighting in and around urban areas. (Ibid)
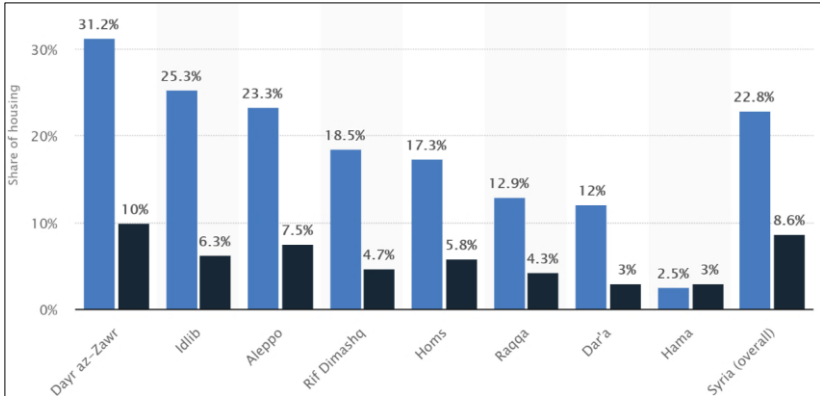
Figure 87 Percentage of housing units damaged or destroyed in Syria as of 2017, by governorate. Source: Statista, 2017

Figure 88 illustrates that the destruction of housing is concentrated in the industrial, big cities of the governorates. The following figures demonstrate the percentage of housing destruction within the governorates, in north Syria, Aleppo, Idlib, Der Al-Zor and Raqqa depicted together.
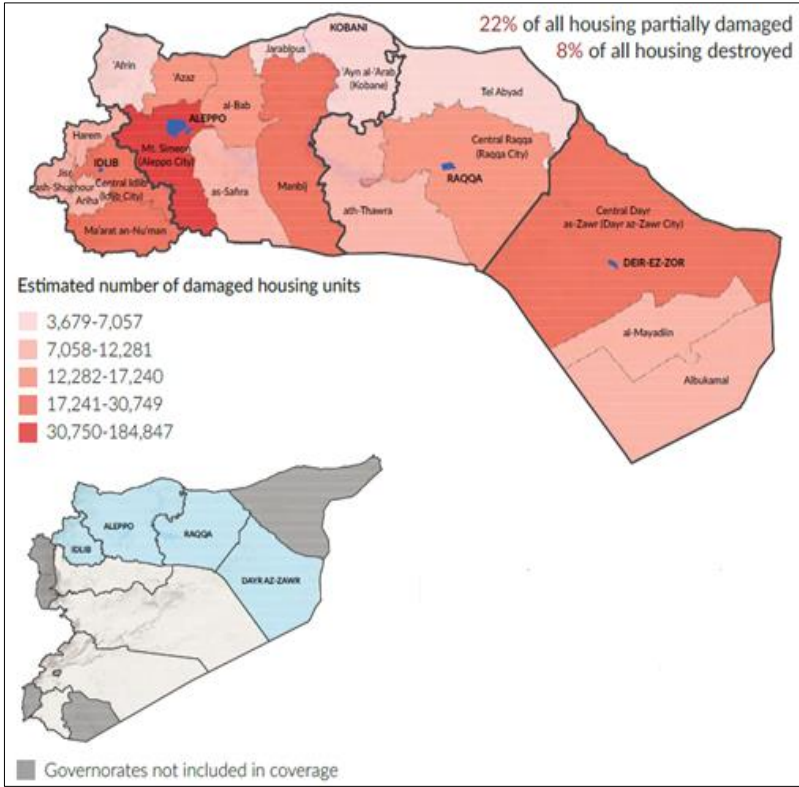
Figure 88 Estimated damage to Syria's housing sector in Aleppo, Idlib, Der Al-Zor and Raqqa governorates. Source: The World Bank, 2017

Figure 89 demonstrates the percentage of housing destruction within Damascus, Homs, Hama, and Daraa.
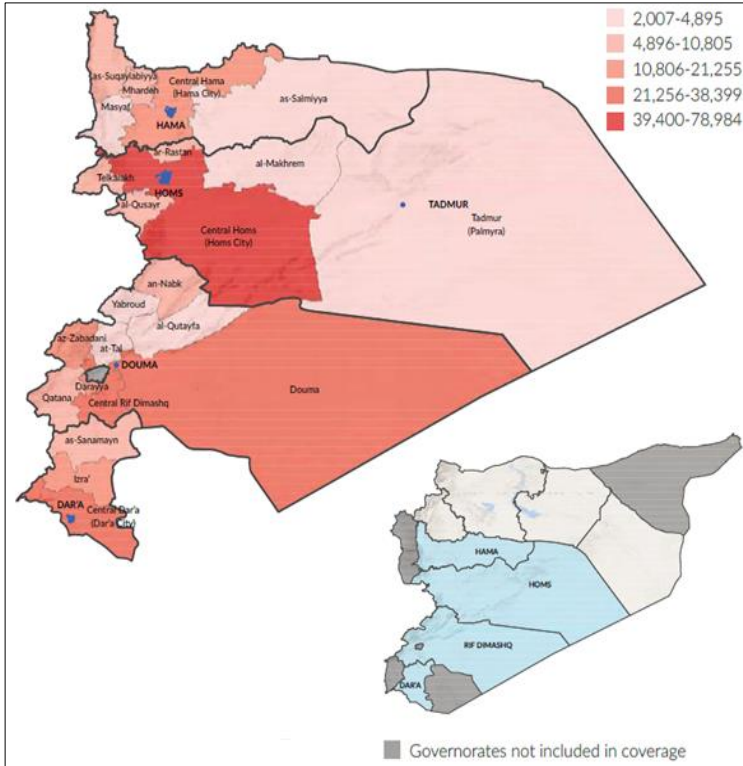
Figure 89 Estimated damage to Syria's housing sector in Rif Damascus, Homs, Hama and Daraa governorates. Source: The World Bank, 2017

The figure illustrates, also, that the damage is concentrated in big cities with high densities of population.

5.1.4.2 Amount of destruction in the housing sector in Syrian cities

The war in Syria has largely affected the housing sector in cities, where a huge number of residential units have been destroyed and no new housing investment has been possible.

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At the city level, an estimated total of 316,649 housing units has been affected.

Across the cities, 27% of housing units have been affected, with 7% destroyed and 20% partially destroyed. The percentage varies across cities, with destroyed building percentages ranging between 3 and 10% of housing units, while the percentage of partially damaged units ranges from 2.5 to 33%. Damage also varies across neighborhoods (Figure 90).

Syrian cities are divided into three groups according to the percentage of housing destruction, according to The United Nations Economic and Social Commission for West Asia (ESCWA).

- The first group was classified as 'heavily damaged': Aleppo, Damascus countryside and Damascus, Homs, and Idlib.

- The second group was 'partially damaged': Daraa, Der Al-Zor, Hama, and Raka.

- The third group was 'affected': Latakia, Hasaka, Tartous, Sweidaa, and Qunaitera.

According to the Syrian Central Bureau of Statistics in 2010, there were 4,128,941 conventional dwelling units across the governorates with a shortage of 800,000 dwelling units. Up until 2017, about 870,000 units were destroyed or severely damaged, as previously mentioned. Any calculation of damages must include the number of units that would have been built in the absence of war. The loss of new housing units is estimated by the General Establishment for Housing at 330,784 unbuilt residential dwellings across the eight governorates (no specific estimate is provided for all of Syria). (The World Bank, 2017). Based on these estimates, the missing number of units in all of Syria is 2,000,784 (800,000+870,000+330,784). This means that the equivalent of half the pre-war housing stock needs to be constructed.

16% of Aleppo city was destroyed, with the city center, the castle and the surrounding neighborhoods worst hit. The damage stretched beyond the center of the city, with neighborhoods to the east and north-east suffering 30.8% damage and Bustan Al-basha district to the south-west 10%. (ESCWA, 2016)
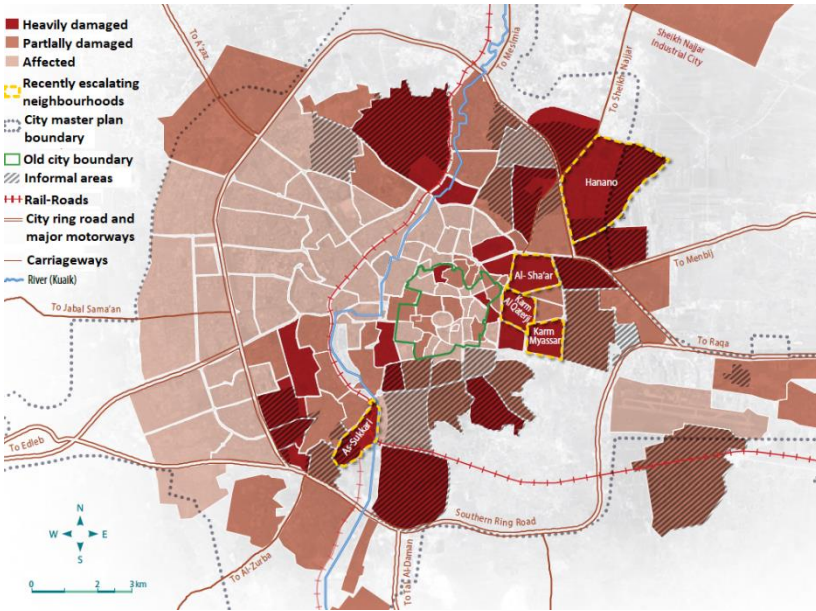
Figure 90 Aleppo residential housing damage. Source: UN-Habitat, 2014

The second most war-affected city after Aleppo is Damascus' environs with a destruction percentage of about 55%. (Figure 91). The damage is concentrated in the "Gouta Sharkia" neighborhoods (Barza, Kaboun, Jobar, Zamalka, Irbeen, and Ain Tarma), at 16%. In addition, the "Douma" and "Harsta" districts were affected with 19% destruction, "Jaramana" and "Akraba" with 6.5%, and the damage in the "Gouta Garbia" and "Dahiet Koudsaya" neighborhoods was 13.5%. (ESCWA, 2016.)

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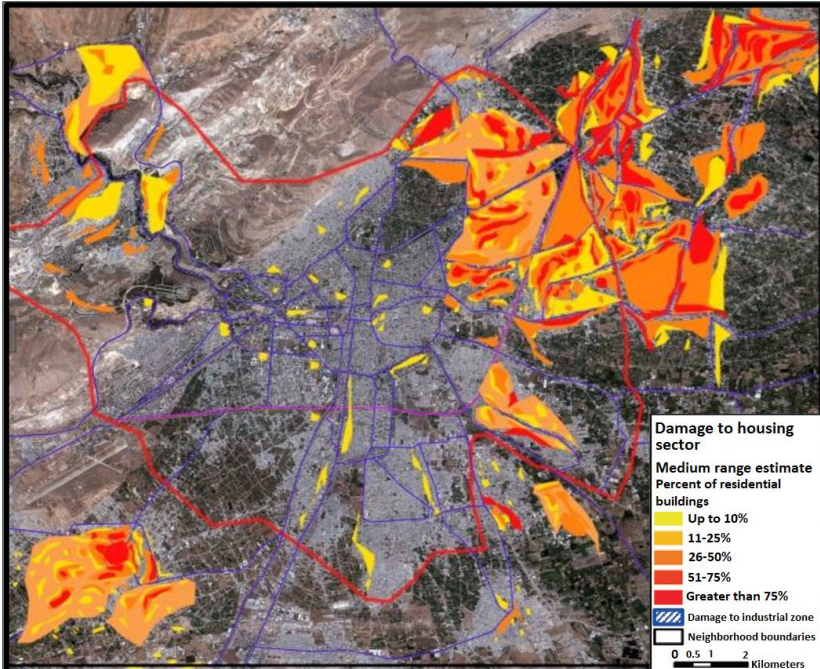
Figure 91 Aerial image of a satellite, Damascus Countryside housing damage.
Source: UNOSAT photo

The third most war-affected city is Homs. The destruction percentage there is 50% and is concentrated as shown in Figure 92 and Figure 93:

- The city center includes the old city and "Jouret Al-Shayah", "Khaldya" and "Karabis" with 6% destruction. This destruction spread to the north, to "Khaldia" and "Kusur", then to the north-east in the direction of Der-Baalbeh, with 22% destruction.

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- The destruction spread from the old city to the south-east, with 14% of destruction.

- South-west of Homs is the Bab-Amr neighborhood, with 8% destruction. (ESCWA, 2016.)
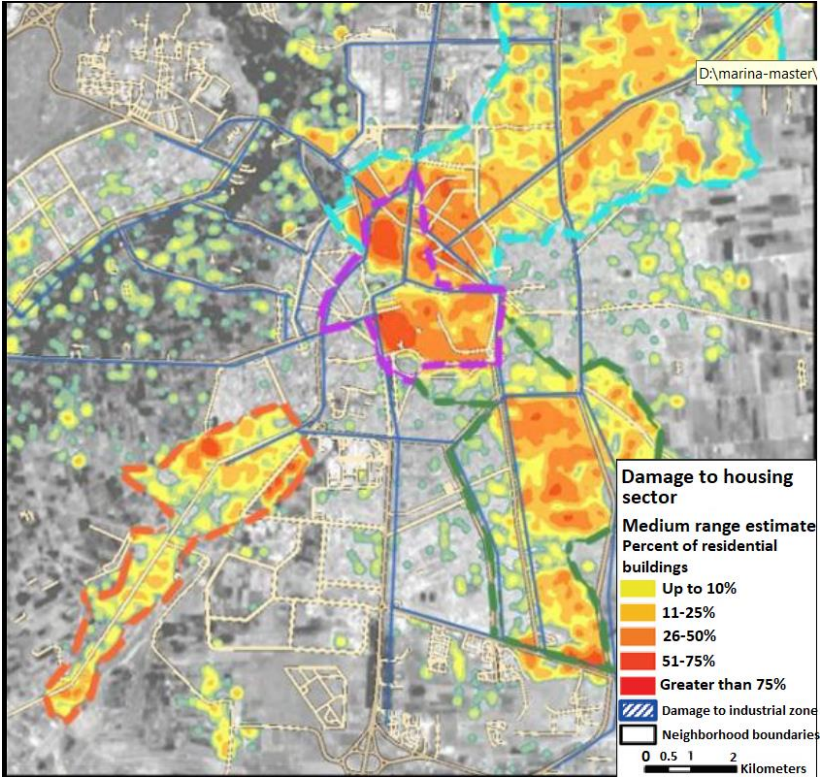
Figure 92 Aerial image of a satellite, Homs housing damage. Source: UNOSAT photo
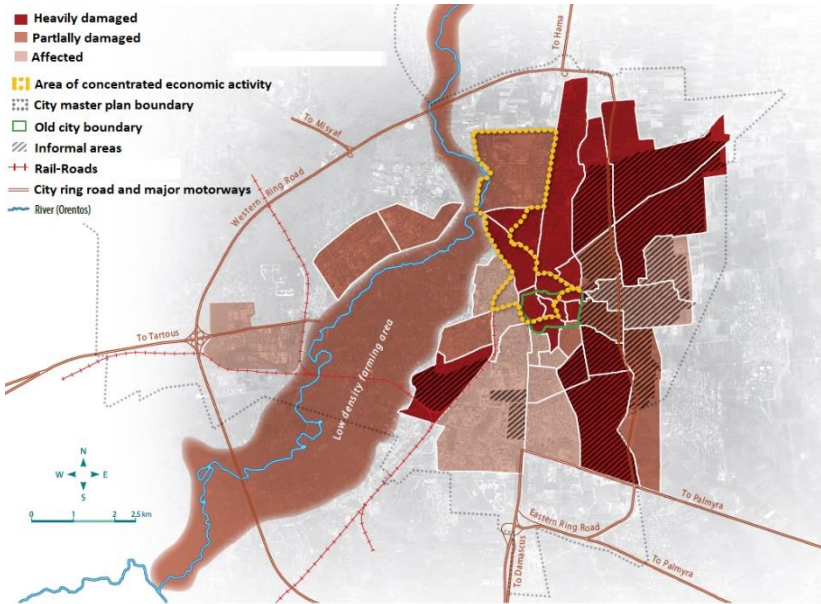
Figure 93 Damage to buildings and housing stock in Homs city. Source: UN-Habitat, 2014

Features of the urban structure remained unharmed in most of the damaged areas. Inside the cities the streets remained usable, creating borders between neighborhoods and real estate.

The general characteristics of post-war cities are similar, the main difference being the degree of destruction. At the same time, every city in Syria has a different social, environmental and demographic identity. In order to devise a suitable housing policy, all these factors must be analyzed and considered. This will allow comparisons to be made later with the German case, taking into account similarities and differences.

5.1.4.3 The amount of existing rubbles

The destruction of buildings in Syrian cities has created the problem of rubble accumulation. Removing rubble requires time and equipment. The director of the General Company for Roads and Bridges in Syria has estimated the amount of rubble from war destruction at 30 million tons. In the World Bank report, a remote-sensing-based analysis was used to analyze the amount and location of rubble in Aleppo and Homs (Figure 94 & Figure 95). The results show that in Aleppo, it would take about 6 years of continuous work and 26 million trucks to remove the rubble. In Homs, it would take about 2.5 years and 2.3 million trucks. (Ibid)

Removing rubble costs a lot of money and time and imposes environmental risks. For these reasons, it is challenging to find crushing sites. The solution could be to use the rubble as building material to construct new houses.
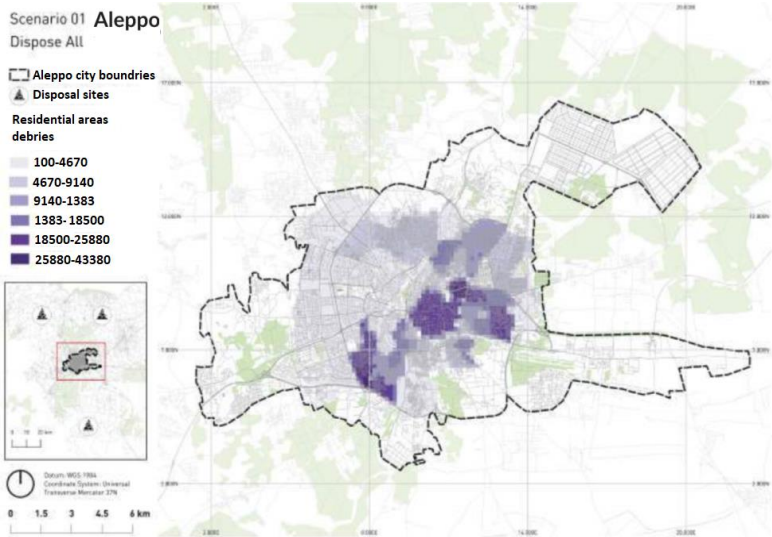
Figure 94 Calculated rubble accumulation, 2017, Aleppo, Syria. Source: World Bank staff calculation
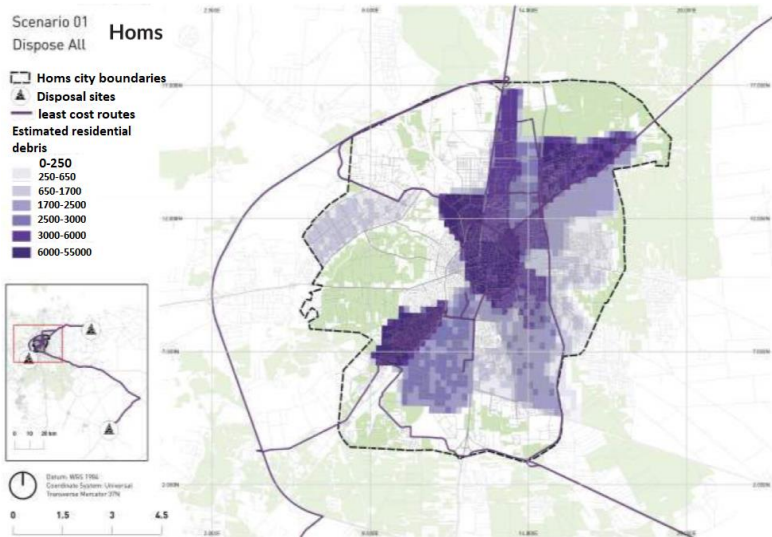
Figure 95 Calculated rubble accumulation, 2017, Homs, Syria. Source: World Bank staff calculation

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5.1.4.4 Temporary living space

Wartime housing conditions in the cities are very bad. Families crowd into shared rented dwellings. Other displaced families live in collective shelters such as schools and public buildings, or in partly-constructed houses (Figure 96). Squatting or secondary occupation of unoccupied apartments occurs in hosting neighborhoods. Many inhabitants decided to leave the city for greater safety and in search of a livelihood. Since 2011 there has been a trend for squatting without agreement with the owners, but hosting by friends and family remains the predominant method of finding shelter.

Figure 96 Displaced people inhabit partly-constructed units, enclosing them with plastic sheets. Source: the author

Informal housing expansion can be considered a part of the urban crisis, as a step to absorb social trouble. Illegal construction started to rise directly after the beginning of the war in 2011. Later, it was destroyed through the war or removed. Figure 97 shows an informal settlement in Damascus as an example, which appeared during the war as a consequence of the conflict.

Figure 97 Informal settlement started in 2011 and continued in 2012 shown on the satellite image of an area located in Douma, Damascus's suburbs. Source: Clerc, 2015

Some people with houses in the cities started to go back to them, in order to fix them and live in them again.

5.1.4.5 Housing rent prices

As the situation in some Syrian cities became unsafe as a consequence of the war, their inhabitants moved to safer areas. According to a UN-OCHA (2016) report, adequate housing was not available in many cities, causing people to seek shelter in substandard housing. Families could rent unfinished

apartments, using plastic sheets and curtains for windows and doors.

The pressure on rental demand in these safe urban areas has increased rents by between 50-100%. The diagram in Figure 98 shows the increase in rental costs in Homs city districts after 2010.
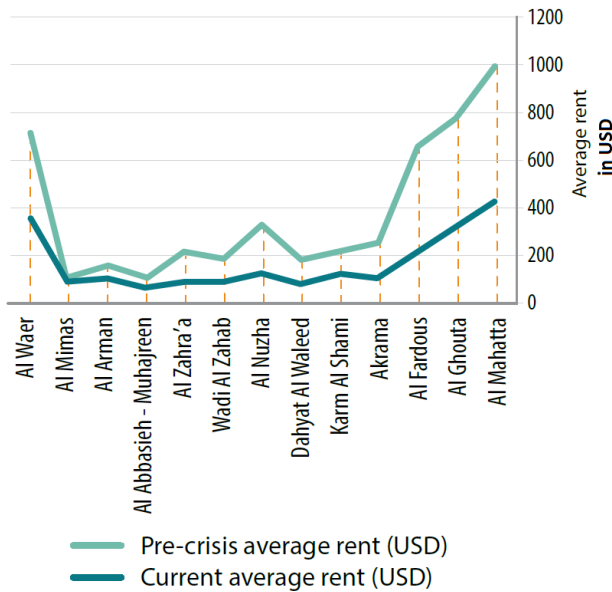
Figure 98 Increase in house rents in Homs city districts between 2010 and 2014. Source: UN-Habitat, 2014

In WWII Germany, rents were controlled by law to prevent such a situation.

5.1.4.6 Social housing prices

As a post-war procedure, the General Establishment for Housing in Syria announced a social housing program consisting of 12,200 apartments to buy with an average area of 40-60 m^2, to be located in the eight largest cities in Syria. Monthly repayments for these units are about 20,000 S.P. (95$, in 2017), with a down payment of about 10% of the total price. (General establishment for housing.) The cost of one square meter is 110,000 S.P. (524$, in 2017)

As previously mentioned, the average monthly income is about 35,000 S.P. (167$, in 2017). The rules of social housing in Syria state that monthly repayments must be less than 25% of the family income. For families with a required monthly expenditure of 230,000 S.P. (1095$, in 2017), it is clear that additional support is needed. (Ibid)

5.1.4.7 Housing design competitions and suggestions

Many ideas have been developed over the course of the war for the post-war reconstruction of housing. On a conceptual level, they are comparable to reconstruction plans devised in Germany during and after World War II, but are mostly not realistic because of the lack of resources in post-war Syria.

Reconstruction is an opportunity to improve the urban situation of cities. Creative ideas always appear under challenging conditions, reflecting the hope of the people for a better future. Many design competitions have been held throughout the war to find solutions to the housing problem and to develop a better housing situation. But dreams do not always come true, especially in a post-war situation, when the economic situation of the inhabitant is not at its best. More realistic steps are needed to provide people with affordable homes.

Many design suggestions for the post-war Syrian context have been put forward. The following section presents a number of these that have been developed. Some are far from realistic and focus on aesthetics, while others ignore the rapidly changing needs of the population. If no suitable strategies are realized, people could be forced to return to informal settlements.

Marota City is one of the suggested ideas for a residential neighborhood in Damascus. (Figure 99). Part of it was once informal settlements that were destroyed during the war. It is a high-tech luxury city, nicknamed "the city of dreams".

Figure 99 Suggested master plan of Marota new residential city in Damascus.

Marota city is a new construction project that was launched by the Syrian government in Damascus in 2012, the second year of the war. This project was presented as part of a more modern, aspirational 'master plan' for urban development, to move away from the traditional patterns of informality in housing that had developed over generations. see Figure 100 and Figure 101 perspectives of the project and its residential skyscrapers.

Figure 100 Suggested perspective of Marota, a new residential neighborhood in Damascus.

Figure 101 Some suggested housing blocks in Marota, a new residential neighborhood in Damascus.

The proposed Marota city plan is highly modern, reflecting the tastes and aspirations of urban planners and architects. But some questions need to be addressed before implementing any approach. Is this type of city or housing development the solution to the housing problem in Syria? Is it feasible, given the economic situation in Syria after years of war, to build or rebuild at this level of luxury? Is this a suitable urban structure for a Syrian city? It can be argued that the answers are 'no'. A housing strategy with clear laws and standards is required for the entire country. It must consider the economic, social and urban situation, as well as the demographic changes that have taken place, the housing location, the housing strategy timeline, and the intended target population.

Another example is a promising idea, presented in 2015, that has been suggested as a solution for a destroyed informal neighborhood in Homs. (Figure 102)

Figure 102 Suggested master plan for a destroyed residential area of Bab-Amr in Homs city. Source: Al-Sabouni, 2015.

The concept was to consider social privacy and environmental factors. Privacy would be achieved through windows and terraces that do not expose private living areas. It offers flexibility and the possibility of future vertical growth. (see Figure 103)

The Tree Blocks "Holding Hands"

Figure 103 Suggested perspective of a new housing block in the destroyed residential area of Bab Amr in Homs city. Source: Al-Sabouni, 2015.

Again, is it the solution for the housing crisis in a post-war situation? Has the economic situation been taken into consideration? Again, it can be argued that the answers are 'no'. This is not a solution for overcoming the post-war housing shortage or building a social housing suburb. This concept may provide a solution for the rebuilding of neighborhoods where

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the inhabitants can afford the costs of the units, or if they are supported by the government. However, the neighborhood for which this plan is proposed is informal and its inhabitants are mostly low-income people.

Another avenue for solving the problem of providing suitable housing is through international competitions, and one such competition was held in 2016, in the fifth year of the war. More than 60 plans were submitted. Two of them are presented here (Figure 104). In general, it seems that Syrian architects tend to stray too far from reality, but idealism is usual in such situations; it happened also in Germany after the war, as mentioned in chapter 3. In Germany, as a developed country, the solution was to build affordable, good quality houses. What is the solution for Syria, where the income of most people is below the poverty line?
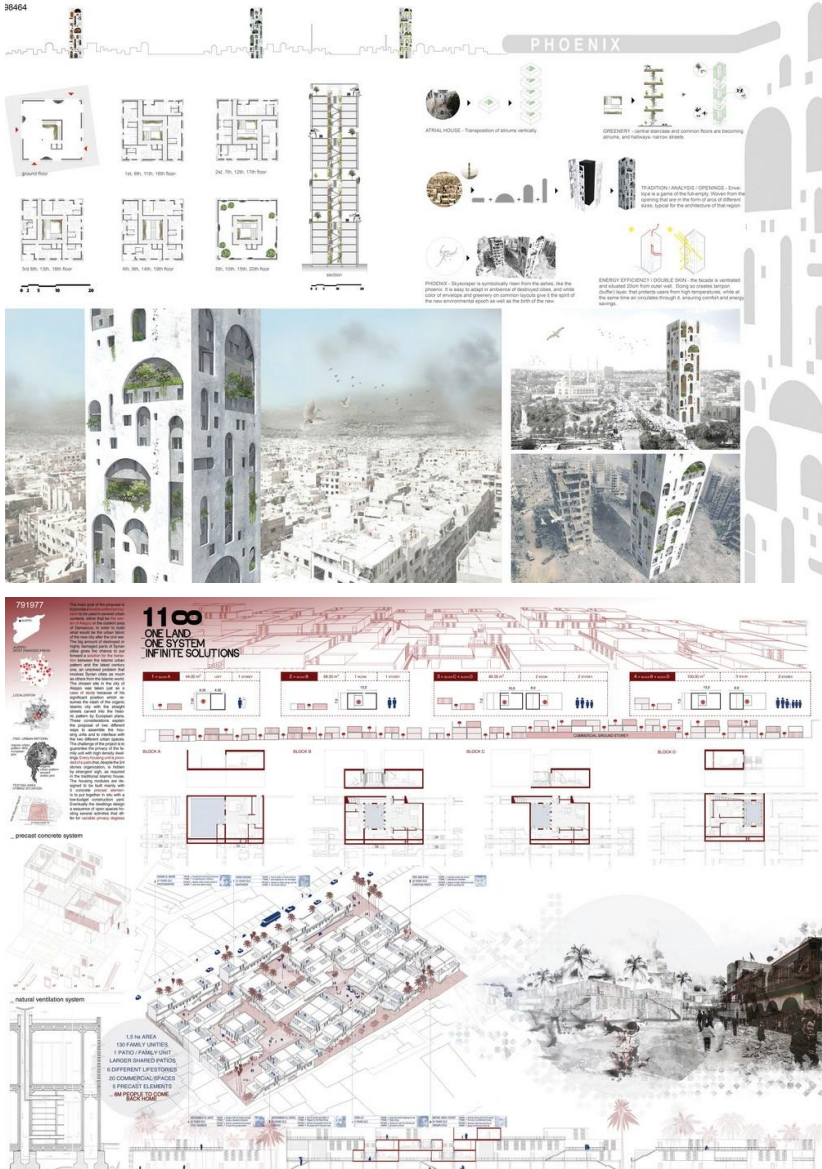
Figure 104 Two projects presented in the post-war housing competition of 2017.
https://matterbetter.com/blog/article/s/syria-post-war-housing-winners

The two projects presented here give a brief idea of the competition's content. The web address for full details has been provided in the references list.

5.1.5 The housing situation in post-war Homs and Aleppo cities

Homs and Aleppo are two of the most severely war-affected big Syrian cities. They are where the most industry is concentrated and their situation can be compared to the German cities destroyed in World War II. The post-war situation of these two cities will be described in greater detail. Information will be provided to explain the urban structure of housing in the two cities and the varying amounts of damage to houses in different types of neighborhoods, to illustrate the location of the damage. Some areas are completely destroyed, whereas others are partly damaged. Every city in Syria has a different social, demographic, and economic situation but similar urban structures, especially the most significant cities. That is why it is possible to use these two cities as examples. It is not possible to study every Syrian city in detail within this thesis. However, the issues in Aleppo and Homs can be generalized to other cities.

5.1.5.1 The housing situation in Homs city

Homs city was the site of war activities from 2011 to 2015. While the situation is now, in 2019, more stable, much destruction occurred during the five years of active conflict. However, the remaining inhabitants, in cooperation with the government and nonprofit organizations, have begun to clear the rubble from the partially damaged neighborhoods. Some of the displaced people have started to return to their homes to fix what is possible. Others, whose houses are located in completely destroyed areas, must wait.

Homs city has 36 neighborhoods, as shown on the master plan (Figure 105). It is possible to divide the city into five categories of district (old city, city center, formal settlement, informal settlement, residential suburbs). These differ by density of population and percentage of destruction. (UN-Habitat, 2014)

NEIGHBOURHOODS OF HOMS

1   Bab Houd
2   Al Mahatta
3   Al Boghtasia
4   Al Ghouta
5   Al Fardous
6   Bani Sibaee
7   Bab Al Siba'a
8   Al Khidr
9   Akrama
10 Karm Al Shami
11 Dahyat Al Waleed
12 Bab Al Draib
13 Jamal Al Deen
14 Jub Al Jandali
15 Al Mrejeh
16 Al Nuzha
17 Karm Al Loaz
18 Karm Al Zaitoon
19 Wadi Al Zahab
20 Bab Tadmor
21 Karm Shamsham
22 Al Zahra'a
23 Al Abbasieh-Muhajreen
24 Al Sabeel
25 Al Arman
26 Al Hamidia
27 Al Khalidia
28 Joret Al Shayah
29 Al Qusour
30 Al Hasawia
31 Al Mimas
32 Al Waer
33 Deir Ba'alba (N)
34 Deir Ba'alba (s)
35 Al Bayada
36 Baba Amr

Figure 105 Names of Homs neighborhoods. Source: UN-Habitat, 2014

Differences in population density between these neighborhoods are related to the type of housing. Figure 106 illustrates the different densities in various areas of Homs city.
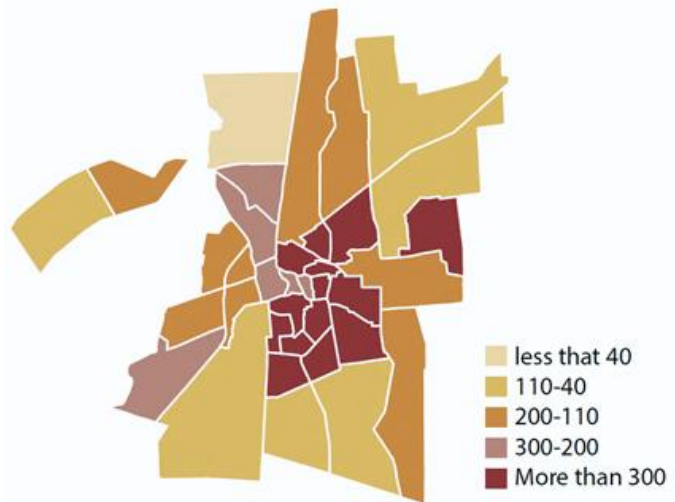
Figure 106 Population density capita/ha in the city of Homs before 2011. Source: UN-Habitat, 2014

Informal housing areas form about 59% of the pre-war master plan area, with population density in these neighborhoods higher than informal ones. Issues concerning disputes over land and property had been resolved during 2009-2010 through a national experimental project requiring that all housing properties be recorded on the cadastral register, thereby confirming official ownership. About 69% of the most badly damaged areas are informal. (World Bank, 2017.)

Based on the General Company report, 2016, about 53% (19 areas) of Homs is badly damaged. About 20% (7 areas) of the city's districts have been partially damaged and about 27% (10

areas) have minor to no damage. The housing sector has received the most significant portion of injuries, as seen in Figure 107. About 85% of the areas destroyed were residential (Ibid).
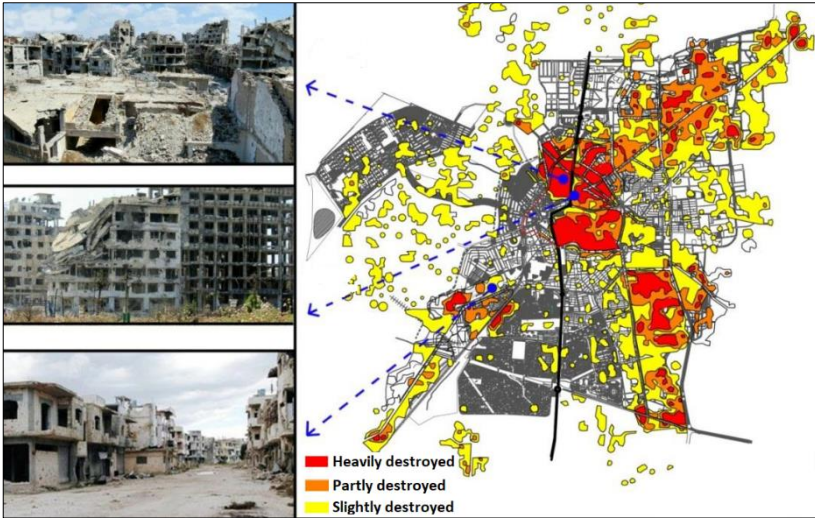
Figure 107 Destruction in Homs city. Source: The author, and satellite photo UNOSAT

In 2011, Homs had 178,000 housing units, of which about 71% were multi-story apartment buildings. In 2016, about 96,700 housing units were out of use. This is about 54.3% of the city's 2011 housing units. Some of the city's neighborhoods have been completely abandoned by the population as they have become unsafe or inaccessible. (ESCWA, 2016)

Homs is the third-largest city in Syria. Industry, services, construction, and local tourism are the city's main sectors of employment. About 198 of the important industries or factories in Syria are located in Homs (Figure 108). This is a reason why they were targeted, as happened by the same cause to German cities. In the course of the war, 173 of the factories have been partially or totally damaged. Homs is also the site of several large, heavy public industries. These include the oil refinery west of the city which opened in 1959 (General Company, 2011) and a fertilizer plant (used for domestic consumption and export) which was built in 1971 (Ibid). During the past decade, a growing private industrial sector has flourished, and many small-to-medium-sized enterprises occupy the industrial zones in the northwest and south of the city. In addition, there exists a new sugar refinery, an automobile factory, and liqueur, phosphate and oil factories.

An external industrial settlement, called Hissaya, was established 47 kilometers south of the city. A major industrial project spread across some 2,500 hectares, this industrial city covers four main sectors: textiles, food, chemicals, and engineering. In all, the facilities were designed to accommodate up to 66,000 workers and their families (Ibid).
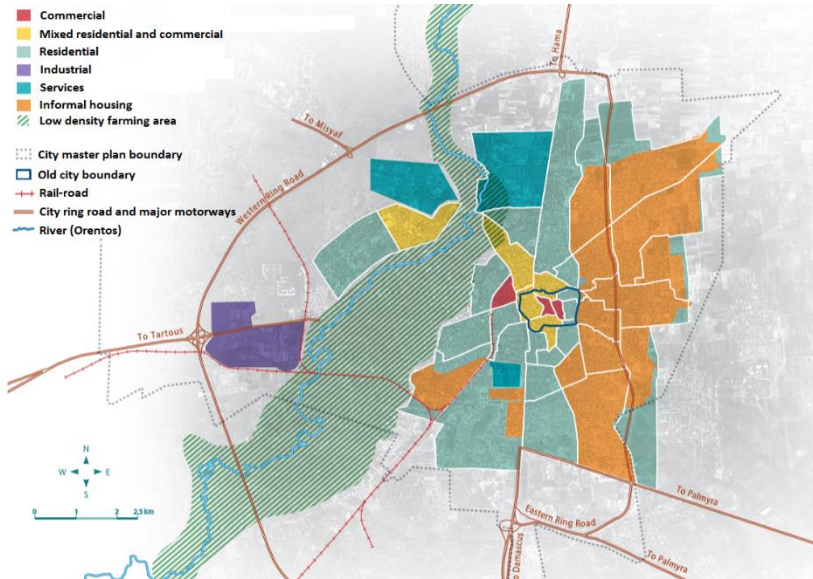
Figure 108 Homs city urban composition. Source: UN-Habitat, 2014

The infrastructure of Homs city's industrial area received less damage but most of the factory machinery was stolen. Its current non-functional state has a big influence on the city's economy and local self-recovery efforts for housing and building rehabilitation.

Homs is one of the Syrian cities most affected in terms of displacement and destruction. About 60% of the 2011 inhabitants have been displaced (Figure 109) (UN-Habitat, 2014), due in part to long-term insecurity, damaged housing, and ongoing conflict from 2011 to 2014. There was displacement movement inside the city to safe areas, and some

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people fled the city. In 2015, some people started to return to their pre-war locations where possible.
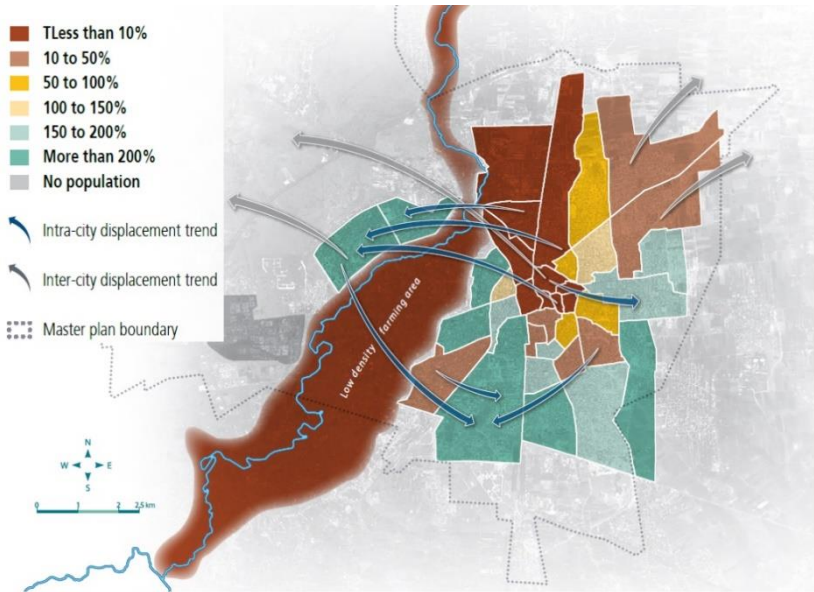
Figure 109 Population displacement in Homs after 2011. Source: UN-Habitat, 2014

The city's central neighborhoods are badly damaged (Figure 111), including the old city and the traditional (residential and commercial) neighborhoods surrounding it (Figure 110, and Figure 112).

Traditional houses with courtyards can be found in the old city of Homs. These houses are built of basalt stone. It is an area of high population density, and with a traditional urban structure. About 80% of the old city has residential use. (Figure 111, A).

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This part of the city is a traditional, historic area, as is the neighboring city center area. Both need special treatment when deciding how they should be rebuilt. (Kassouha, 2014.)
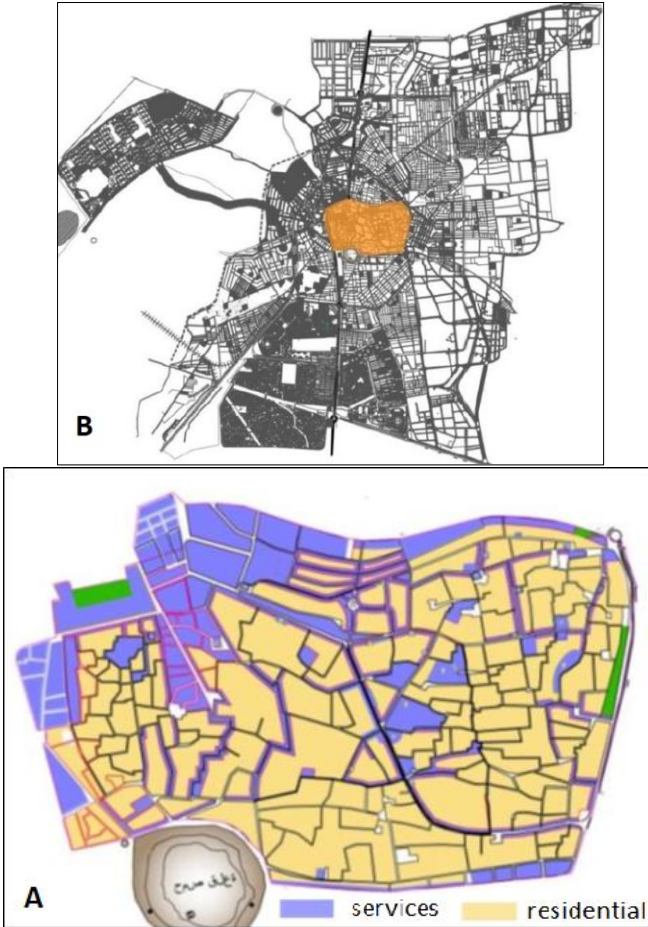
Figure 110 Badly damaged area in the old city of Homs. Source: The author
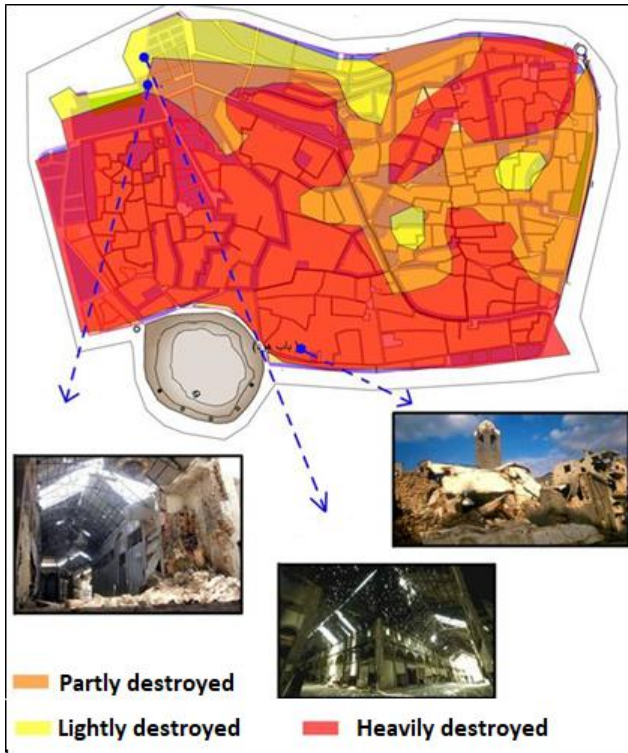
Figure 111 The heavily destroyed area in the old city of Homs. Source: The author

The city center of Homs has commercial, service and residential functions (Figure 112, B). It is located to the north of the old city and is connected to many neighborhoods (Figure 112, A). Destruction in this area is about 50% (Figure 113).
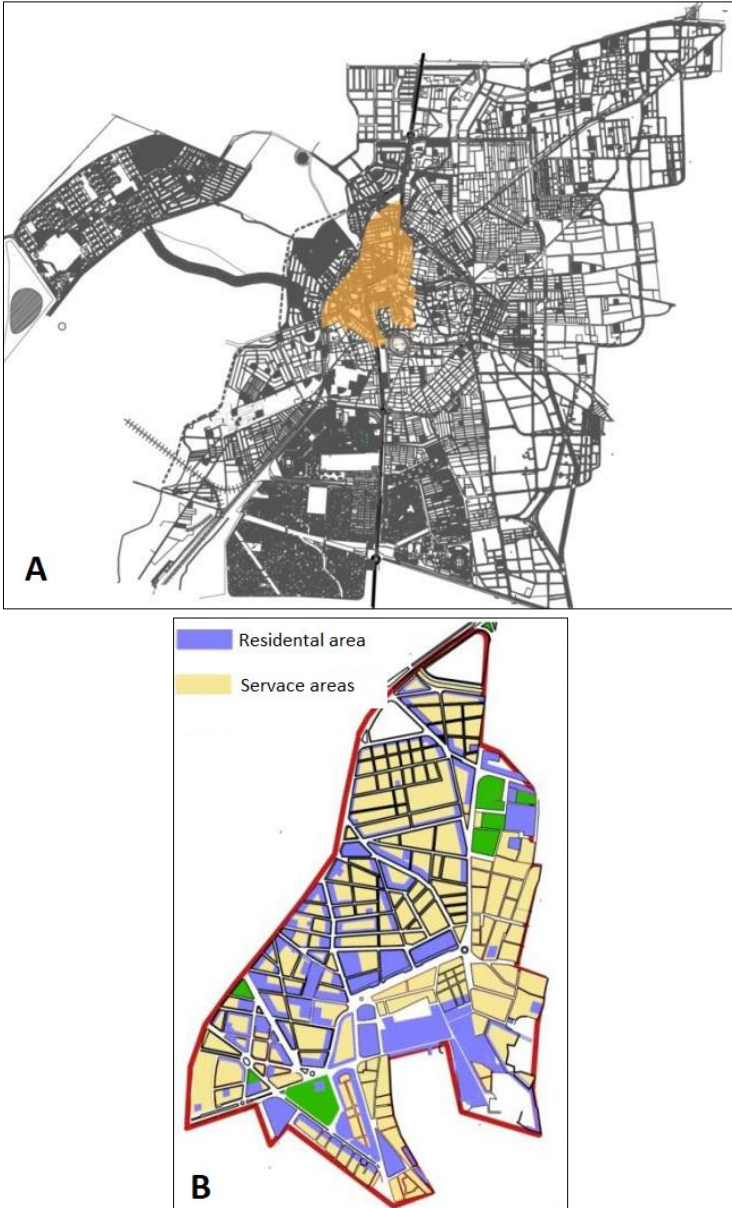
Figure 112 Location and functions of the city center. Source: the author
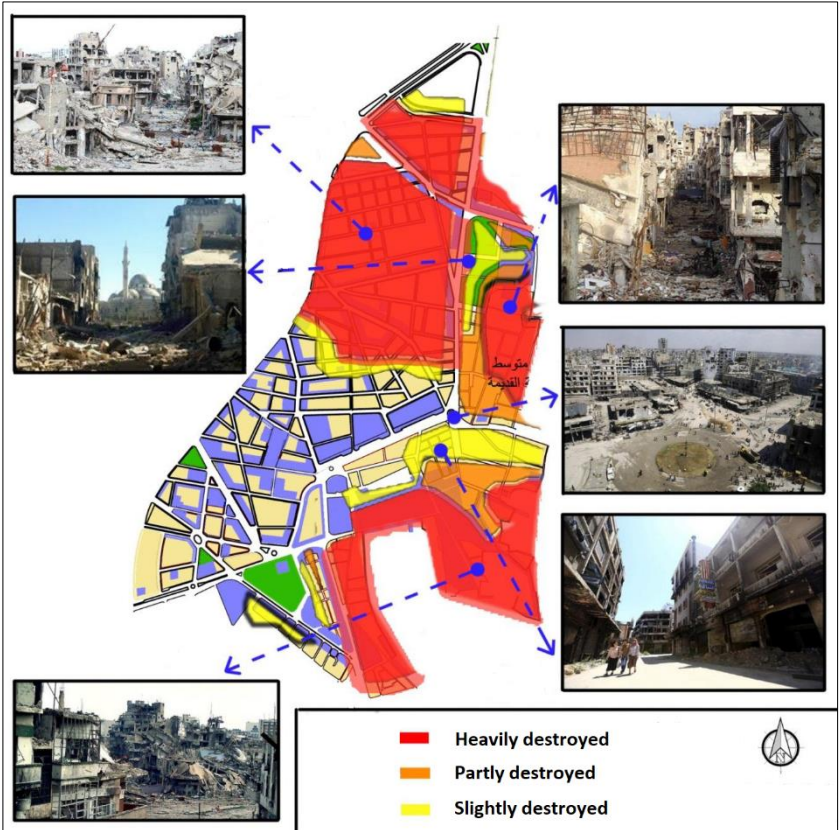
Figure 113 The destruction in the city center of Homs. Source: The author

The third type of neighborhood is the one organized formally in the Docsiads master plan from 1946. There are 24 such neighborhoods, with different levels of damage in each (Figure 114).
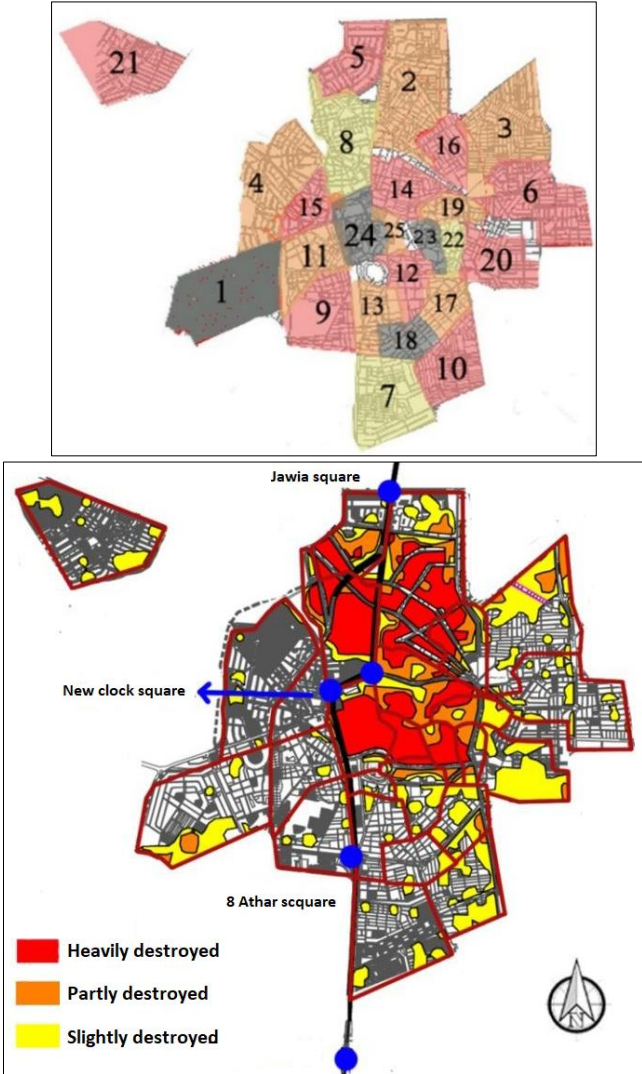
Figure 114 Organizational neighborhoods in Homs city and the degree of destruction in each. Source: The author

The fourth type is the informal neighborhood, of which there are seven (Figure 115, A). They are heavily damaged. (Figure

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115, B). The houses in these neighborhoods are built out of cement and bricks.
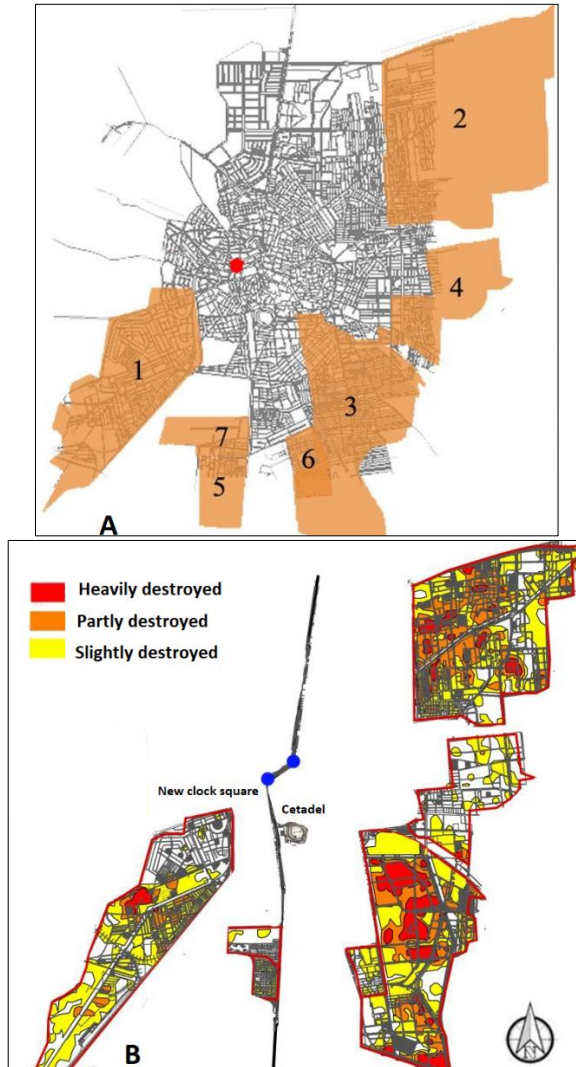
Figure 115 Informal neighborhoods in Homs city and the degree of destruction in each. Source: The author

Bab Amr (Figure 116) is one of the affected informal
neighborhoods in Homs.
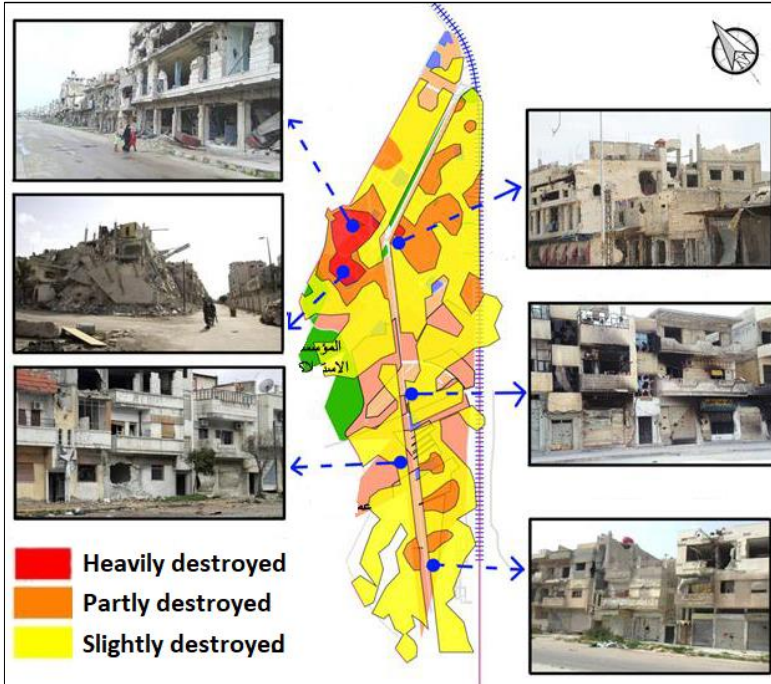
Figure 116 Bab Amr informal neighborhood in Homs. Source: the author

The fifth type of neighborhood is the residential suburb (social
housing). There are three residential suburbs in Homs. (see
Figure 117, A). The percentage of their destruction is shown in
Figure 117, B.
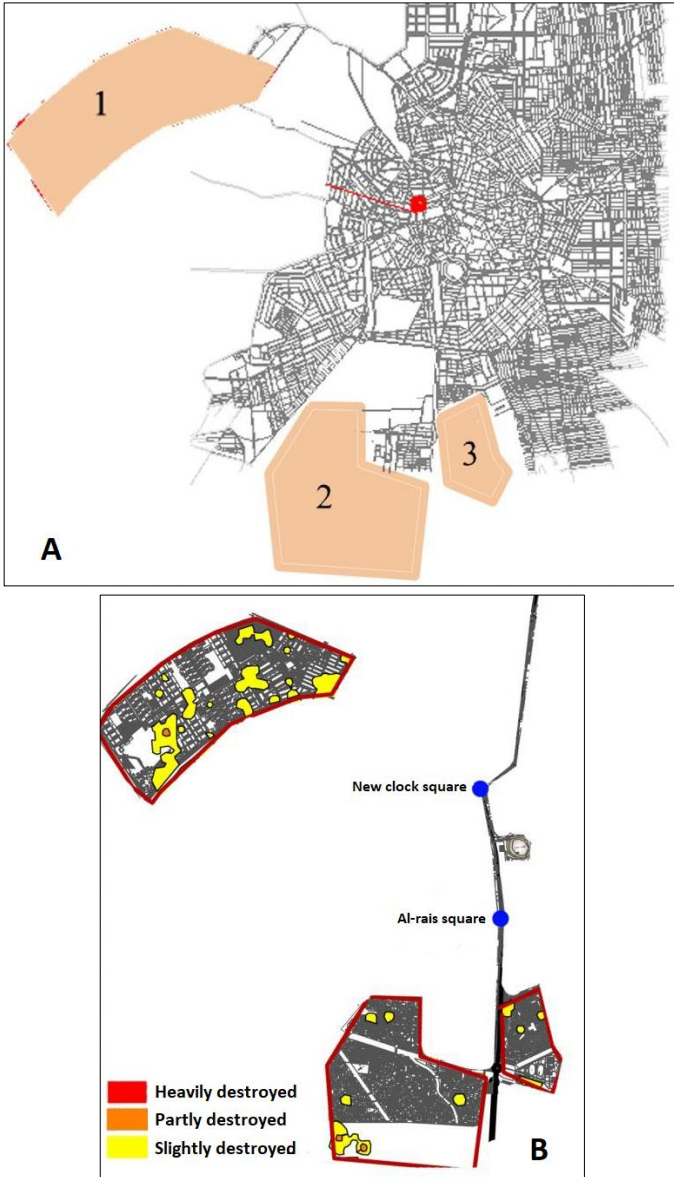
Figure 117 Residential suburbs in Homs city and the degree of destruction in each. Source: The author

The residential districts in the old traditional and the informal neighborhoods, which mostly have high population density, are the most damaged areas. In these districts, the inhabitants are mostly poor with low incomes.

(Since the war is still ongoing, the figures quoted could have changed, but were correct at the time of writing, in 2019.)

5.1.5.2 The housing situation in Aleppo city

Before 2011, Aleppo was the industrial and commercial heart of Syria; it enjoyed a strong economy. For this reason, it was attractive to rural migrants, who mostly lived in informal settlements. After 2011, many people flocked to Aleppo, until the conflict reached the city at the end of 2012, forcing the inhabitants to flee to other governorates and cities or out of the country. Massive destruction continued until 2015 when it decreased.

Aleppo has 125 neighborhoods (Figure 118). Twenty-one of these have been heavily damaged and require a high level of reconstruction to be habitable again. Another 53 neighborhoods are partially destroyed, to the point where it is difficult to live there.

NEIGHBOURHOODS OF ALEPPO

1	A'aziziyeh	28	Al-Nayrab	51	**Beit Meheb / Jdeydeh**
2	**Abraj**	29	Al-Sakhour	52	Bileramoon
3	**Ad-Dallain**	30	**Altunbogha**	53	Bostan Bash
4	**Ad-Dudu**	31	Andalus	54	**Bustan Al-Qaser**
5	**Aghyol**	32	Ard As-Sabbagh	55	**Bustan Az-Zahra**
6	**Al-A'ajam**	33	Ar-Ramouseh Indusrtial	56	Dahert Awwad
7	**Al-A'arqoub**		District	57	East Al-Ansari
8	Al-Amerriyah	34	Ar-Ramouseh Indusrtial	58	**Fardos**
9	Al-Ansari		District	59	Hamadaniyeh
10	Al-Ansari Mashhad	35	Ar-Ramouseh Indusrtial	60	Hamadaniyeh
11	**Al-Aqabeh**		District	61	Hamadaniyeh
12	**Al-Asileh**	36	Ar-Ramouseh Indusrtial	62	Hamadaniyeh
13	**Al-A'zamiyeh**		District	63	Hamadaniyeh
14	**Al-Ballat**	37	Ashrayeh	64	**Hamidiyeh**
15	Al-Basel	38	Ash-Shahba'a	65	Hanano
16	**Aleppo Citadel**	39	Ash-Sheikh Maqsoud	66	**Hanano Barrack**
17	Aleppo International	40	Ash-sheikh Yusef	67	Haydariyeh
	Airport		Cemetery	68	Helwaniyeh
18	**Al-Farafra**	41	Ash-Shuhada	69	**Ibn Ya'aqoub**
19	**Al-Feid**	42	As-Sabil	70	Industrial Area / Al-Man-
20	Al-Furqan	43	As-Sukkari		tiqa Al-Sina'aiya
21	Al-Ghazali	44	Ayn At-Tal	71	Industrial Area in Jibreen
22	**Al-Hazzazeh**	45	Az-Zahraa	72	Jabal Badro
23	**Al-Jalloum**	46	Az-Ziediyeh	73	**Jabriyeh**
24	Al-Kawakbi	47	Ba'aiedin	74	**Jamal Abd An-Naser**
25	**Al-Madina Old Souq**	48	**Bab Al-Maqam**		**Park**
26	**Al-Maji**	49	**Bab Qinnesrine**	75	**Jamiliyeh**
27	Al-Mohafaza	50	**Bayada**	76	Jibreen

77	Jouret Awwad	103	**Sahet Bizzeh**
78	**Kallaseh**	104	**Sajilikhan**
79	Karm Ad-Da'da'a	105	Salah Ad-Deen
80	**Karm Al-Jabal**	106	**Salheen**
81	Karm Al-Jazmati	107	Sayf Ad-Dauleh
82	Karm Al-Qaterji	108	Sha'aar
83	Karm Homed	109	**Sheikh Abu Bakr**
84	Karm Myassar	110	Sheikh Fares
85	**Karzdada Cemetery**	111	Sheikh Kheder
86	Khaldiyeh	112	Sheikh Said
87	Ma'asaraniyeh Youth	113	**Suleimaniyeh**
	Housing	114	**Sulleman**
88	Maqar Al-Anbiya'a		**Al-Halbi**
89	Marjeh	115	Syriac Quarter
90	**Masharqa**	116	Tal Az-Zarazir
91	**Maysaloon**	117	Tareq Ben Ziad
	Cemetery	118	**Tatarlar**
92	**Midan**	119	**The National**
93	**Muhamad Bek**		**Hospital**
94	New Aleppo	120	**The Public park**
95	Nile Street	121	Tishreen
96	**Oghlu Bek St**	122	Trab Al-Hellok
97	**Ourubah**	123	University of
98	**Qa'alet Al-Sharif**		Aleppo
99	**Qadi Askar**	124	Youth Housing
100	**Qarleq**	125	Zuhour
101	**Qastal Mosht**		
102	Rasafeh		

Figure 118 Neighborhoods of Aleppo city. Source: UN-Habitat, 2014

At the end of 2013, about 302,000 housing units (52% of the city's 2011 housing stock) were either partially or completely destroyed (see Figure 90). (UN-Habitat, 2014.)

Around 140,000 workers in the industrial sector lost their jobs as the factories' machinery was stolen or damaged. (UN-Habitat, 2014.) Figure 119 shows the location of different land functions in Aleppo city, for instance, housing, industry, informal residential settlements, the old city, and services. The informal settlements are mostly located in the eastern and northern parts of the city.
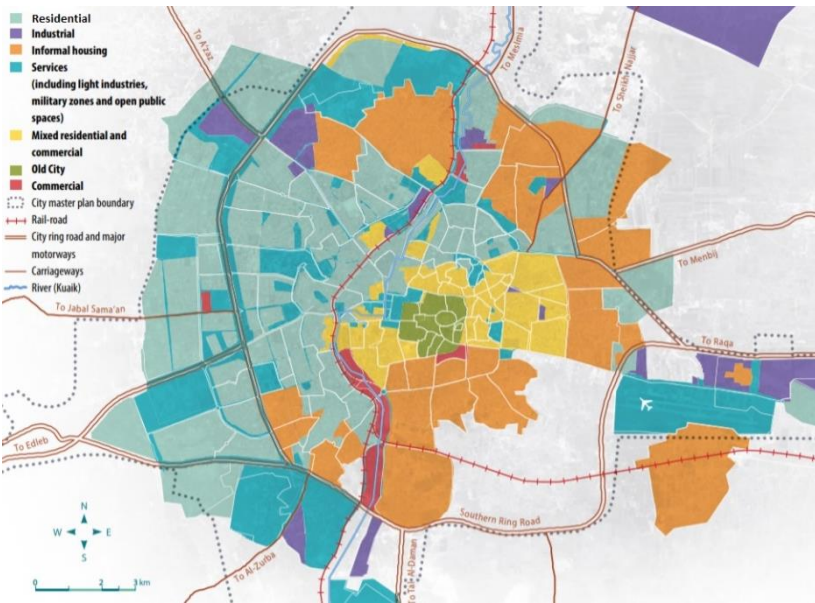
Figure 119 Aleppo city urban texture. Source: UN-Habitat, 2014

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After 2012, two separate main areas grew up in the city: the eastern area and the western area (see Figure 120). The forms of governance in the two areas changed, with the eastern area coming more under the central government and the western area run by local initiatives. Conditions and the services provided vary between the two parts.

Figure 120 East and west Aleppo. Source: UN-Habitat, 2014

Population densities in the most affected areas are high and are largely comparable to those in informal settlements and the city center. Figure 121 shows the population density in Aleppo's neighborhoods before the war.
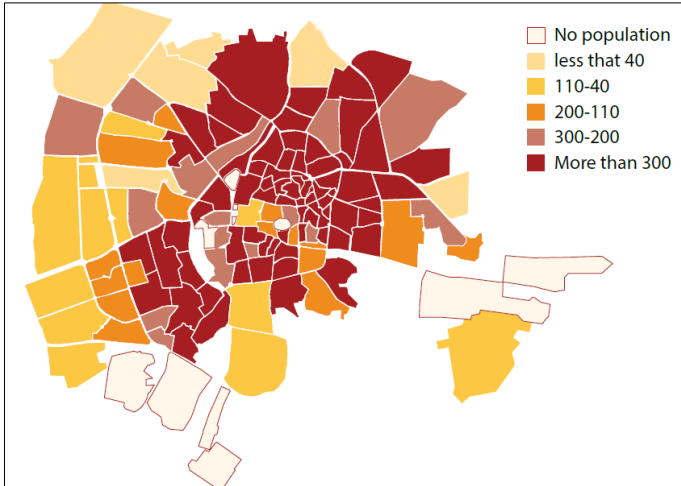
Figure 121 Population density per capita/ha in the city's neighborhoods before 2011. Source: UN-Habitat, 2014

According to the UN-Habitat report in 2014, about 1.72 million inhabitants fled the Governorate of Aleppo (UN-Habitat, 2014). About half of them fled to the Syrian coastal cities or to neighboring countries, with the other half displaced within the city. (Figure 122)
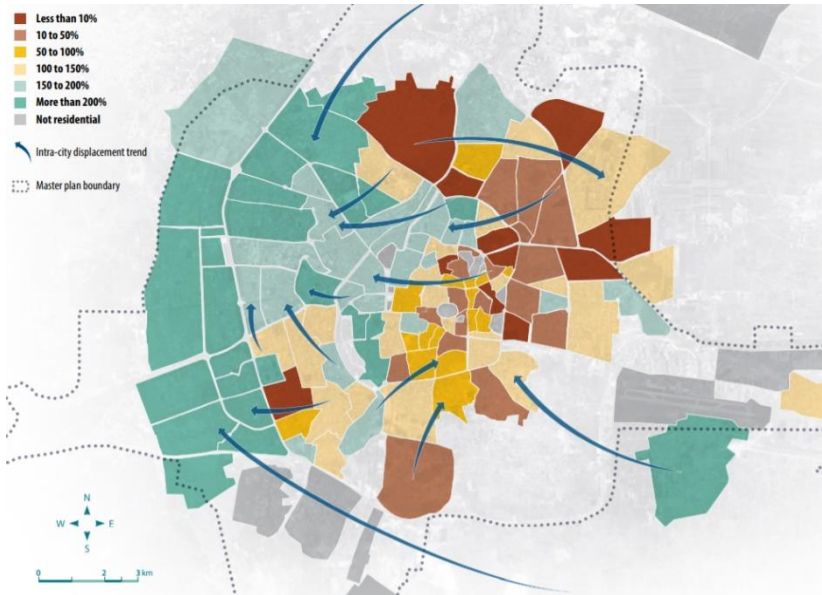
Figure 122 Displacement of the inhabitants of Aleppo city, at the neighborhood level. Source: UN-Habitat, 2014

As previously mentioned, different types of neighborhood arose in the city, as a result of the urban development that occurred over the decades. In the old city area D (in Figure 123), the urban structure is traditional. The neighborhoods there are damaged but not as intensively as in the informal settlement areas E and C or in area B where informal residency is mixed with commercial functions. (Figure 123). The destruction is concentrated in the eastern part of the city, where industry and poor, low-income people are located. The housing type in those

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residential districts is traditional, informal and attached row housing.

Figure 123 Analysis of destruction in Aleppo by area and neighborhood. Source: UN-Habitat, 2014

Figure 124 and Figure 125 demonstrate the degree of destruction in the old city neighborhood.

Before

After

Umayyad Mosque of Aleppo, 2013.
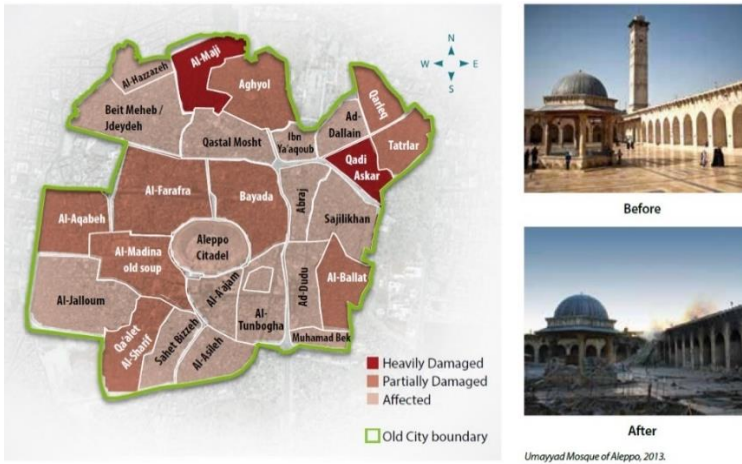
Figure 124 Degree of damage in the old city of Aleppo. Source: Syrian department of antiquities and museums
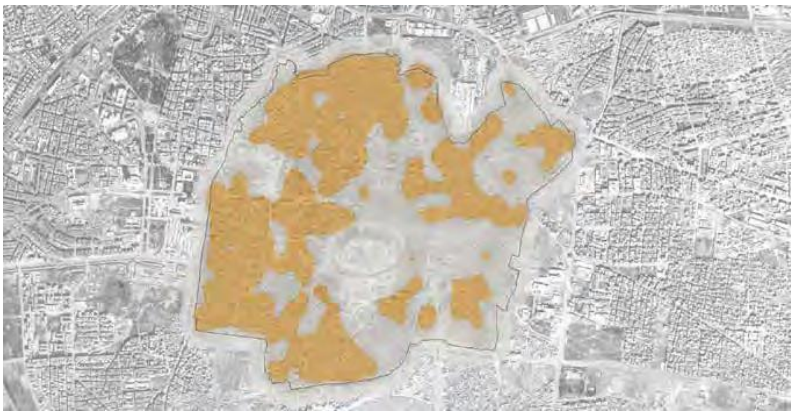
Figure 125 Damage in the old city of Aleppo. Source: UNESCO / UNITAR, 2018

The old city includes the historical, traditional urban fabric (Figure 126). Typically there is row housing in addition to one block of multi-story housing (Figure 127 and Figure 128).

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Figure 126 Traditional urban fabric in Aleppo. Source: the author
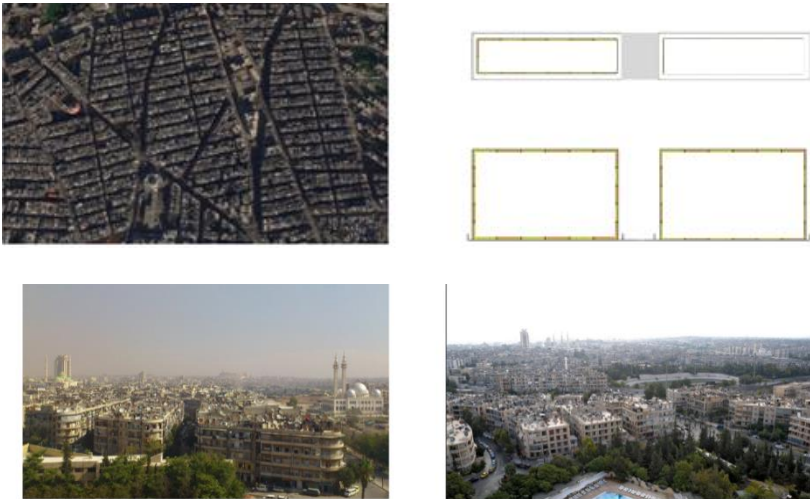
Figure 127 Attached row housing in Aleppo city. Source: the author

Figure 128 Detached multi-story houses. Source: the author

As seen in Figure 129, the damaged areas are mostly in the informal areas that comprise about 40% of the urban structure in Aleppo city.

Figure 129 informal settlements urban fabric in Aleppo city. Source: the author

Outside the city center, there is some high-rise housing (Figure 130) that makes up about 2% of the urban fabric of Aleppo city. (The author).

Figure 130 High-rise housing in Aleppo city. Source: The author

In 2018, a master plan of Aleppo city was organized by the municipality with new areas of housing expansion reserved predominantly for social housing projects. (Figure 131) The expansion is all around the city.
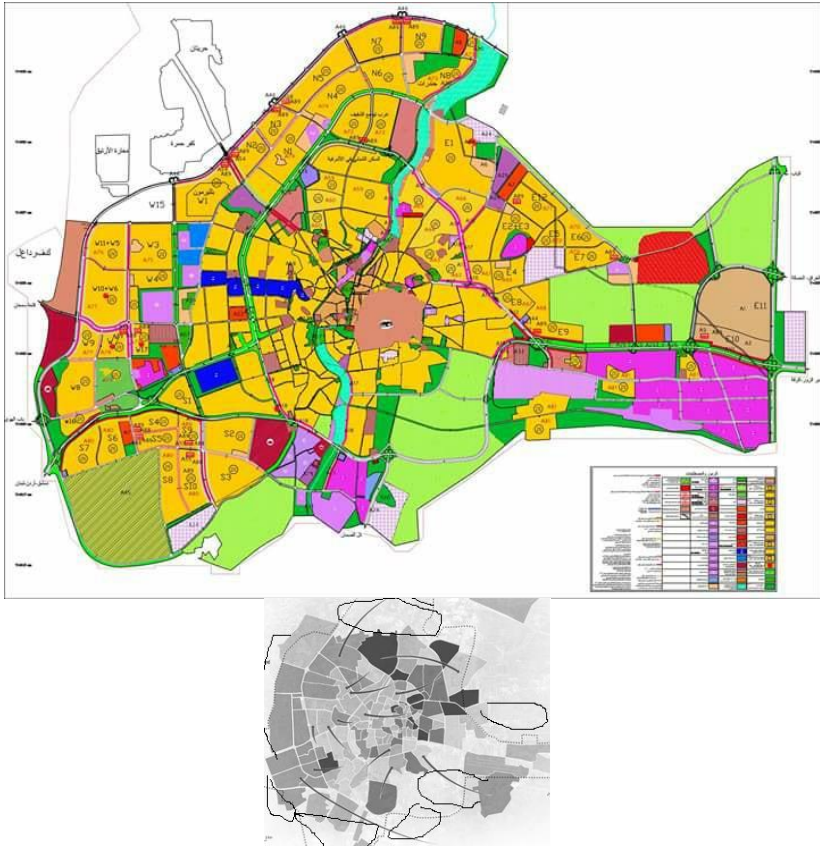
Figure 131 Suggested master plan for the future of Aleppo. Source: The General Company, Aleppo, 2018

After analyzing the situation in Aleppo city, it is clear that the damaged areas are the poorer ones with high population density. The concept of informal is a little bit different between Homs and Aleppo. In Homs, there are neighborhoods built without infrastructure on land not specified for residential use. In Aleppo, there is an additional type of informality where

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people build an additional room, add more floors than is allowed or close their balconies with concrete blocks or glass to convert the space into a room. This occurs mostly in poorer areas, where residents are primarily displaced Syrians or refugees from other countries.

Aleppo and Homs are representative of the post-war housing problem in Syria. In general, they have many similarities with the German case, for instance, the high number of destroyed housing units, the importance of the cities, or the location of the most badly damaged areas.

Summary

The conclusion of this chapter is that the people of Syria suffer from low-income or unemployment and poverty problems caused by the war. The value of the Syrian currency continues to depreciate in comparison to the euro or dollar. Average expenditure is ten times the average income.

Concerning housing, the equivalent of half the pre-war housing stock needs to be built after the war, either in areas that have been destroyed or in new areas of expansion. An overview of the distribution of damaged areas in two war-affected cities, Homs and Aleppo, was provided as an illustration. During the course of the war, plans for housing projects to be implemented

when the war ends, have been put forward by different groups or individual architects, as happened in post-war Germany. Although these proposals demonstrate optimism and creativity, they lack a comprehensive strategy for finding a realistic solution for all subgroups of society.

The required strategy needs to ultimately overcome the war-driven housing shortage by developing proper and sustainable methods for housing planning and construction for the future of Syria. In doing so, it will also solve the informal settlement problem that has existed since before to the war.

The next chapter (6) will compare the two post-war situations, in Germany (chapter 3) and Syria (chapter 5). A recognition of the similarities and differences will be decisive for the considerations about the transfer of social housing measures from the German to the Syrian context.

Chapter 6. *Similarities and differences between the German and Syrian case*

The Second World War in Germany has long passed and the housing strategy used in post-war Germany has been proven successful. In contrast, the war in Syria is still ongoing and no housing strategy has yet been implemented. This time difference is an opportunity to study in detail a demonstrably successful plan from the past with the idea of transferring it, if possible, to a present-day scenario. However, before the question of transferability is considered, it is necessary to look at the two situations of Germany and Syria. Only if similar

conditions exist can a possible transfer have a realistic chance of success. What are the similarities and differences between post-war Germany and Syria with respect to housing destruction and the urban, social, demographic, administrative and economic situations?

It is important to present the commonalities and differences between the two contexts particularly with regard to the above points because post-war housing policy is necessarily linked to these factors (as discussed in Chapter 2). It has to consider for instance such factors as the numbers of destroyed and required houses, the existing urban infrastructure, the people's poverty, the local currency value, and finally the demographic situation.

In order to determine whether it is possible to transfer the experience of social housing in Germany to the Syrian case, it is necessary to know whether the situation in the two cases is comparable. Based on the information presented in the former chapters of this study, there are many similar points, which were recognized in the individual analysis of each case, despite differences between their economic and governmental systems.

In the case of Germany, war ceased throughout the entire country with the capitulation contract, at a fixed date, "Stunde

Null". By contrast, Syria is facing an ongoing war, alternating between cities, without a clearly defined end but with a decreasing extent. Although war took place at a different time and with completely different causes, the impact of hostilities is still comparable between the two countries.

6.1 The urban situation

The urban situation of cities considers the most important features that characterize post-war cities. For example, the number of buildings and infrastructure destroyed and the amount of rubble left on the cities' streets. The following paragraphs will present similarities and differences concerning the urban situation.

6.1.1 Similarities

6.1.1.1 Remains of urban structure:

> War results in damage to urban structure and infrastructure. In the German and Syrian cases, features of the urban structure remained largely intact in most of the damaged cities, for instance, as previously mentioned, the master plans of Hanover and Homs demonstrate that the streets remained in reasonable,

usable condition, creating borders between neighborhoods and real estate.

The two cases are similar concerning what remained of the urban structures of badly damaged cities.

6.1.1.2 Remains of urban infrastructure:

In the German case, about 95% of the underground utilities survived after the war whereas about 70% of the above-ground infrastructure survived. The required urgent step was to supply utilities for the people: water, gas, electricity, and sewage disposal. There was a coal crisis, as coal was not only the most important raw material for German industry but also an essential prerequisite for the transport system as well as the main source of energy for private households.

In Syria, the lack of fuel has led to a sharp decline in the public power supply and the decrease in electricity supply has had a major adverse impact on the delivery of other services such as water and gas. However, there was less damage in the underground infrastructure (about 90% survived). In addition, about 70% of physical infrastructure survived.

The use of remaining infrastructure is therefore possible in both cases and makes the cost of rebuilding the destroyed areas less than the cost of constructing new suburbs or cities.

6.1.1.3 Rubbles in the cities:

In 1945 in Germany, there was a large amount of rubble in the bombed cities. This amount differed from city to city and depended on the type of bombs used, how often the city had been bombed, and the density and character of the city. For example, in Munich, it was initially estimated that 20-25 years would be required to clear away the rubble. In fact, it took only 7 and a half years, thanks to the will of the displaced people who returned to live in their ruined neighborhoods and removed the rubble themselves.

In 2017, Syria had large amounts of rubble in the destroyed cities. The amount differs from city to city, depending on the level of destruction and the character of the city. In Aleppo, for example, it could take an estimated six years of continuous work to remove the rubble. At the same time, it is difficult to start

rebuilding. However, as in Germany, the displaced people have started returning to live in their ruined neighborhoods and are making efforts to remove the rubble themselves.

In both cases, the destruction resulted in large amounts of rubble in the cities whose removal required a great deal of time and effort. In addition, the inhabitants in both cases returned to their neighborhoods to live amongst the ruins and remove the rubble themselves, at the same time trying to fix their houses where possible.

6.1.1.4 Types of building destroyed and their inhabitants:

In the German case, most of the destruction was of multiple-unit buildings rather than single-family houses. The buildings were mostly social housing because this type of housing had been concentrated in the large cities. Population density in the destroyed areas was high, meaning that the poorer sectors of the population suffered much more than the richer ones.

In Syria, most of the destruction is of multi-story apartment buildings that are mostly concentrated in the informal areas where population density is high. Most

of the population residing in these areas have low incomes, again meaning that the poorer sectors of the population suffered much more than the richer ones.

The destruction in both cases is concentrated in high-density neighborhoods inhabited by low-income people.

6.1.1.5 Numbers of destroyed and required houses:

In the German case, the destruction of the Second World War left many families without houses. About 25% of houses (2.34 million of 10.5 million housing units) were destroyed or badly damaged. As mentioned in (section 3.2.5), about 5 million housing units were needed. These numbers indicate that the missing number of housing units in previous West Germany overall totaled about half of the pre-war housing stock.

In Syria, more than 22% of houses (870,000 of 4,120,000 units) were destroyed or badly damaged up until 2017. As mentioned in (section 5.1.4.2), more than 2 million housing units were needed. These numbers indicate that the total number of missing housing units in Syria is about half of the pre-war housing stock.

The two cases are similar in the percentage of housing units required. In the German case, this amount consisted of housing units destroyed, housing units needed by incoming refugees, and the expected need for housing units in the next ten years, taking into account natural population growth. However, in Syria, this amount consists of housing units destroyed, shortfall of housing units before the war, and the expected need for housing units in the next ten years, taking into account natural population growth. Thus, the percentage of housing units needed is similar in both cases.

6.1.1.6 Temporary living space:

In West Germany, in the first months following the end of WWII, people applied skills they had developed during the war to repair whatever they could. With the support of local authorities, property owners slowly began to repair their damaged buildings. Others, who had no house or whose houses were totally destroyed, created shelters in the rubble and built temporary dwellings, illegal or legal. These temporary shelters were especially prevalent in rural areas.

In Syria, in 2017, housing conditions in the cities were awful. Families crowded into shared rented dwellings in the safe areas of the cities. Other families, in the areas where the war was winding down, attempted to repair their apartments, offices, and shops, at their own expense or with the support of non-profit organizations. In cities where the conflict was still ongoing, displaced families lived in collective shelters such as schools and public buildings. Squatting or secondary occupation of unoccupied apartments occurred in hosting neighborhoods. Many inhabitants decided to leave the city in search of greater safety and livelihood. Hosting remains the predominant method for sheltering IDPs, who are hosted by family, friends, and others. Informal housing expansion can be considered as part of the urban crisis and a means to absorb social trouble.

Thus, the phenomenon of people returning to their damaged houses and attempting to fix them where possible, or creating and using temporary living spaces, is similar in both the German and Syrian cases.

6.1.1.7 Percentage of destruction in the cities:

In the German case, the percentage of housing destruction or damage differed from city to city but was concentrated where industry was located. About 4/5 of housing unit losses happened in the large cities, which lost on average about 50% of their housing stock (e.g., Hamburg, Cologne, Dortmund, Münster, and Essen). Housing damage was more severe in the inner cities, where total destruction ranged from 50 to 90%.

In Syria, the percentage of housing destruction also differs from city to city. The percentage of destruction is high in large cities, where industry is concentrated. For instance, up to 60% of the city of Aleppo and 30.8% of its housing units were destroyed. In Homs, 173 of 198 factories have been put out of service, and about 23.1% of housing units have been destroyed.

Thus, in both cases, the percentage of housing destruction or damage differed from city to city but was concentrated where industry was located. In addition, about 4/5 of housing unit losses also happened in the large cities in both cases. In the inner cities the

percentage of destruction was higher than in other areas.

6.1.2 Differences, urban development procedures:

In the German case, many steps were taken before and during the war to create a new urban image for the cities. By contrast, Syria was already suffering from a shortage of urban projects even before the war started. Thus, the destruction caused by the war is a real opportunity to fix long-standing problems.

Cities, in general, reflect their residents in one way or another. They are indicative of social activities, culture, lifestyle, location, and climate, and this is ultimately reflected in the urban structure. All these factors create differences that can be easily recognized when comparing cities. In Germany, a high level of organization is demonstrated in circulation and street image, functions and services, and says a lot about the long-term dedication to regulations and good orientation. In Syria, a spontaneous chain of actions and reactions seems to form a city's image, resulting in an inadequate traffic system and structural failures where

urban development procedures are concerned. The two cases display notable differences.

Table 17 shows the similarities and differences between the two cases concerning the urban site:

	Germany	Syria
Urban situation		
Similarities		
Remains of urban structure	Features of urban structure remaining, eg: streets still usable	Features of urban structure remaining, eg: streets still usable
Remains of urban infrastructure	About 95% of underground utilities and, 70% of above-ground infrastructure survived	About 90% of underground utilities and, 70% of above-ground infrastructure survived
Rubble in the cities	A large amount of rubble in the destroyed cities. The inhabitants return to live in ruins	A large amount of rubbles in the destroyed cities. The inhabitants return to live in ruins
Types of destroyed buildings and their inhabitants	Multiple-unit social housing buildings. High-density neighborhoods with low-income inhabitants	Multiple-story buildings. High-density informal neighborhoods with low-income inhabitants

Numbers of destroyed and required houses	22% of pre-war housing units destroyed. About 50% of pre-war housing units needed.	25% of pre-war housing units destroyed. About 50% of pre-war housing units needed.
Temporary living space	Temporary (legal or illegal) dwellings, sharing housing unit with another family (relatives or strangers), squatting	Informal housing expansion, sharing dwellings with another family (relatives or strangers), squatting with or without agreement
Percentage of destruction in the cities	About 50-90% in the city centers	About 30-60% in the city centers
Differences		
Urban development procedures	New urban projects, regulated and organized, development of traffic, functions, services	No new projects, unorganized growth, spontaneous and less ordered

Table 17 Similarities and differences between the German and Syrian post-war urban situations. Source: the author

Summarizing, the urban situation in the two cases, as countries emerging from war, have many common points. Comparing the two cases shows many similarities in the urban sector.

6.2 The economic situation:

One important characteristic of post-war countries is poverty. The economic status of a country can be characterized by indicators like poverty, unemployment, and the status of industry and the currency. The next paragraph will present the points common to the two cases concerning the economic level of the inhabitants.

6.2.1 Similarities:

6.2.1.1 The people's poverty:

In post-war Germany, the economic situation of most people was poor; they were classified as low-income. The definition of low income is an annual income less than the value associated with a decent standard of living at the time. Poverty levels can also be defined by nutritional status. For example, a lack of animal protein or below-average calorie consumption. The norm recommended by the League of Nations at the time was of 3000 calories a day, but in 1946 the average German consumed only about 1451 calories.

In the Syrian case, the economic situation of most people is poor. It is clear that most of the population

can be classified as low-income based on information provided by the UN office: "Recent surveys have shown that almost 85% of households across the country are living in poverty".(World Food Program WFP, 2017). The poverty level can also be defined by nutritional status. In Syria 2017, about 67.6% of the population across Syria were food insecure. (WFP, 2017).

In both cases, the economic situation of the post-war population is poor. However, a country's economic situation is rated according to world economic classifications and, whereas Syria is a developing country, Germany, by contrast, was a developed industrialized country and this difference undoubtedly influences what is classified as poverty or low income in each respective case. But, even taking these differences into account, poverty and economic deprivation can be judged as high in both the German and Syrian cases.

6.2.1.2 Currency depreciation:

In the German case, at the end of the war, the economy was weak. There was no financing. Directly after the

war, the currency was worthless, but thanks to currency reform in 1948, it started to be stable.

In 2017 Syria, the economy was weak and the currency worthless. Consequently, the Syrian government faced financing problems. Subsidies were dramatically decreased. The value of the Syrian pound to the American dollar dropped more than 10 times over the course of the war years.

In both cases, the currency after the war was worthless and the national economy weak.

6.2.2 Differences: A developed versus a developing country

The status of Syria as a developing country stands in contrast to that of Germany as a developed one, which is an important point to be considered. The classification is made by the UN. Many indicators are used to specify if a country is "developing" or "developed": GDP, GNP, GNP per capita, birth and death rate, mortality rate, life expectation, education, the extent of poverty, HDI ranking, mean years of schooling. Two of these indicators are of particular

importance when making comparisons between Germany and Syria.

The gross domestic product (GDP) per capita is one of the criteria for evaluating the degree of economic development. The GDP per capita in Germany was 4,326 USD in 1945 and 44,550 USD in 2017. Before the war, Germany had a highly-skilled workforce and an advanced technological level. After the war, it started to regain its industrial power and provide job opportunities. Thanks to high levels of know-how, education and skills, Germany was able to establish its recovery on a secure basis.

A developing country can be defined as a low or middle-income country, with a less developed industrial base. It can also be defined as a poor, agricultural country that is seeking to become more advanced economically and socially. Syria is one such developing country. Its GDP per capita in 2017 was about 890 USD.

It had a skilled workforce, but capital supplies and industries have been destroyed or stolen during the war.

In 2017, it started to regain its industrial power. However, it had an unemployment rate of about 55%.

The economic situation in a developing country is different from that in a developed country. This is an important point of difference between the two cases, but the situation is still comparable. Table 18 shows the similarities and differences, in the economic sector, between the two cases.

Poverty is one of the characteristics of post-war countries, accompanied by food crises. Currency depreciation is another characteristic, as well as the lack of capital supplies. The status of Germany as a developed country and Syria as a developing one is one of the important differences which has to be taken into account.

6.3 The social situation:

There are many factors influencing the social situation in post-war times, and one of them is displacement. Other factors are changes in the social structure of the country's population and a strong will for recovery and for using the destruction as an opportunity for better development. All of these phenomena contribute to post-war social changes.

The economic situation		
	Germany	**Syria**
Similarities		
The people's poverty	- The economic situation for populations emerging from war is poor. -In 1945, about 75% of the population, across the country were considered low-income. -There was a food crisis.	- The economic situation for populations emerging from war is poor. -In 2017, about 85% of the population, across the country were living in poverty. - There was a food crisis.
Currency depreciation	In 1945, the currency was worthless	In 2017, the currency was worthless
Differences		
Industrialized versus developing country	- A developed country with GDP per capita 4,326 USD in 1945 (war-end). -Germany had a skilled workforce and an advanced technological level.	- A developing country with GDP per capita 890 USD in 2017 (war-end). -Syria, as a developing country, had a skilled workforce, but in 2017 the unemployment rate was about 55%.

Table 18 Similarities and differences between the German and Syrian post-war economic situation. Source: the author

6.3.1 Similarities

6.3.1.1 Suburban versus urban

In Germany, in the course of WWII, 9 million people (12% of the population) changed their place of residence for greater safety and job opportunities. The destruction of the city centers led to the evacuation of the population, who took refuge outside the cities in rural areas. Later, the people wanted to move back to the cities to find work, especially in industry.

In the course of the war in Syria, 6.2 million people (29% of the population) changed their place of residence for job opportunities and safety. For greater safety, many people moved within the same city or to another big city. Rural-urban migration increased. Thus, a dramatic demographic change took place in these urban areas.

In both cases, demographic change occurred, with displaced people searching for safety and job opportunities.

6.3.1.2 Changes in gender role

-   In Germany, during WWII, many men died or emigrated, as was mentioned in 3.2.3. At the time of the first census after the war, in October 1946, there were only two men in the Western occupation zones for every three women - an unprecedented shortage of men. This was especially true for men of "best age". Women's role changed and females became responsible for family members in many cases. These were changes in tradition and they created some difficult situations at the start.

    In Syria, many men died in the war and many emigrated or fled to neighboring countries to escape military service. The role of women changed and females became responsible for family members in many cases. The ratio of men to women in Syria in 2017 was about 2:3. This activation of women's abilities creates a new situation.

    Thus, social changes after the war in terms of the structure of the family and society are similar in both cases.

6.3.1.3 Inequality

In post-WWII West Germany, the different economic situations between the refugees and the former local inhabitants created a kind of inequality and feelings of injustice. Most refugees had no houses in West Germany or had lost their former properties and had to live in camps directly after the war. Rich people suffered less, but generally, most people were poor after the war, as mentioned in Chapter 3.

In Syria also, the different economic situations between people, which had existed before the war, increased during the course of the war, creating feelings of inequality and injustice amongst a wide group of people. However, as mentioned in Chapter 5, though the rich have been affected less, most people are now poor.

6.3.1.4 The will for reconstruction and development

In the German case, feelings were positive after the war and there existed a strong general will for development and reconstruction. During and after the war, the architects and planners had many ideas about how to rebuild the cities. One of these ideas was to build new

cities near those that had been destroyed. However, as mentioned in (3.2.5), reality demanded that the first step should be to provide the people with such basic utilities as water, gas, and sewage disposal.

In the Syrian case, feelings are also positive and a strong will exists for development and reconstruction. During the war, many ideas appeared and were developed about how to rebuild the cities. Many examples, such as the competition for suitable housing types, were far removed from reality. One of these was the Marota city project for a luxury city in south Damascus, full of technology and skyscrapers (see Chapter 5).

The same goals existed in both cases and were characterized by feelings of hope and a will to use the destruction as an opportunity for new development.

6.3.2 Differences

6.3.2.1 Secular countries

Post-WWII, Germany was officially a secular country. The separation of religion and political power was fixed in constitutional law. Different religious groups existed.

The majority were Christian (Catholic and Protestant) and a small minority were Jewish. The influence of religious groups was indirect, limited to contributions to the public discourse.

Syria is also officially a secular country. However, in Syria, religious influence has traditionally been merged with political power. The influence of the Islamic religion in the government and politics exists. The borders between religion and public affairs are porous. This can be seen in certain laws concerning, for instance, education, marriage and inheritance. In Syria, there are different religious groups. These include the majority Muslims (Sunnis, Alawites, Druze, Isma'ilis, Shiites), and a minority of Christians.

The two countries are officially secular, but there are differences in the amount of power and influence wielded by religion in public affairs and in politics and government. In addition, the war in Syria has increased the level of conflict between the different religious groups.

6.3.2.2 Post-war increase in population

In post-war West Germany, there were many refugees from neighboring countries. Directly after the end of the Second World War, the de facto annexation by the Soviet Union and Poland of the "eastern territories" (formerly part of Germany), along with others from East Germany, created 12 million refugees (about 17% of the German population in 1939), as was mentioned in 3.2.3, who moved from eastern settlement areas into the territory of the Federal Republic.

In Syria, over 5.6 million people (about 27% of the pre-war Syrian population) were officially registered in 2017 as refugees outside the country. The population decreased enormously during the war, temporarily alleviating the housing crisis, but it is expected to grow again, if the country becomes safer.

In both cases, there were demographic changes. In the German case, many people fled to West Germany after the war, searching for safety, and it is likely that, in the case of Syria, many refugees will return after the war.

Table 19 shows the similarities and differences:

Similarities and differences between the German and Syrian case

The social situation		
	Germany	**Syria**
Similarities		
Suburban versus urbanism as demographic changes	Displacement for greater safety and job opportunities.	Displacement for greater safety and job opportunities.
Social changes	- During and after the war many men died or emigrated. Post-war men to women ratio of 2:3. -Women's role changed and females became responsible for family members.	- During and after the war many men died or emigrated or fled. Post-war men to women ratio of 2:3. -Women's role changed and females became responsible for family members.
Inequality	-During and after the war, the different economic situation between people created feelings of inequality.	-During and after the war, the different economic situation between people created feelings of inequality.
Will for reconstruction and development	-Positive feelings and a strong will for development and reconstruction.	-Positive feelings and a strong will for development and reconstruction.

Post-war increase in population	- About 12 million people (17% of the post-war population) fled to West Germany after the war searching for safety.	- An estimated 5.6 million people (about 27% of the pre-war Syrian population) who took refuge outside the country during the war will return.
Differences		
Secular status	- Officially a secular country. - Religion has an indirect influence on public affairs, through discussion of laws.	- Officially a secular country. - Religion has a direct influence on public affairs, through laws and rules.

Table 19 Similarities and differences between the German and Syrian post-war social situations. Source: The author

Although the social frameworks of the two countries have some differences, they are still comparable with respect to the post-war situation.

6.4 The administrative situation

The administrative systems of the two countries show similarities as well as differences. Both have different levels, reaching from national or central level to the provincial and communal levels. However, what is important in the Syrian

case is that there is no coordination between the different levels.

6.4.1 Similarities: the government hierarchy

The German government hierarchy is as follows: national central government, federal state, commune.

The Syrian government hierarchy is as follows: national central government, province, commune.

The two cases have similar hierarchies as the governmental system in Syria has European roots due to the French occupation of Syria.

6.4.2 Differences: federal versus central administrative system

The federal republic of Germany has a mixed governmental system with a central national government and a federal state government. Generally, nationwide relevant laws are given by the central government. Certain domains are in the responsibility of the federal states, eg, culture or education but inside the fixed scope, inside the scope, legal decisions can be made on respective lower levels. These hold also to the communal level.

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This is also the case for lower levels, down to communal level. A recent example, in 2015, was how to deal with refugees. Concerning the housing sector, there is a central ministry that lays down central laws, but the law is formulated in such a way that there is also scope for decision-making by local authorities. There is a framework that provides freedom at a lower level.

The governmental system in Syria is central. There is one central government. Decisions are ultimately made by the central government once local administrative opinions and suggestions have been taken into consideration. Even decisions related to culture, environment, and the education system are taken at national central level.

The two cases are partially similar because there is a central national institution handing down laws. But in the elaboration and implementation of the law at lower levels, there are differences between the two systems. Table 20 shows the similarities and differences between the two cases.

There are similarities between the two cases but, in addition to the differences in their administrative systems, it has to be said that the level of organizing techniques and the precision and

implementation according to bureaucratic rationality is by tradition higher in Germany.

The administrative situation		
	Germany	**Syria**
Similarities		
The government hierarchy	National central government, state, commune.	National central government, province, commune.
Differences		
Federal versus central administrative system	- Central national government mixed with federal governmental system. - Every federal state has own ministries	- Central governmental system. - Ministries are on the national level.

Table 20 Similarities and differences between the German and Syrian post-war administrative situations. Source: Author

Summary

A number of points have been presented regarding the post-war situations in the two countries. The comparison has shown that they have many features in common, while some features are different. However, taking into consideration the differences between the two contexts, the transferability of the German solution to the Syrian post-war housing crisis needs to be discussed in detail.

In order to learn from the German solution for housing, one has to realize that the German solution has factual status (it is in the past), while the Syrian solution only has "could be" status (it lies in the future). Whether the first can be made to fit the second is an open question and needs to be analyzed in order to assess transferability (see next chapter).

Chapter 7. *The transferability of the experience of post-war social housing in Germany to post-war housing approaches in Syria*

In this chapter, an argument will be made regarding the possibility of transferring key characteristics of the German social housing strategy to the Syrian post-war case. Based on

this argument, suggested scenarios for the housing situation in Syria are provided, as are related recommendations for the post-war phase in Syria. The author is aware of the fact, that the German case is factual, in that it has already happened, whereas the Syrian case lies in the future. The idea is – presupposed argued evidence – that out of scientific considerations a scientist gives recommendations to political actors, regardless the unforeseeable decisions they will make. In the context of the thesis it is not a problem of making predictions, rather to give recommendations. The recommendations of transfers of German experience to the Syrian case are made on the basis of an elaborated analysis of after war status and the respective context.

The hypothesis of this research is that it is possible to transfer strategies which were successful in providing permanent post-war social housing in Germany, to the Syrian context. Based on comparisons of the post-war situation in Syria and West Germany, there are arguments that support the notion that transferability is possible. The comparisons presented in the previous chapter reveal many similarities that provide the conditions, at least the possibility, for transferability. Methodologically, the essential aspects of the German social

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housing strategy are examined with respect to the question of whether they are transferable or not. The answer to that question is based on judgements, which are to be substantiated by deliberate and sufficient arguments. Judgements are made with respect to certain criteria. They are outlined in the following section. When transferability of certain aspects of the German experiences is found to be given, a further question is asked regarding in what form they are transferable. So, certain comments on the necessity of adaptions are made.

7.1 Criteria of transferability

The transferability of the characteristics of the German social housing strategy to the Syrian case is judged by two major criteria, including a number of subcriteria:

1-Similarities/differences of war consequences:

- in the degree of building destruction

- in the needs to be addressed by an adequate recovery strategy

- in the still available and functioning infrastructure

- in the displacement of people.

2- Similarities/differences in the contextual situation:

- of financial, material and human resources that can contribute to the recovery

- of governmental and administrative structures

- of available actors (private persons, companies, officials)

- of the traditional attitudes as developing/developed countries

- in the degree of development

- in the degree of skills and education.

These are the criteria applied for judging whether the characteristics are transferable or not and for structuring the arguments concerning the transferability of each essential point of the social housing strategy. In this context, the post-war consequences and the contextual conditions, which are different by history and time issues, in Germany and Syria, need to be considered. Each characteristic, as mentioned in chapter 3, could be transferable in general but might differ in detail.

Such characteristics, for example, are the laws as a regulating framework or as standards for actions. Another characteristic is funding. In the German case, there was international aid; in the

Syrian case, there could be a variety of possible scenarios for further development:

- International support

- Own recovery

- A mixture of the two.

Using the above criteria, it is investigated whether the German social housing strategy and its key characteristics can be transferred to Syria.

7.2 The social housing concept and its characteristics

The social housing concept is the approach to sustainably improve the housing situation in Syria as a developing country suffering from war. Most of the Syrian people are not able to enter the free housing market due to their poor economic standing. Social housing was the solution for the housing shortage in Syria prior to the start of the war, with small flats and governmental support provided to some special groups. However, as discussed in Chapter 5, this social housing strategy faced some obstacles. Among these were the use of traditional construction methods, the absence of a clear

definition of the target group, and unclear and complicated housing laws.

The number of people in Syria unable to afford a permanent place to live has further increased due to the destruction of houses and the worsening economic situation of the population. This confirms the need for affordable, permanent solutions, with support either from the government or non-profit organizations. Thus, social housing is a necessary strategy for the housing situation in Syria. Figure 132 illustrates the possibility of transferring the social housing concept from the German case to the Syrian one.
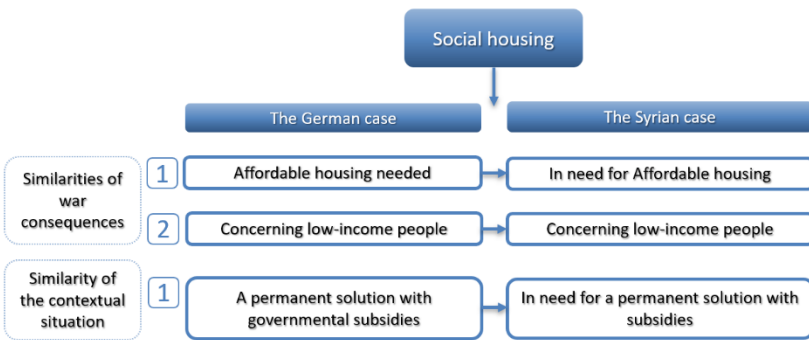
Figure 132 Possibility of transferring the social housing concept from the German case to the Syrian one, as suggested by similarities of the two cases. Source: The Author

The social housing concept as a characteristic of the German case strategy is transferable through two similar consequences of war: 1) The need to build a quantity of housing units equivalent to about 50% of the pre-war housing stock; 2) A large proportion of the population (70-80%) suffering from poverty or war victims. (The first has to take into consideration, that in the Syrian case there are no accurate statistics about the number of people in need of dwellings).

The social housing concept is transferrable also through a similarity in the contextual situation: the need for affordable housing which can be subsidies by the government, as in the German case, or from a different source depending on the particularity of the Syrian context.

7.2.1 The housing law as a regulating frame

Housing laws are the bases of housing programs, as they regulate critical factors such as standards of housing size, type, cost, target groups, financial issues, and investors. These standards were made clear in the First and Second Housing Laws passed in West Germany after the war, the first of which was set in response to the post-war emergency situation. The equivalent of about 50% of the prewar housing stock was

needed (either because 50% had been destroyed or because that figure was deemed sufficient). A large number of residential buildings in the cities had been destroyed, most of the population (70%) was unable to access the housing market because of poverty, and the economy was still weak. The situation in Syria in 2017 was similar to the German case, as demonstrated in Chapter 6, meaning that the need for and enactment of social housing law is transferable.

However, there are some special conditions to be mentioned. In the Syrian experience of social housing, laws surrounding housing were not sufficiently clear and a clear definition of social housing did not exist (see Syrian Housing Law Nr. 39 in 1986). Furthermore, the target group for social housing programs was ill-defined, lacking specific standards. For example, the income ceiling for qualifying individuals was not stated. Housing laws must specify clear criteria for target groups. Furthermore, there was no one law concerning social housing in general, but rather a number of specific laws issued to each of the housing establishments, creating a kind of mismatch between them in results. It is therefore particularly important that one contemporary law concerning social housing programs be issued after the war.

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In previous social housing laws in Syria (see Syrian Housing Law Nr. 39 in 1986), housing projects were either implemented by investors or private contractors working for the General Establishment for Housing. Throughout the war, the law provided the chance for the private sector to invest in social housing, but in reality, the tax on loans was too high and potential profits too low to attract investors from the private sector into housing.

Based on the above considerations, the issuance of new housing laws with certain standards to address all issues specific to the Syrian case is a necessary and transferable idea from the German context (see Figure 133).
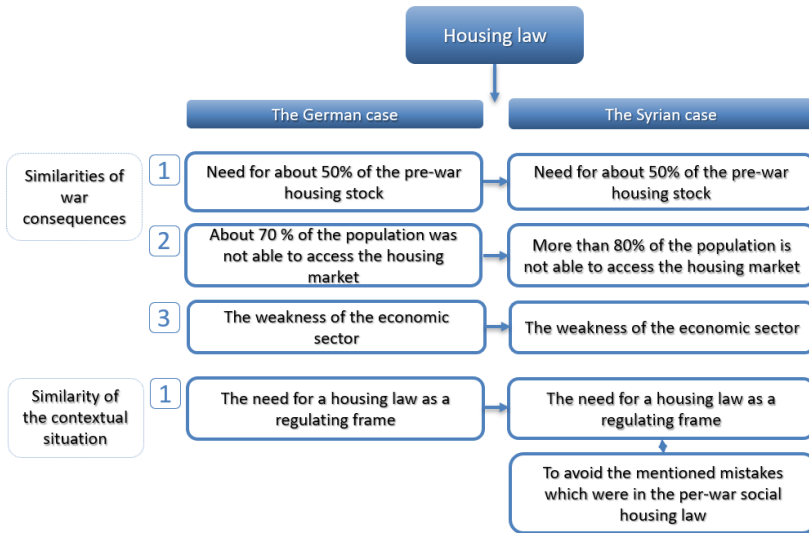
Figure 133: Possibility of transferring the concept of enacting a special housing law for a post-war situation from the German case to the Syrian one, as suggested by similarities of the two cases. Source: The author

The concept of enacting a social housing law especially adapted to a post-war situation as a characteristic of the German case strategy is transferable because of the mentioned similar consequences of the war in Syria.

The concept of enacting a housing law specifically for a post-war situation is transferable also because of similarities in the contextual situation: there is a need for this law as a regulating frame specifying standards in house size, type, cost, and target group. The mistakes of the old housing laws in Syria need to be tackled to ensure that they are not repeated.

7.2.1.1 The target groups (see 3.3.2.4)

In 1950, about 70% of the German population qualified for social housing. In the First Housing Law there were two criteria for target groups:

1- Displaced people and bombing victims. There were also special programs for resettlers, Soviet-zone refugees, miners, displaced elderly, displaced people, barracks, and federal employees.

2- Income ceiling. Family income ceiling was between 6000 DM /year and 9000 DM/ year depending on the different categories of housing.

As a country coming out of a war, Syria must certainly consider war victims, those who lost their houses, the displaced, and returning refugees as target groups for social housing. Low-income individuals must also be considered, such as government employees who earn less than, or equal to, the international poverty line. This was specified by the World Bank in 2015 as $1.90 a day for one person, or 28,500 S.P. (1.90x30x500) a month per person. This means that for families consisting of 5 people, incomes below 142,500 S.P. (28500x5) per month would fall beneath the poverty line.

However, the reality is that government employee incomes are between 10,000 and 45,000 S.P. monthly, well below internationally considered poverty levels. Those who lost their jobs as a result of war-related destruction should also be considered as part of the target group. In sum, those who should qualify for social housing (55% government employees + 22% unemployed + war victims (eg. the disabled) = more than 80% of the population).

One of the differences in the two contexts is that in Syria there was no heavy bombing in which massive numbers of people were killed. Rather, Syrian civilians were victims of smaller-scale destruction that left a large proportion of the population unable to work and in need of housing.

Unlike in Germany, in Syria, the income ceiling is difficult to determine. Many employees are paid under the table in cash. Moreover, many people have multiple part-time jobs. For example, a school teacher can work as a taxi driver in the evening if he owns a car, thereby supplementing his official income. This makes it hard to pin down incomes in Syria.

It can be seen from the above that it is necessary to specify the target group of social housing programs in Syria. Important

characteristics can be transferred from the German case, while
considering the specific situation in Syria. (see Figure 134).
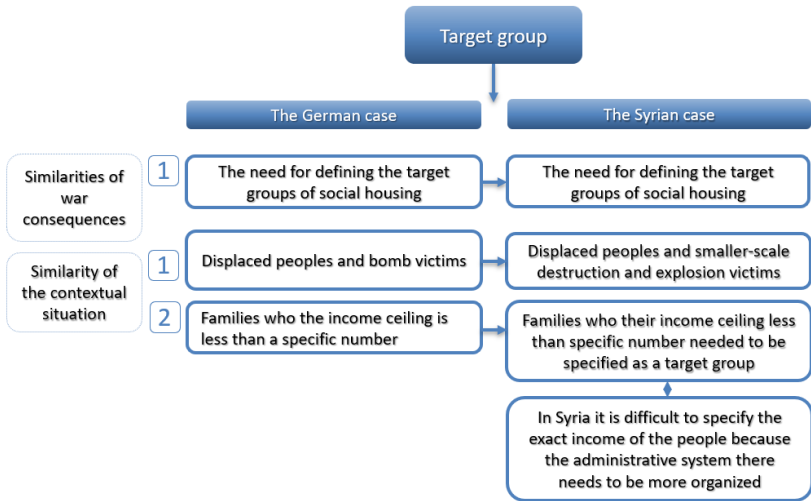
**Figure 134 Possibility of transferring target group definitions in social housing law
in a post-war situation from the German case to the Syrian one. Source: The
author**

Defining the target group for social housing for a post-war
situation as a characteristic of the strategy in the German case
is transferable given the similar effects of war on the two
countries. Large numbers of victims and poverty are similar in
both cases. However, assessing family income in Syria is much
more difficult than it was in West Germany since the
administrative system in Germany was more developed. In
Syria, it is difficult to get reliable figures.

7.2.1.2 Standards for housing size (see 3.3.2.5)

In Germany, the post-war constructed houses were generally small (3.25 rooms per unit on average). Apartment areas were a minimum of 32 m^2 up to a maximum 65 m^2, which could be extended to 80 m^2 of living space. Up until 1954, most flats were 40-50 m^2. The Second Housing Law specified a maximum of 85 m^2 and a minimum of 50 m^2. Special cases such as family homes specified a maximum of 120 m^2, with older couples allotted 36 m^2 and single people 26 m^2, as mentioned in Chapter 3 (3.3.4.2). The number of rooms per person increased from 0.9 (10-15 m^2) in 1950 to 1.0 at the end of the 1950s, then to 1.5 (30 m^2) at the beginning of the 1970s. The increase in the size of the flats was related to the economic situation of the country and therefore of the population.

Prior to the war in Syria, there were norms for the different kinds of houses. For example, row housing for one person was 11-18 m^2 as mentioned in 4.6.1. It would be good to maintain the commitment to minimum limits in the post-war situation, because of the poverty of the population and the high cost of construction materials and labor. Many social housing programs implemented in Syria before 2011 designated apartment sizes between 65-90 m^2. The size of social housing

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apartments was related to building costs per square meter and average family size. Before 2011, the average family size was 5.5 people, and was estimated at 4.7 persons between 2011-2017. The cost of one of social housing was 3,838 S.P. (77$, in 2010) but rose to 110,000 S.P. (220$, in 2018).

Up until 2010, the maximum period of time given to subscribers to repay their loan was 25 years. As mentioned in Chapter 4 (4.6.5), average monthly income per person was about 12,000 S.P. (240$, in 2010) and 35,000 S.P. (166$, in 2017), nearly three times higher, but during the same period, the cost of one of housing rose by 30 times. In addition, the average monthly expenditure on basic human needs is about 7 times average income. Social housing law in Syria states that monthly repayments on housing loans must not exceed 25% of income.

Given the above data, good quality small houses at minimum prices are needed. This conclusion takes into consideration the fact that average family sizes have decreased over the wartime years and will likely continue in this direction based on the current economic situation of families. Moreover, smaller, young families still dominate the domestic landscape of Syria. The standard of the small apartments is one lesson that can be

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taken from the German experience, albeit scaled to fit common Syrian family sizes, which vary more widely than those in Germany.
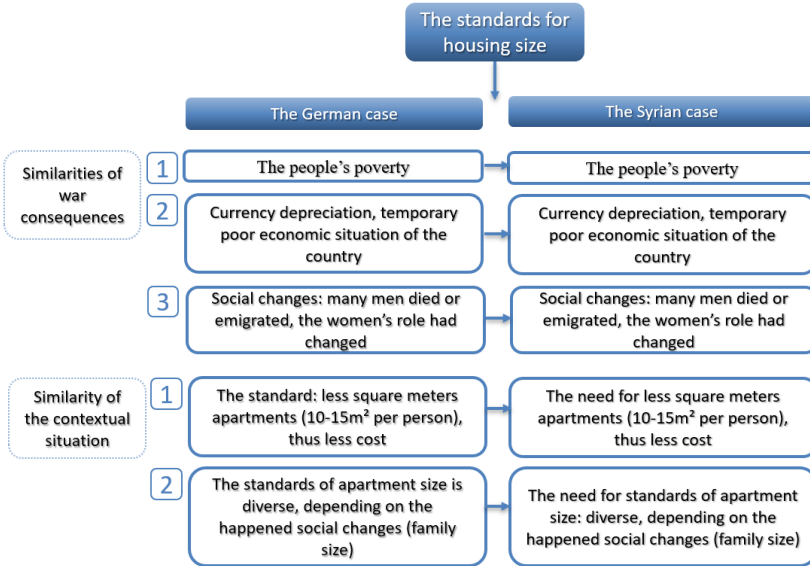
Figure 135 Possibility of transferring the standards for housing size from the German case to the Syrian case. Source: The author

War consequences in the two cases are similar. For instance, as mentioned in Chapter 6, the structure of the family has changed, reflecting other social changes. Thus, the average family size has grown smaller over the war years. Other similar effects experienced by the two countries are a temporarily weak economy, manifested by currency depreciation, and the poverty of the people.

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The post-war situation in Germany led to a recognition of the need for specific standards in social housing sizes (standardized norms) to be laid down in law. It also led to the need for standardized allocation of living space (m²), taking into account, for instance, average family size and the requirements of single people and elderly couples, as well as cost per square meter of housing, in order to figure out what could realistically be financed. These housing size standards are transferable from the German to the Syrian case, due to the similarities in war consequences and the contextual situation of the two cases.

7.2.1.3 Financial support and subsidies (see 3.3.5)

An efficient housing finance system is a prerequisite of a practicable social housing strategy. As outlined in Chapter 3, the specificity of social housing in Germany is that it was defined as a financing policy with distinct regulations and responsibilities, including the possibility of transition to private ownership or renting once the subsidized loans had been paid off.

During the 1950s and 1960s, three forms of governmental or public subsidies were provided by the local, state, and national

central governments, as mentioned in Chapter 3 (3.3.5). The first two kinds of subsidy were provided to build units:

1-Direct money for the household to build their own house or to the investor to build housing units.

2-Loans offered to the investor with no interest or low interest. Investors were then obliged to take low (cost-price) rents for a specific period. The extent of this lock-in time depended on the size of the subsidy and the type of program.

The financial assistance was provided from the public money, with the central national Government and Federal States paying up to 80% of costs. In exchange for subsidies such as tax relief or grants, mortgages as first-rate mortgages from the capital market, home savings loans, and subsequent public loans, these companies or investors were required to treat housing as a social contribution. In other words, this meant enforced rent ceilings and income limits for a specific period. The loan amount and interest resulting from the "standard rent" were to be determined locally.

Once the loan was repaid, the owners of the houses were free to sell or rent these properties at market prices. However, many

of the developers were firms owned by the municipality, which in practice, continued to operate the units as social housing.

3-The third kind of support was a personal subsidy provided to groups of people unable to pay their house rent (Wohngeld), effectively keeping their rents low. This kind of subsidy was mentioned in the Second Housing Law in 1956 and activated at the same time.

In Syria before 2011, social housing was dependent on public (government) support. The government offered 20-30% of both the costs of site development and construction, which is why social housing was cheaper for the subscriber than in private sector housing. In addition, long-term loans were offered to subscribers to help them pay their monthly installments, and to own the house at the end of the repayment period (although this depended on the social housing program).

The German concept of social housing could also work in Syria in its post-war state, first as a temporary and then as a permanent solution. In other words, low-cost social housing apartments could be rented to people who need a place to live, for a specified period of time. This would also be good from a social perspective, allowing different groups of people to live

together again in a spontaneous way that aids social recovery. At the end of the specified time period, when their economic situations had improved, people could choose whether to buy or leave the apartments. In some cases, the rent also contributes to achieve ownership after some time. This social housing concept could be one solution to the problem of whether funding for the building of social housing should come from the government or the private sector and whether it should be subsidized.

Syria as a developing country is considered a poor country. Under the weight of economic sanctions and the consequences of the war, the economic situation has continued to worsen. This research will discuss financial issues from a conceptual point of view, presenting different scenarios (mentioned at the beginning of this chapter) linked to possible financial solutions.

Scenario 1) the money comes from inside the country, thereby enabling its own recovery

Scenario 2) there is internationally supported funding

Scenario 3) the source of the money is a mixture of 1 and 2. Internal resources and international support.

Scenario 1

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During the past eight years, financial resources in the Syrian housing sector have been small amounts of capital coming from:

1-Non-profit organizations like the UN and others:

- The United Nations Development Programme (UNDP).
- GOPA -DERD "Gesellschaft für Organization Plannung und Ausbildung." The Department of Ecumenical Relations and Development.
- UNHCR Syria United Nations High Commissioner for Refugees (The UN Refugee Agency in Syria).
- ICRC Syrian Arab Red Crescent.
- HRP Humanitarian Response Plan.
- UN-Habitat United Nations Human Settlements Programme.
- UN-OCHA United Nations Office for the Coordination of Humanitarian Affairs. UNOCHA Syria Hub.
- S.H.A.R.P Swansea Humanitarian Aid Response Project, Aid for Refugees.

2- Money transfers from Syrians residing outside the country to their families still living there.

Other sources of money that may be considered for the future in the Syrian case are:

1- Taxes levied on people who have not suffered directly from war destruction.

2-Investment: contracts of investment between international companies and local, private ones.

3-The economic recovery of the country, by raising the efficiency of agricultural investments such as cotton, wheat, citrus, as well as industrial investments such as the housing industry, oil, gas, and basalt.

The first three sources of money could help fix the situation in industry (by reactivating factories and industrial cities) and refresh the country's economic situation. Thus, it could help repair damaged houses and rebuild new ones.

Scenario 2

This scenario foresees international funding support and could be compared to the Marshall Plan in the German case.

In the current economic situation, housing reconstruction will be gradual and will not occur at the same time for all cities. This is because there is an existing shortage of about two

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million units that still need to be built. A wide swathe of the community still has no access to the housing market, thus requiring the intervention and support of the government and private sector to subsidize the housing sector, especially for new housing. This can be achieved later through loans with reduced/exempt taxes when the government recovers economically. In the Syrian case, it is difficult to offer grants for building houses based on the current economic situation, which differs dramatically from that of the German case. But, a change to the situation can be expected after the war, with the help of international funding and economic recovery.

When it comes to building social housing programs, it is necessary to extend the repayment period beyond 25 years commensurate with the monthly income of the subscribers and their average monthly expenditure.
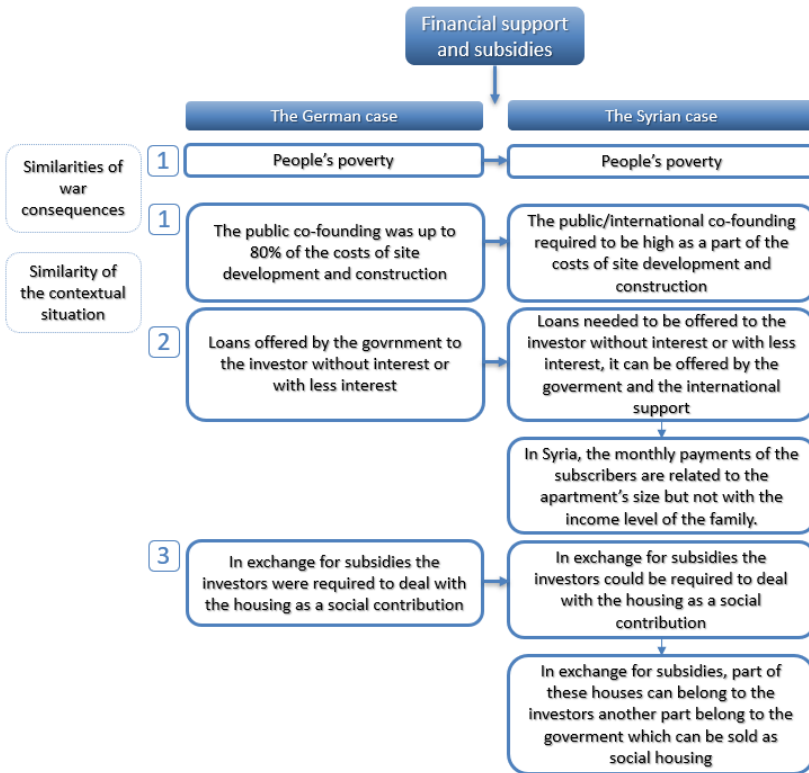
Figure 136 Possibility of transferring the financial support and subsidy as a characteristic of social housing strategy in post-war Germany to the Syrian case. Source: The author

Based on the above data, government financial support for social housing can be provided when the Syrian economy begins to recover. At the same time, the housing industry will be a source of job opportunities and therefore critical to economic recovery. Another way to provide social housing is

to secure enough funding from international organizations or private international investment in local companies. This would provide money and job opportunities to local inhabitants. A third way is a mixture of the two. In all three cases, loans with reduced/exempt taxes can be given to public or private investors to build social housing. This is because planning and constructing new social housing requires a lot of money, because of the price of land, building material, and labor.

Financial support and subsidy as a characteristic of social housing strategy in post-war Germany are considered to be transferable. One condition is the contextual situation and whether there is enough money available to invest in the housing industry. The German economy recovered at the same time that government social housing programs were being provided and loans were given. Given the difference between the economic situations of the two countries, transferability is possible, within limits.

Thus, the allocation of funds for social housing must be written into housing law.

7.2.1.4 The investor

The role of the investor is very important in implementing housing strategies. In the German case, private companies, insurance companies, non-profit and public entities, and individuals were allowed to invest and receive financial subsidies. This approach to housing policy considers the role of public policy as a way to achieve a kind of balance between the demands of the market and government intervention.

In Syria, before the war, the General Establishment for Housing and the Military Housing Establishment were responsible for social housing provision. During the war, the Real Estate Development Law was passed to allow private investors to provide social housing to the low-income group. If the private sector participates in providing social housing in addition to the public sector, the number of social housing units will increase, and the gap between demand and supply will be less. However, due to the difficulty of getting a loan and the high-interest rates imposed by the banks on the private developers, their motivation decreased.

In this case, a different approach needs to be applied after the war to make social housing provision more attractive to private developers. This could be achieved, for instance, by reducing

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the interest rates of loans or by the provision of grants. One may also allow private investors, who construct housing projects, to own a specific number of the flats, based on a specific percentage of the costs, as a solution for destroyed areas.

Likewise, what was done in Germany could also be replicated, namely allowing investors to construct housing projects that allow those in need to rent low-rent housing units for a specified time period, until investors finish repaying the loan installments. These measures could be set as regulations within housing law. This solution is transferable from the German case to the Syrian context, taking into consideration Syria-specific issues.
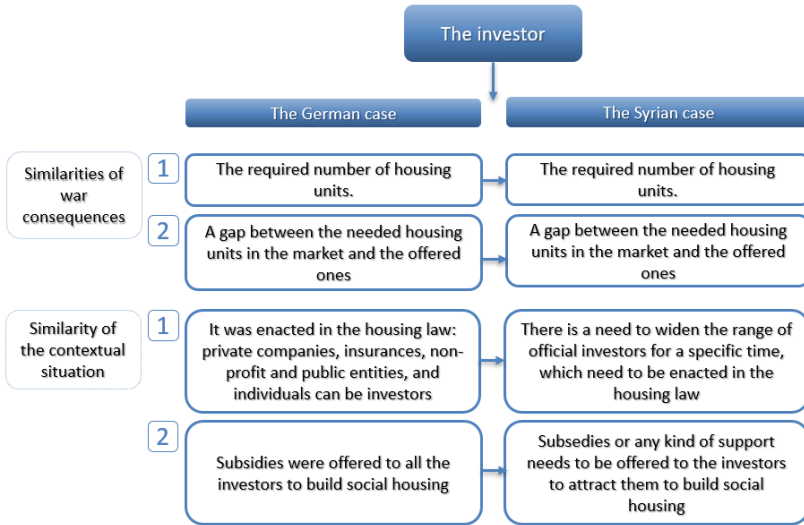
Figure 137 Specification of the investors in the housing law as a characteristic of the social housing strategy in the post-war German case and the possibility to transfer it to the Syrian case. Source: The author

Specifying the investors in this particular way, which had been done in post-war West Germany is transferrable due to a similarity in the contextual situation, concerning the need for a variety of investors. It would be difficult for a single kind of investor, for example, the private kind, to build millions of housing units in one decade. The solution in the German case was to offer subsidies to private companies, insurance companies, non-profit and public entities, and individuals. With respect to the similarities of the cases, this strategy can be regarded as the needed solution in the Syrian case. However, in

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Syria, as a developing country, it will be difficult for the government to give subsidies to all these investor groups. At the same time, it is difficult for investors to carry out all the required housing projects without subsidies or some other kind of support to attract their interest.

7.2.1.5 Flexibility and networking across various levels of government

Germany utilizes a mixture of central governmental and federal administrative system in which every state can decide specifically on certain issues. It was decided that the housing minister of the central government was responsible for specifying the targeted group of social housing, through the housing law. The rent prices for apartments designated as social housing had been related to the average income. It could differ from state to state by a maximum limit of 1DM for every square meter monthly (up to 1.10 DM in some special cases). The federal funds for housing varied from one state to another. In each state, funds were divided between cities, and the money often was mixed with local resources. The design of the houses and many other issues were decided locally.

Syria, in contrast, has a central administrative system. After wartime, it is important to have a central housing law issued by

the housing minister. This law should be specific to solve the housing crisis at hand. Nevertheless, each city should have its own special housing design based on the specific environmental, economic, cultural and social needs of that city. It needs to be considered in that regard, that the housing crisis also varies from one governorate to another and from one city to another.
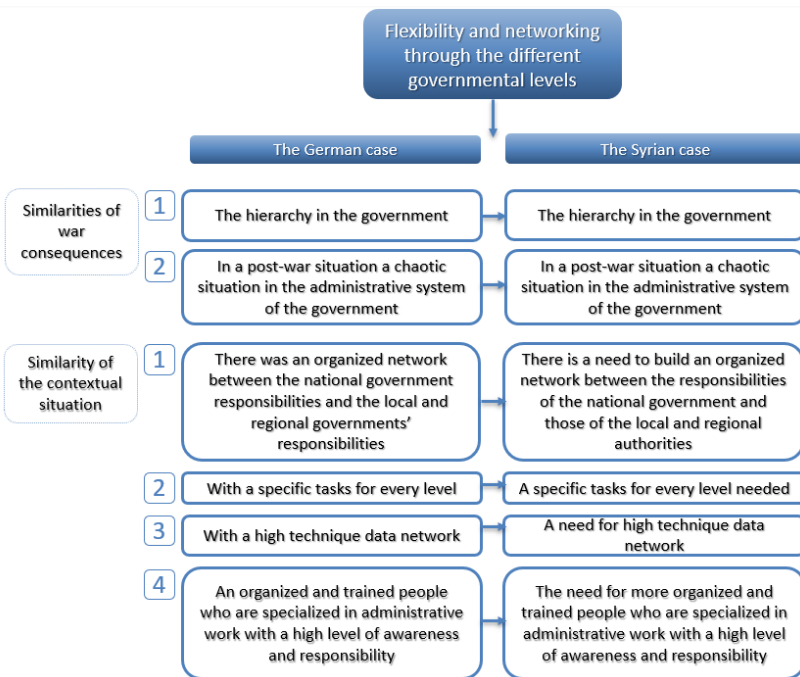
Figure 138 The transferability of the networking through the different governmental levels, as a characteristic of W-German social housing, to the Syrian case Source: The author

This organized administrative German system can be transferred to the Syrian context. Typical for post-war conditions is the initial chaotic situation in the administrative system, which can be regarded as similar in the historical German case and the expected situation in Syria. In addition, there exists a similar hierarchy in the government. However, in the contextual situation for the two cases, there are some points that existed in the German case and should be organized in the Syrian case. For instance, a legal framework organizing the relationship between the responsibilities of the national government and the responsibilities of local and regional governmental authorities. The social housing law must determine specific tasks for every level, who can decide, about which issue and how. Also, it needs more organized and trained people in administrative work with a high level of awareness and responsibility. Therefore, a versatile and technically skilled networking system is needed.

7.2.1.6 Special social housing programs

In the German case, there were special programs for housing different groups, such as war victims and displaced people, refugees from the Soviet zone, displaced military personnel, miners, federal employees, and groups with special needs, such

as widows with children or old people. These kinds of programs are very important and necessary in a post-war situation.

In Syria, in 2017, different special social housing programs were planned (e.g., for families of martyrs and war victims) but have yet to be implemented.

This strategy is transferable, but the target groups are different in the Syrian context due to different scenarios and outcomes of the war.
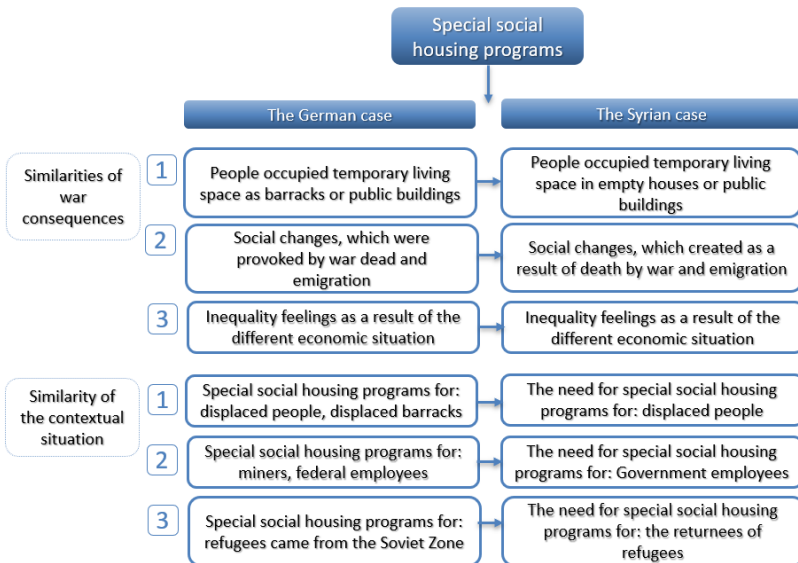
Figure 139 Special social housing programs as a characteristic of the German case strategy and their transferability to the Syrian case. Source: The author.

Special social housing programs as a characteristic of the German case strategy are transferable to the Syrian case because of three similar war consequences:

- People occupied temporary living spaces such as barracks or public buildings.

- Social changes, which were provoked as a result of death by war and emigration.

- Inequality feelings as a result of the different economic situations within the resident society or because of being refugees who lost their properties. The solution to this situation probably is a special social housing program concerning those groups.

The concept of the special social housing program is transferable also because of similarities in the contextual situation, though, due to different scenarios and war outcomes, the target groups of these programs can be different. In both cases, the displaced people who lost their homes because of the war need a quick solution, in their old cities, if possible, or in a new place where they have a new job. In the German case, many refugees came from the Soviet zone. They had lost their properties there and needed a permanent place to live. In the

Syrian case, the returnees and victims were mostly in Syria before the war.

7.2.1.7 The tenancy

Social housing in post-war West Germany consisted of:

- Highly subsidized rented and cooperative flats in urban blocks.

- A considerable amount of owner-occupied housing in smaller peripheral developments and single-family homes.

The majority of new housing units was rental. There was not much demand from buyers, because few people had enough money at the time.

In Syria, homeownership is more common and is preferred to renting. This is one of the reasons for the phenomenon of informal settlements in Syrian cities. It reflects a tradition and a need for stability and safety. Perhaps after the war, these sentiments might change when people feel they are no longer in a state of emergency.

In present-day Syria, there is a need for dwellings in the big cities. These can be rented to begin with, then owned when the economic situation of the inhabitants improves. Likewise, one

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can continue with the previous social housing strategy that facilitates ownership when the subscriber completes the repayments. This means that this feature is transferable from the German experience within what is appropriate to the economic situation of the population of Syria.

However, the one-family house strategy is not a solution for the current Syrian housing crisis. In Germany, since there was a large number of incoming refugees from other countries, integrating them into the towns gave them a sense of belonging and helped solve the housing problem. In the Syrian case, however, the people coming in will be previous inhabitants who fled the country in search of safety and who are now looking for their old house, or for compensation or alternative housing. The one-family house subsidy could be a step in a future housing strategy to motivate people to stay in their towns rather than move to the big cities in search of work. In the future, after solving the current housing crisis, there should be a general development policy for the Syrian towns.
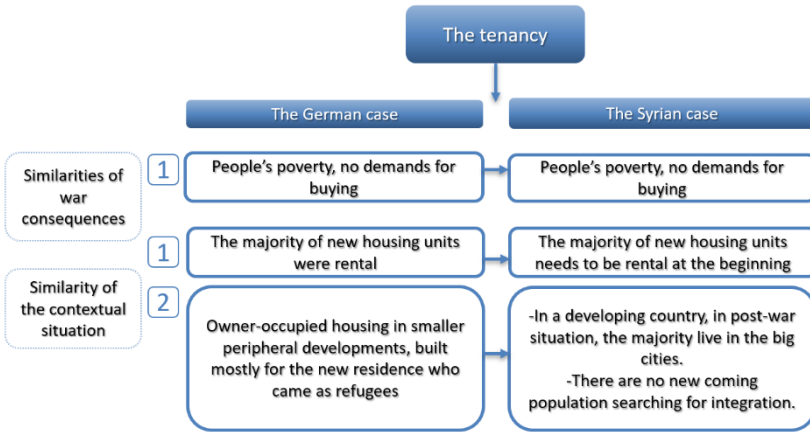
Figure 140 Transferability to the Syrian case of housing tenancy in urban blocks as a characteristic of the German case strategy. Source: The Author.

Housing tenancy in urban blocks as a characteristic of the German case strategy is transferable to the Syrian case because of a similar war consequence: the people's poverty that precludes them from buying a house directly after the war.

Housing tenancy as a concept is transferrable also because of a similarity in the contextual situation: the solution for the post-war situation is that the majority of new housing units need to be rented at the beginning. In the German case, owner-occupied housing formed a part of the social housing strategy, especially for newcomers in rural areas. In the Syrian context, there are no newcomers. Most of the social housing target groups are located in big cities.

7.2.2 Housing quality, construction methods, and techniques

In the German case, housing construction was quantitatively oriented. In addition, it focused on long-term housing projects, as temporary housing can be considered a wasted resource. The renewal of legal and fiscal tools enabled poor property owners to redesign and rebuild their damaged buildings using the new, more efficient construction techniques that were available after the war. Housing construction was mostly standardized to speed up the construction process and achieve greater efficiency. The new buildings were characterized by increasingly industrialized construction methods.

Some international housing strategies had recommended temporary housing structures made of wood and prefabrication as a new construction method, but local authorities in Germany blocked the construction of prefabricated units. They insisted that solid masonry construction would last for decades and that the design of individual buildings should reflect traditional local styles. Because of the severe shortage of houses, some were built using the suggested international construction methods, but later, in the 1960s and 1970s, these were demolished and rebuilt to higher construction standards.

The transferability of the experience of post-war social housing in Germany to post-war housing approaches in Syria

In Syria, the construction quality of historic buildings in the city centers proved to be very good, as they have remained stable over the years. Formal social housing also remained stable, even when neighboring streets were bombed. Earlier descriptions of the quality of social housing as poor referred to such things as electrical plant, plumbing and insulation materials used. Standards can also be good, but one must take into consideration that Syria is a developing country, with little money to invest and a few experts.

Construction techniques in Syria are still traditional. This means that a lot of time is needed to construct new buildings and the quality is lower. This is an essential point to consider in a post-war situation and one can learn from the successful German experience in this regard. The best technologies and instruments are needed for fast construction and quality. Also, standardization could be transferred.
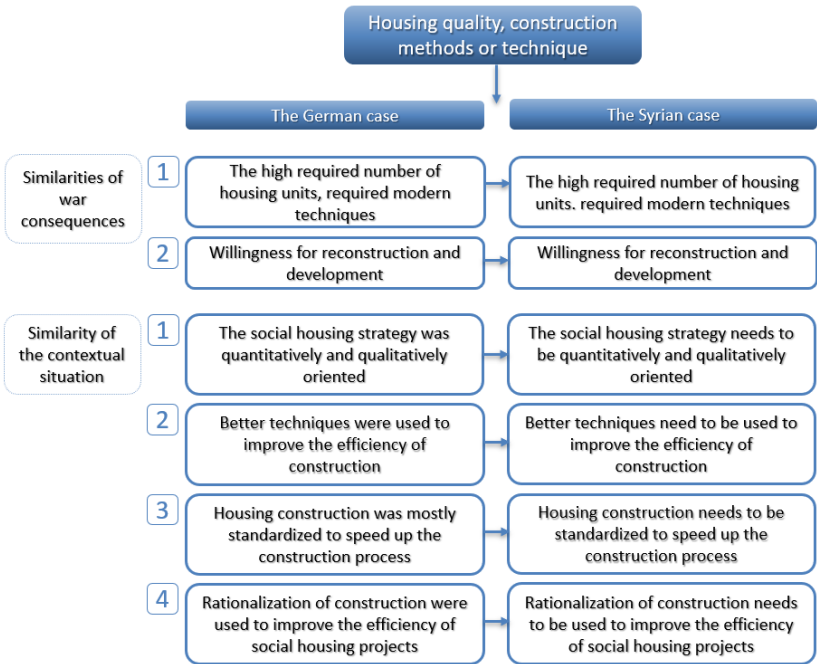
**Figure 141 Transferability to the Syrian case of housing quality and the
construction methods and techniques as a characteristic of the German case.
Source: The author.**

Housing quality and construction methods and techniques as a characteristic of the German case strategy is transferable to the Syrian case because of similar war consequences: the high number of housing units required and the desire of the people for reconstruction and development.

Housing quality and construction methods and techniques as a concept are transferrable also because of similarities in the

contextual situation: the solution to a post-war lack of housing is a social housing strategy that is quantitatively and qualitatively oriented, to improve construction efficiency. In addition, it needs to be based on standardized construction and modern techniques, to speed up the construction process. That was the situation in the German case and it is necessary to do the same in Syria. It is possible that quality may have to be evaluated differently, however, as in Germany cultural attachment to high standards of quality has been developed over time.

7.2.3 The standards for housing type (the cost)

In the German case, the type of houses was specified in the First Housing Law as the lowest-cost house providing residents with good living conditions such as good ventilation and sun exposure.

In West Germany, after WWII, 1920s row-standardized construction (Zeilenbau, Reihenhaus) was generally regarded as the most suitable basic form of development in residential areas. This was influenced by Neufert's writing and thinking. He proposed the use of standard elements in buildings. By making economic comparisons of different forms of

construction, it was found that row construction had the lowest costs. These row apartment buildings are typically located along streets and consist of three- to five-story-high buildings.

It is also important that housing type standards be covered in Syrian housing law, as the economic situation is the most influential element in the housing sector in the post-war situation and housing type impacts costs. The feasibility of each type of housing should be calculated in order to determine which one is suitable for the Syrian context and, at some later date each governorate needs to specify the building design preferred, based on geographical, religious and social issues, as well as on local availability of construction materials.

In Syria before the war, row construction was considered the most affordable type of construction. It affords high-density, low-elevation 2-3-story buildings that fit into the Syrian social and environmental context. Building type should take into account the urban structure and urban fabric of the cities. High density can also be achieved by reducing the width of roads and the spaces between buildings, as well as by strategic positioning of building entrances. Figure 142
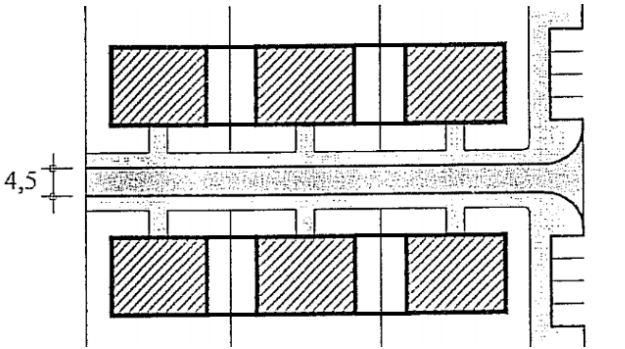
Figure 142 Row housing achieving high density by reducing road widths. Source: The author

In 2017, the price of one square meter of social housing was 110,000 S.P. For example, a flat measuring 70 m² costs 7.7 million, including the cost of land, construction materials, and labor. A down payment of 700,000 S.P. is followed by monthly repayments of 280,000 S.P. for a duration of 25 years. How is this possible on an average monthly salary of 30,000 S.P.? This question needs to be considered very carefully. The area of the house needs to be the minimum and the duration of the repayment period needs to be longer than 25 years.

Given the pressure of poverty and the acute need for housing units, there is another solution that could be offered by the government. This is the concept of self-help-built and growing construction, the brainchild of Alejandro Aravena, winner of

the Pritzker prize in 2016. (The Prizker architecture price)
https://www.pritzkerprize.com/announcement-ale-jan-dro-ara-ve-
na. The concept was put forward in the "Half of a Good House"
project and features an innovative approach called
"incremental housing". The idea is that, in cases where people
decide to build their houses themselves, they start by building
just one room and gradually add more.
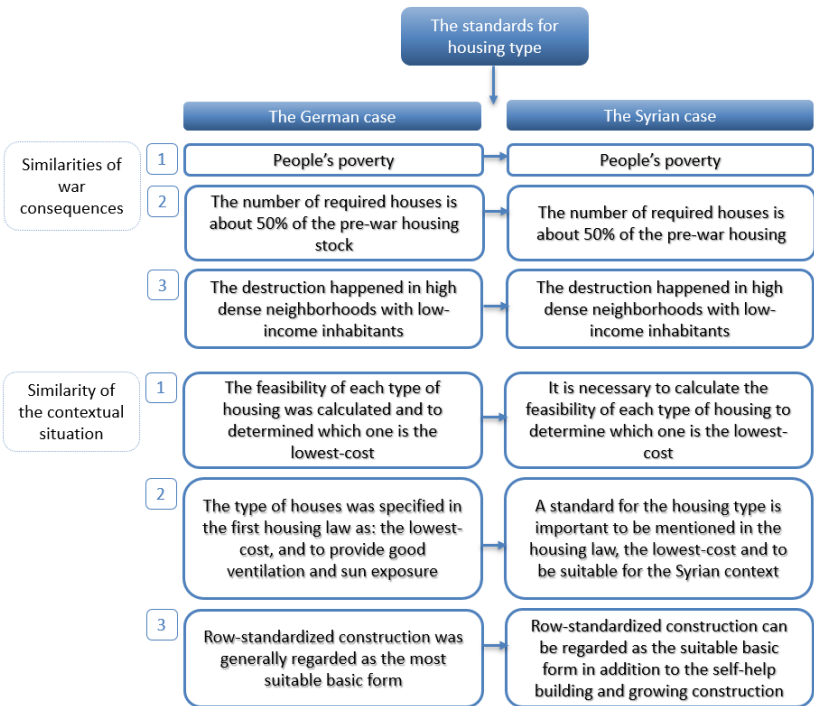
**Figure 143 Transferability of housing type as a characteristic of the German case
to the Syrian one. Source: the author.**

Similar war consequences are evident in both the German and Syrian cases. For instance, as mentioned in Chapter 6, the poverty of the people, the acute need for housing units, and the fact that much of the destruction happened in high-density neighborhoods with low-income inhabitants. In the German case, the housing type needed was carefully specified and was suited to the context.

The concept of specifying housing type in housing law as a characteristic of the German case is transferable because of similarities in the contextual situation. The housing type in Germany needed to satisfy the lowest-cost and life quality issues, and that is also important in the Syrian case. However, in the Syrian case, as previously mentioned, there are different scenarios as regards funding issues. A suitable housing type, incurring the lowest costs, is row housing, which was approved before the war and is similar to the type used in the German case. Within its context, Syria could also consider self-help building.

7.2.4 Housing location and urban planning

In Germany, there were three choices facing developers and planners when defining the location of new housing:

1- Build on undeveloped land, located on the edges of the cities.

2- Build on the sites of demolished buildings within the cities.

3- Build-in rural areas and villages.

There were convincing reasons for each option. The first one was based on the experience of 1920s housing projects, which were composed of row housing with suitable site planning:

- No existing rubble.

- Simple models of land ownership.

- Cheaper per square meter of living space (ignoring mobility costs to places of work).

At the same time, city landowners did not have enough money for rubble clearance. In addition, a widely shared opinion was that inner-city areas had become unhealthy and uncomfortable places in which to live.

After 1945, planners who defended construction on undeveloped land wanted to avoid a future concentration of people within the cities because they believed that high population density had increased the death toll during the war.

New housing with suitable site planning would decrease the possibility of disasters through war attacks.

In contrast, there were convincing reasons for rebuilding housing in the inner cities. Some of the inner-city damaged housing was comparatively new from a structural point of view. For instance, the walls and foundations were usable. Despite the destruction, rebuilding these buildings quickly could produce a large number of housing units at a small cost. Towards the end of the war, Gutschow, Meitinger, and Hillebrecht had set out plans for the immediate reconstruction of certain areas in bombed cities such as Hamburg. Gutschow started implementing these plans when the war ended. Large construction firms were invited to study these areas and submit proposals for effective reconstruction using industrial approaches, and architects were asked to suggest ideas on how dwellings could be better located to provide air and light.

In addition, construction in the suburbs would have been costly due to the cost of establishing roads and other improvements. Furthermore, abandoned damaged buildings and ugly open spaces would have appeared within the cities as a result of using funds and materials far from the inner city. Moreover, a study showed (see 4.6.9.3) the increasing need for small

housing units for young families and single persons, and that this kind of housing fits better within the inner cities than the suburbs. One more important reason in favor of constructing buildings on the sites of destroyed buildings in cities was that only inner-city housing could restore a city's historic life. This after-war solution for the location of housing in the German case was successful in terms of rapid and cost-efficient recovery of social living conditions in the war-destroyed cities.

In the Syrian case, the level of destruction varies between cities. The three most badly destroyed cities are Aleppo, Homs and the suburb of Damascus. A detailed analysis of Homs and Aleppo has been carried out in (5.1.5) and then generalized for other cities. After analyzing the urban situation in 2017 of the big Syrian cities, such as Aleppo and Homs as those which were most affected by the war, it is possible to divide housing destruction into two categories:

1-War-affected or damaged neighborhoods.

2- Destroyed city center.

The situation in other Syrian cities can be similarly described.

In Syria, vacant land near the cities is cheaper than in the city center, so it is cheaper to build houses there. Models of land

ownership are not complicated in these areas and no rubble is there. These factors are attractive when building new areas of social housing in the suburbs. Houses there may be rented for a small amount of money by people in need of a house or by returning refugees. The people in this scenario would have three possibilities:

1-Return to their neighborhoods when there is a possibility of restoring their houses to acceptable living standards (e.g., fixing destroyed walls, windows, doors, electricity, water pipes, internal excavation, painting).

2-Rebuild their old houses and then to return to them, leaving their temporary accommodation outside the city.

3-Buy their new houses which have been built in the suburbs and stay there.

In the case of rebuilding housing in the inner cities, it is possible to:

1- Choose suitable companies to invest in rebuilding the destroyed neighborhoods (including former informal settlements). The former owners are free to choose if they want to live in their new houses or to sell up and buy a cheaper one. The investing companies can build higher-density

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neighborhoods and invest in a percentage of houses as an incentive.

2- Provide the destroyed areas with new infrastructure to replace what has been damaged and give people the possibility of building their houses according to the construction rules of the city.

Rubble can be used as a building material for houses inside the city, thereby reducing construction costs. The size of the apartments in all cases needs to be economical within a specified standard, as mentioned earlier. The expansion of informal settlements will be avoided if the housing location and strategy is laid out clearly to the people.

The circumstances of the two cases are similar from a theoretical point of view, but the implementation is different. They differ, for example, in terms of available funds.

Deciding location for housing construction post-war as a characteristic of the German case strategy is transferable to the Syrian case because of the similar consequences of the war. For instance, the amount of rubble in the destroyed cities could be an obstacle to housing construction there. However, the remaining urban structure and infrastructure facilities could

reduce the cost of the construction process. The level of destruction in the cities is high in both cases.
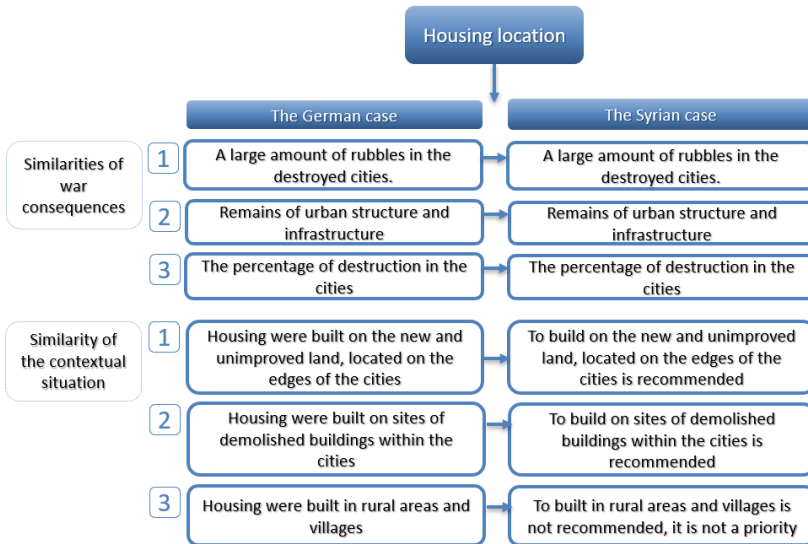
Figure 144 Transferability of housing location as a social housing strategy from the German case to the Syrian one. Source: the author

The concept of deciding the location of housing construction as a characteristic of the German case is transferable because of similarities in the contextual situations:

The construction of dwellings on new, undeveloped land, located on the edges of the cities, can be applied to the Syrian case. It is recommended as a way to solve the housing crisis which could occur when Syrian refugees return home.

When building dwellings on the sites of demolished buildings within the cities, existing urban infrastructure should be used and efforts made to help rebuild the social life of the people.

The building of houses in rural areas and villages is not recommended for the post-war Syrian case because the need for housing units is concentrated in the cities.

Urban planning

In the post-war period, Germany used the massive destruction of the bombed cities to develop a new urban structure. Many of the destroyed areas had been poor before the war and in need of renovation. In other words, the town planners did not start with a tabula rasa in 1945 and none of the zero-hour post-war plans were totally distinct from prior planning. Pre-war planning models were the bases of later propositions; they had to be modified or rewritten to suit the post-war conditions. Many planners believed that it was not about rebuilding the cities of the past, but about laying the groundwork of cities of the future. This included specifying the best locations for housing construction, keeping or modifying historic street patterns, renovating old areas, and reducing population densities in the residential areas of the historic cities.

In the Syrian case, care must be taken to consider the current situation as an opportunity to overcome existing problems regarding the master plans of the big cities. The problem with urban planning in Syria stems from the naturally increasing population as a result of immigration from rural areas to cities, in addition to immigrants from neighboring war-affected countries. The result has been a rapid expansion on the outskirts of major cities and a rise in informal housing settlements. For example, in Homs, 50% of the housing sector consists of informal settlements. Considering the current state of destruction, it is an opportunity to reorganize the urban structure of the cities by studying the possibility of urban expansion in a formal way. This means establishing new housing suburbs around the cities in addition to rebuilding destroyed areas with better urban infrastructure.

This idea can also be taken from the German experience. German cities were already well planned, but the densely-populated destroyed city centers were replanned to reduce density and include more green areas, open spaces, and places for social activity. Such changes afforded opportunities for people to meet and create a social life, and helped to facilitate the return of people to their former neighborhoods as they felt

that, once again, they had a comfortable, attractive and sociable place to live. This concept is also important in the Syrian case, with a post-war society needing to heal its wounds and build bridges.

Land for housing projects is widely available in Syria, but bureaucracy and the centralization of the decision-making processes create interminable delays that hold up allocation. The allocation of land for social housing projects must also come under housing law.

Figure 145 Transferability to the Syrian case of urban planning as a characteristic of the German experience. Source: the author

Urban planning as a characteristic of the German experience is partly transferable because of similarities but needs to consider differences in the specific contextual situations.

The characteristics of the West German social housing strategy after the Second World War are transferable to the post-war

Syrian case within the limitations of the contextual issues. The social, economic, administrative and demographic situation of every country is unique.

Characteristics	Transferable Germany/ Syria	Contextual issues
Social housing	*	Social need after the war
Housing law	*	To avoid the mistakes which existed in pre-war social housing law
Target group	*	In Syria, it is difficult to know people's exact income
The standards for housing size	*	Building costs, social and cultural aspects, and living conditions
Financial support and subsidies	*	In exchange for subsidies, part of the houses belongs to the investors, while another part belongs to the government and can be sold as social housing In Syria, the monthly repayments by subscribers are related to the apartment's size but not to the family's income
The investor	*	There is a need to widen the official group of investors for a specified time, to be enacted in housing law

Flexibility and networking throughout the different governmental levels	*	A need for high tech data network The need for more organized and better-trained administrators with high levels of awareness and responsibility
Special social housing programs	*	-
Housing quality, construction methods and techniques	*	Rationalization of construction needs to be used to improve the efficiency of social housing projects
Standards for housing types	*	Demographic and social aspects
Housing location	*	Building in rural areas and villages is not recommended; it is not a priority
Urban planning	×	It is necessary to care about the urban planning structure and consider the current situation as an opportunity to overcome existing problems in the master plans of the big cities.

Table 21 The transferability of the social housing characteristics from the German to the Syrian case, respecting the Syrian contextual limitations. Source: The author.

7.3 Critical reflection on transferability

After investigating the transferability of characteristics of the German experience to the Syrian context, many of these characteristics can be recommended for the Syrian case (taking into account the specific conditions of the Syrian context). However, the applicability of some of these characteristics is tricky.

For instance, in Germany, the war ended throughout the country with a capitulation contract, at a fixed date, "Stunde Null". In Syria, the war is still ongoing in some areas. In spite of this, the rebuilding process needs to start, for example in cities such as Homs where the war ended four years ago. This would provide the opportunity to carry out the reconstruction process gradually, city by city, and to learn from the experience of each city along the way.

The German economy was weak immediately after the war. But, because Germany was a developed and highly industrialized country before the war, it was possible for the "economic miracle" to happen. The economy soon started to improve. Syria, in contrast, is a developing country where most of the people were on or around the poverty line prior to the war. For a developing country suffering from the effects of

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war, much effort and support are needed to revitalize the economy and to make possible the building of sufficient social housing for the low-income groups who comprise the majority of the population.

The war in Germany happened with outside countries. After the war, the people were united with the same aim to rebuild the country. In Syria, the war has affected the relationships between the people living in the same country. Any housing strategy must consider the need to bring people together to heal social wounds. Before the war, there were successful examples of social housing suburbs. The people who lived in them came from different religious backgrounds but shared a similar economic level. Lessons can be learned from this experience. It is important that the government organizes housing projects and provides land for housing projects with infrastructure. This would attract people to build their houses on this land rather than build more informal settlements. This would also allow a variety of people in need of a house to live together, unlike informal settlements that reinforce the separation of different social and religious groups.

Regarding the need for privacy of many social groups in Syria, it might be anticipated that many old traditions based on the

economic situation and house size may change, with increasing the spaces outside the buildings being used for social meetings. This will also be influenced by the fact that the role of women and the way families function have also changed. In the German case, there were also changes in the way houses were designed, with most of the new houses offering less space but more sunlight and ventilation. This was because the attached housing type was used, which was more economic than the detached type.

These points summarize some of the special or specific-to-the-Syrian-case characteristics that need to be considered in the housing strategy.

Summary:

In Chapter 7, the transferability of the characteristics of the West German social housing concept to the Syrian situation was examined. The legislative framework of social housing in West Germany post-WWII was taken as a reference. The investigation included the regulations that were set in these laws, such as for instance, housing type and size, investors, construction techniques, methods, and location. The transferability of most of the aspects could be proven based on

the similarities of the war consequences and the similarities or differences in the contextual situations of the two countries. Because of these and other differences, a differentiation in the details of the policy for social housing has been reasoned.

Chapter 8. *Summary and recommendations*

The present research work has been conducted with the aim of investigating the possibility of transferring lessons learned from the West German (FRG) experience in social housing after WWII to the post-war Syrian context as a developing country.

This chapter collates the main research results. In addition, a number of recommendations will be highlighted. A critical perspective with respect to the limitations of the present study is reported. The last section provides a reflection on future directions to expand upon this work.

8.1 Summary of main results of the research

The findings of the literature review and the consequences of a war situation in general and in the destroyed cities, in particular, have been elaborated in Chapter 2. It was found that long-term housing strategies in the post-war phase are to be preferred, as they are more sustainable than short-term solutions.

Chapter 3 presented in detail the social housing strategy that was implemented in West Germany after WWII and compiled a list of essential characteristics, comprising location, quality and standards of housing, target groups of social housing, political and legal aspects, and funding resources.

After presenting the experience of pre-war social housing in Syria, the obstacles that have impeded the Syrian government from achieving the needed social housing development were revealed. Chapter 5 served to illustrate the situation of the Syrian cities in their post-war status, bearing the consequences of six years of war.

Based on the findings obtained from the aforementioned chapters, a comparison was made between the consequences of war in the two cases, the Syrian and the German. The results of

this comparison suggest that the two cases have similarities and that transferability from one case to the other is possible to a large extent, with certain differences.

The next stage in the research was to gain insight into the transferability of characteristics from the German case based on two kinds of criteria: the contextual ones and the consequences of the war. Thus, the findings of Chapter 7 confirm the fact that the characteristics of the German experience can be transferred to the Syrian case, albeit within some limitations. These results proved the validity of the research hypothesis; "that it would be possible to transfer the West German experience in social housing after WWII to the Syrian post-war context as a developing country".

The aim of this research was to extract key elements from the German social housing strategy after WWII (FRG) which can be beneficially applied to the Syrian context. This involved a comprehensive discussion of approaches obtained from the West German experience and their potential role in solving the expected housing crisis in the post-war Syrian context. Furthermore, possible mechanisms that could help to improve the efficiency of the process of social housing supply in Syria have been elaborated.

The limitations of transferability are related to specific details regarding the economic, social and urban context in Syria. For this reason, this study ended with scenarios and a list of recommendations concerning the post-war housing crisis in Syria. To set a post-war housing strategy one needs to have fixed and clear data on the sources of funding for reconstruction. It needs at least to be known whether there is an external source of money available or whether funding will be dependent on the self-development of the local economy, or both. Because the housing strategy differs in the two cases, the recommendations do not include specific dates or numbers.

8.2 Recommendations for post-war social housing policy in Syria

Finally, some special recommendations can be formulated.

8.2.1 On the legislative level

- A comprehensive survey of real estate in Syria should be performed to establish a national database on existing properties, with the aim of identifying the urgent needs of the housing sector and future needs according to population growth rates.

- A database on the housing situation (the number of households in relation to the number of housing units, density, quality of housing units, etc.) is the starting point in the social housing strategy.

- New legal and legislative bases should be established to support the development of the residential sector and improve the Syrian housing situation.

-A specific law concerning post-war housing problems should be enacted, wherein the requested standards for housing size and costs, the targeted groups, the requested number of houses to be built, the kind of subsidies, the investors and the housing type are specified.

- Furthermore, a law that limits housing rents should be enacted.

- Quick alternative solutions for the owners of destroyed houses should be provided in addition to the necessary compensation for housing damage.

- Compensation should be provided to all returning refugees and displaced persons for the properties that cannot be returned to them.

- The Housing Affordability Index (HAI), which measures the hardship of access to the housing market as a house price/income ratio, should be considered. This would provide a way of determining whether housing is becoming more or less affordable for private households over time. This is necessary especially for the big Syrian cities such as Damascus, Aleppo, and Homs.

- Advanced technologies and access to technical support and training should be available to administrative and construction groups.

8.2.2 On the economic level

- The rebuilding of a functioning economy in Syria and at the same time the implementation of adequate social housing policy are the first essential steps.

- In this process, also job opportunities for the people should and can be created through the housing industry and, due to the interrelatedness of different economic sectors and social welfare of the population, this can also contribute directly and indirectly to the reactivation of other industries damaged by the war.

- Job opportunities for the people should and can be created through the housing industry and by refreshing industries damaged by the war.

- A National Bank for Housing should be established that deals with the provision of housing loans, in accordance with adequate financial regulations that take into account the specificity of the Syrian context.

- The goals of reconstruction in the social housing sector should be defined as a non-profit venture.

- The partnership between the public and private sectors should be emphasized. The government and the public sector should make greater efforts to attract the private sector to social housing construction. This could be achieved by building housing units in residential projects, or by surrendering a number of private housing units to public sector institutions that are responsible for providing social housing.

- Multiple actors should be involved in the investment of social housing, for instance, the public and private sectors, non-profit organizations, and individuals.

8.2.3 On the urban level

- It is essential that municipal authorities update and adopt urban plans, and allocate available land for construction.

- The state should provide the necessary land, free of charge or at nominal prices, for social housing projects.

- Housing costs (maintenance, water, electricity, etc.) should be reduced through increased subsidies.

- Neighborhood community centers should provide the necessary workshops for blacksmithing, carpentry, and block and tile production, in order to avoid the costs of transportation.

- A cultural change should be adopted to reconsider how the qualification of the construction industry can be improved, and to identify the preconditions for such changes.

8.2.4 On the social level

- The target group for "social housing" reconstruction programs should be specified based on income level and to what extent they have been affected by the war.

-Income eligibility should be reviewed in order to determine the amount that low-income households can afford for housing.

- Modern local and external expertise should be utilized to implement houses within the best conditions and the lowest costs.

-Women's rights should be supported as women took on the main economic role in the family during wartime.

The analysis of the German experience indicates that the role of the government is essential to support and provide social housing to low-income groups. Thus, the role of the government in the production process of social housing will be fundamental in Syria, especially in the aftermath of the war. The government should, therefore, prepare a strategy for development that involves various levels and stages in the establishment of social housing. It is important to establish an effective and sustainable National Housing Policy in order to consistently address the need for social housing units in this post-war "emergency" situation in the housing sector.

In light of the above, and given the need for housing units in the post-war situation, the Syrian government should intensify its efforts to increase the supply of social housing. Therefore, significant coordination is needed between the government and industry stakeholders. In addition, the private sector needs to

get involved in providing social housing units, both in the planning and in the supply process.

8.3 Limitations

This thesis was written during a period of unrest, when the war was still taking place in Syria, in 2018. Therefore, it was impossible for the researcher to go back to Syria in order to collect requested data and update destruction numbers, due to safety and health issues.

Another limitation was the limited access to sources on housing policy, social housing and the amount of housing destruction in Syria. This was due to the research having been written in Germany where the information is mostly available through international organizations or informal conversational interviews with architects and urban planners who have been to Syria during wartime.

Elaborations on destruction and war consequences refer mainly to the specific period of 2016-2018.

Depending on the factual status of the final post-war situation in Syria, the strategy for social housing will need to be adapted.

8.4 Further work

This research has focused on possible scenarios for solving the post-war housing needs in Syria. Based on lessons learned from the West German social housing strategy after WWII, recommended steps to develop a successful and permanent social housing strategy have also been provided to meet the increasing demands for housing units within a specific period of time.

However, due to the wide scope of the need to increase the provision of social housing to low-income groups in Syria, it is not possible to cover all areas in the course of this research. For this reason, the aim of this paragraph is to address some issues for further research.

Research is required to build up the body of knowledge necessary to promote the discovery of methods to strengthen linkages between research institutions, the private sector, and the public sector. This would provide opportunities for further communication between actors involved in the construction industry, in order to achieve better implementation of the social housing policy.

Another open issue is the eligibility to access social housing. In the German case, the target group was identified more tightly

in relation to income levels. The allocation system of social housing units warrants attention in Syria. Thus, further research can be executed in order to assist in setting out an instructive framework for social housing allocation. Future research should focus on improving funding programs for social housing.

Further research is also needed on technology developments in the construction industry since it is currently operated traditionally. Every characteristic of the social housing strategy in Germany can itself be a prompt for further research by examining the details differing between the German and Syrian cases. The social housing sector, with a special focus on the status of a developing country after the war, is a domain for further research.

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