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KUWAIT PROGRAMME

WAITING FOR A HOME

THE PRICE OF PUBLIC HOUSING DELAYS IN KUWAIT

Suleiman H. AlBader and Khaled W. AlSabah

LSE Middle East Centre Kuwait Programme Paper Series | 30 | September 2025

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About the Author

Suleiman H. AlBader is an Assistant Professor of Finance at Kuwait University's College of Business. His previous research addressed the diminishing effects of pay-for-performance in compensation practices within sovereign wealth fund portfolio companies, in addition to revisiting the 'dividend smoothness puzzle' where he identifies the premium investors attribute to firms' share prices that offer high and stable dividend payouts. AlBader received a PhD in Finance from the University of Illinois at Urbana-Champaign, an MBA from the University of California, Berkeley, and a Bachelor's degree in Accounting with honours from Kuwait University.

Khaled W. AlSabah is an Assistant Professor of Finance at Kuwait University, where he has served since 2020. He earned his PhD in Finance from the University of Colorado Boulder, and his research focuses on financial markets, behavioral finance, and corporate policy. His work has been published in highly established journals including Emerging Markets Review, Borsa Istanbul Review, and the Journal of Behavioral Finance.

Abstract

Residential real estate prices in Kuwait have risen well beyond the reach of the average Kuwaiti household, with homes trading at more than 22 times the typical annual income, placing Kuwait among the most unaffordable markets globally. This study examines the relationship between housing prices and the waitlist for government-provided homes administered by the Public Authority for Housing and Welfare (PAHW). We find that growth in the PAHW waitlist is positively associated with nationwide price increases, even after accounting for changes in wages, credit availability, and interest rates. Specifically, an increase of 6,134 applicants to the waitlist – the same seen in 2024 – is associated with a 2.7% rise in residential real estate prices, holding other factors constant. The association varies by city and appears to be asymmetric: prices tend to rise more sharply during periods of weak reductions in PAHW waitlist and tend to stabilise or decline in periods when PAHW actively reduces its applicant waitlist, especially in mid-priced areas. These findings highlight the potential for housing policy performance to shape affordability outcomes across different segments of the market.

Introduction

The global housing crisis is one of the most pressing issues facing nations worldwide.[1] Housing affordability has become a significant challenge in many countries, regardless of income levels or overall economic success. In Kuwait's case, the government has used housing policy as a tool to redistribute oil wealth, committing to provide homes for eligible citizens. This approach has placed the state at the centre of the residential real estate market. For example, Kuwait was one of the first emerging markets to establish a public housing program – beginning in 1956, when the government distributed 343 houses after purchasing homes in the old capital city.[2] Housing affordability has become a growing concern in Kuwait, particularly when it comes to home ownership.[3] The average house price in our sample as of 2023 is KD 417,000 whilst the average monthly salary is KD 1,550. This means the house-to-income ratio stands over 22 times, classifying Kuwait as 'Impossibly Unaffordable' according to 'Demographia International Housing Affordability' standards.

This makes Kuwait's house prices less affordable than in major cities like New York (10.2 times), San Francisco (9.2 times), and even London (13.3 times).[4] The issue of home prices has long been a problem on the radar of policymakers, dating back at least to 1977,[5] but hasn't been resolved. Increasing housing supply is widely recognised as the most effective long-term solution to curbing housing price inflation).[6] However, in Kuwait, the process of expanding supply is often slow due to the significant infrastructure investments required for new residential developments. This includes not only road and sewage construction but also the electricity and water capacity, let alone the subsidy commitment attached to each additional dwelling, which is already the second largest government expenditure (after salaries) in a budget that's been in deficit for 9 out of the 10 years since the 2014 oil price crash.

To partially relieve the burden of homeownership, both previous and recent policymakers have implemented measures such as increasing housing rental subsidies.[7] Whilst these

[1] Achilles Kallergis et al., 'Housing Affordability in a Global Perspective', *Lincoln Institute of Land Policy Working Paper,* 2018. Available at: https://www.lincolninst.edu/publications/working-papers/housing-affordability-in-global-perspective/ (accessed 31 July 2025); Tom Coupe, 'How Global is the Affordable Housing Crisis?' *International Journal of Housing Markets and Analysis* 14/3 (2021), pp. 429–45; Steffen Wetzstein, 'The Global Urban Housing Affordability Crisis', *Urban Studies* 54/14 (2017), pp. 3159–77.

[2] Housing distribution data from the Public Authority for Housing and Welfare (PAHW).

[3] This paper focuses specifically on ownership affordability, as opposed to rental affordability, which may present a different set of dynamics and challenges.

[4] 'Ratio of House Prices to Earnings, Borough', *Office for National Statistics* (*ONS*). Available at: https://data.london.gov.uk/dataset/ratio-house-prices-earnings-borough (accessed 31 July 2025).

[5] '1977 | Housing Crisis in Kuwait: Rising Rents and the Spread of "Key Money"', *Al Qabas*. Available at: https://www.alqabas.com/article/5887781-1977-أزمة-المساكن-بالكويت-ارتفاع-الإيجارات-وانتشار-خلو-الرجل/ (accessed 31 July 2025).

[6] Edward L. Glaeser & Joseph Gyourko, 'The Impact of Building Restrictions on Housing Affordability', *FRB of Philadelphia Working Paper* (2008), pp. 21–39; Christian A. L. Hilber and Wouter Vermeulen, 'The Impact of Supply Constraints on House Prices in England', *The Economic Journal* 126/591 (2016), pp. 358–405.

[7] 'Monthly Rent Allowance of 150 Dinars: Draft Law to Amend Housing Welfare Law', *Al-Qabas Newspa-*

interventions aim to improve affordability, they may inadvertently contribute to rising property prices – particularly in supply-constrained environments like Kuwait. This aligns with the findings of Hilber and Vermeulen,[8] who show that in areas with tight supply constraints, house prices respond more strongly to increases in income, amplifying affordability pressures. Although the housing crisis in Kuwait is impacted by multiple factors, this paper specifically investigates the relationship between changes in the Public Authority for Housing and Welfare (PAHW) waiting list and residential real estate prices. Although housing waitlists are a critical policy tool in many contexts, there is limited empirical research on their broader market impact, particularly in the Gulf region. This study addresses that gap by investigating how fluctuations in PAHW waitlist are associated with changes in residential real estate prices across Kuwait. Rather than claiming causality, we offer an association using Ministry of Justice (MOJ) transaction data from 2006–2023, providing the first analysis of real estate residential prices and PAHW waitlist relationship in Kuwait.

Specifically, we analyse whether fluctuations in the waitlist are associated with variations in housing prices. We pay particular attention to periods characterised by more and less effective management of the waitlist by PAHW, aiming to better understand how policy performance might influence market perceptions and housing affordability outcomes. This exercise provides important insights into how improving the responsiveness of public housing allocations could potentially enhance housing affordability. We find that, as expected, an increase in the PAHW waiting list correlates to rises in real estate prices. Specifically, each additional 1,000 applicants on the waiting list increases prices by 0.45%. This effect is economically significant: a one standard deviation increase in the PAHW waiting list leads to a 3% change in prices. In monetary terms, this translates to a 26.7 KD/sqm increase, which, for the median house size of 400 sqm, amounts to approximately KD 10,675.

Second, the impact of the PAHW waiting list is not the same across all cities. To help us analyse the data better we aggregated the cities into 12 clusters, following a similar approach to Alshalfan et al.,[9] who group cities based on their similarities. The price response ranges from 0% to 1.1% per additional 1000 applicants, with the strongest effect observed in the most expensive cluster.

Finally, to dissect this issue further, we create a dummy variable for the years when the government performed relatively poorly in managing the PAHW waiting list (with changes above the median). Our analysis reveals that during periods of better government performance, the most expensive clusters are the least impacted, while mid-priced clusters experience more pronounced effects. Relative to the most expensive, price growth is

per, 2006. Available at: https://www.alqabas.com/article/47065-ل-بقانون-مشروع-دينارا-150-ب-شهري-إيجار-بدل/ (accessed 31 July 2025); 'Raising Rent Allowance to 300 Dinars', *Al-Anba Newspaper*, 2022. Available at: https://www.alanba.com.kw/1149527 (accessed 31 July 2025).

[8] Hilber & Vermeulen, 'The Impact of Supply Constraints on House Prices in England'.

[9] Sharifa Alshalfan, Dhari S. Alrasheed & Barrak Albabtain, 'Housing Kuwaitis: An Overview of the Current Model and its Implications on Affordability and Quality of Life', *KFAS Independent Research Report*, 2022. Available at: https://www.kfas.org/Publications/Housing-Kuwaitis (accessed 31 July 2025).

slowed, or declines accelerate, by 2% to 4% relative to the most expensive clusters. This suggests that mid-range clusters are more responsive to improvements in government housing efforts. In contrast, high-end cities remain relatively insulated. On the other hand, when the government does not do well in providing supply, all clusters increase by 5.7%. There is no statistical difference between any of the clusters, suggesting that all cities increase in a similar fashion, again confirming families on the PAHW waiting list include all ranges of families from the wealthy to the poor.

The Model & Data

Our objective is to estimate how changes in residential housing pressure – proxied by changes in the PAHW waiting list (ΔPAHW) – are associated with real estate prices. While both public and private housing sectors serve the Kuwaiti market, we focus on the PAHW waitlist because PAHW is the principal provider of homes and land, releasing units systematically. In contrast, much of the private sector supply consists of undeveloped land, with release to the market subject to owners' discretion and timing. It is important to note, however, that the PAHW waiting list does not capture all aspects of housing demand or supply. For example, it excludes private market participants such as unmarried people and former beneficiaries.

While the PAHW waitlist serves as a practical proxy for government-managed housing pressure, it is important to acknowledge its limitations as a measure of overall market dynamics. The waitlist itself is an administrative feature rather than a direct policy intervention, and its size can change due to shifts in PAHW's regulatory standards or eligibility criteria, not solely in response to real changes in housing demand or supply. For example, families may be removed from the waitlist once allocated a plot, even though they may not be able to occupy their homes for several years while waiting for necessary infrastructure to be completed. Such institutional features introduce noise into our measurement which would attenuate any association between PAHW waitlist and real estate prices. Therefore, our analysis should be viewed as exploring empirical associations, with the understanding that the PAHW waitlist may not fully capture the complexity of Kuwait's housing market or the lived experience of its applicants. With this caveat in mind, we estimate the association between ΔPAHW and residential real estate prices using the following weighted least squares (WLS) regression:

$$\Delta Perc_{c,d,t} = \beta_0 \Delta Perc_{c,d,t-1} + \beta_1 \Delta PAHW_{t-1} + \beta_2 \Delta Salary_{t-1} + \beta_3 \Delta Lending_{t-1} - \beta_4 \Delta CBK_{t-1} + House_{c,t} + \gamma_c + \epsilon_t \quad (1)$$

$$\gamma = City\ fixed\ effect$$

In the model, represents a specific year, as our primary variable of interest, PAHW waiting list, is only available at the annual level. The variable denotes a city, while represents the description, indicating whether the transaction involves land or a house. Our analysis is conducted at the City-Description-Year level, where each unique combination constitutes

a single observation. Regardless of the number of transactions within each level, we collapse the data by taking the median transaction value. We estimate our model using WLS to account for heteroskedasticity in the precision of our dependent variable across units. Observations based on a larger number of transactions provide a more precise estimate of the underlying market price than those based on sparse data. By weighting each observation by the number of transactions used to compute the median, WLS gives greater influence to more informative data points. This approach not only improves the efficiency of our estimates relative to Ordinary Least Square (OLS) regression, but also mitigates the risk that price fluctuations in thinly traded segments unduly influence the results.

Similar to AlFalah et al.,[10] we construct our index, $\Delta Perc_{d,c,t}$ using median prices. We could not construct a repeat sales or hedonic pricing model due to the limitation of the data from MOJ. $\Delta Perc_{d,c,t}$ is calculated as $\frac{Price_{d,c,t} - Price_{c,d,t-1}}{Price_{c,d,t-1}}$ where $Price_{d,c,t}$ represent the median price for a given City-Description-Year level. By converting prices into percentages, we prevent high priced cities from disproportionately influencing the results compared to lower priced cities, aligning with our objective to estimate the overall increase in residential real estate prices.

To address the dynamic nature of the housing market and mitigate concerns associated with trending variables, we specify our model in first differences rather than raw levels. By focusing on year-on-year changes, our approach captures temporal fluctuations in both the ΔPAHW and residential real estate prices, rather than simply reflecting persistent upward trends commonly observed in aggregate housing data. The use of first differences allows us to isolate the impact of changes in government-managed housing pressure on price dynamics, rather than the confounding effects of long-run structural growth. Furthermore, this specification is well-suited to our research context, as it leverages the informative periods when PAHW activity either accelerates or decelerates.

The use of lagged values in the model is essential for several reasons. Unlike stock prices, real estate prices respond slowly to economic and market conditions changes. This delayed reaction can be attributed to lengthy transaction periods and the time it takes for economic changes to impact the real estate market. While some responses may occur within a year, particularly in more active segments, our annual data limits us to year-on-year lags. Moreover, the inclusion of lagged values helps mitigate concerns about reverse causality. While current real estate prices may be correlated with changes happening at the same time, such as shifts in bank lending or government policies, using lagged values helps reduce concerns about this overlap. However, we cannot rule out the possibility that forward-looking expectations influence both real estate prices and credit conditions, potentially confounding the observed associations.

We also control for city fixed effect γ_c and include a description-level dummy variable $House_{c,t}$ to indicate whether the observation involves a built house or an empty plot. These controls ensure that the estimated relationship between the PAHW waitlist and price changes is not confounded by systematic differences across cities or between different types of properties.

[10] Abdullah Adel Alfalah, Eamonn D'Arcy & Simon Stevenson, 'Constructing House Price Indices in an Emerging Market: The Case of Kuwait', *Journal of Real Estate Literature* 31/2 (2023), pp. 144–60.

We manually collect every real estate transaction registered by the MOJ from 2004 to 2023 to calculate $\Delta Perc_{d,c,t.}$ MOJ publicly releases transaction data on a weekly basis via their website. We focus on residential real estate, as our primary analysis examines the impact of the PAHW waiting list, which exclusively provides residential properties. Specifically, we analyse transactions involving residential land or houses. We further narrow our analysis to real estate transactions involving properties with lot sizes between 250 and 1,000 sqm, similar to Alshalfan et al.[11] Properties smaller than 250 sqm are typically 'Mushā' (partial sales), where multiple individuals share ownership of a property without specific physical divisions being assigned to each owner. Properties larger than 1,000 sqm are excluded as they are not representative of typical homeowners. Additionally, we exclude transactions categorised as 'Wakala', as these are not comparable to standard real estate transactions. Historically, this method was used to indirectly transfer property ownership, often bypassing legal requirements or restrictions. However, such transactions are no longer permitted under the current legal framework, starting from December 2023.[12]

Transactions from Sabah Al Ahmed Marine City were excluded, as these areas are primarily used for weekend retreats or beach houses rather than primary residences.[13] Our final dataset includes 53,321 residential real estate transactions from 2006 to 2023 which when aggregated into City-Description-Year level result in 2,082 observations. Although data are available from 2004 onward, we begin our analysis in 2006 to ensure that each observation has the required two lagged values of the dependent variable for estimation purposes.

$\Delta PAHW_{t-1}$ serves as a proxy for housing market pressure, capturing both demand and supply dynamics within the public sector. However, it reflects only the PAHW-administered segment of the market – it does not account for private land supply and is influenced by institutional features such as eligibility rules and administrative removals from the waitlist for various reasons, such as receiving a government plot, getting divorced, or obtaining an interest-free loan from the Kuwait Credit Bank (KCB). Data was collected from the Kuwait Census Bureau in the *Annual Bulletin of Social Statistics* under the 'housing services' section.

When ΔPAHW increases (i.e., more families are added to the PAHW waitlist compared to the previous year), it indicates that the demand for government-provided housing is growing faster than its supply. Conversely, a decrease in ΔPAHW suggests that government supply is catching up with this specific segment of housing demand. We hypothesise a positive coefficient for ΔPAHW, as an increase in the PAHW waitlist reflects greater pressure within the government-managed portion of the housing market, which is likely associated with rising real estate prices.

[11] Alshalfan, Alrasheed & Albabtain, 'Housing Kuwaitis'.

[12] 'Law 125 for Year 2023 Concerning Regulation of Real Estate *Wakala*', *Raqib50*. Available at: https://www.raqib50.com/parliaments/14/legislations/274 (Accessed 2 October 2025).

[13] Abdullah Alfalah, Eamonn D'Arcy, Steffen Heinig & Simon Stevenson, 'Modelling Housing Market Fundamentals and the Response to Economic and Political Events: Empirical Evidence from Kuwait', *International Journal of Housing Markets and Analysis* 15/4 (2022), pp. 736–761; Alfalah, D'Arcy & Stevenson, 'Constructing House Price Indices in an Emerging Market'.

ΔPAHW reflects the change in the number of requests but not in the purchase strength. We use ΔSalary to reflect the change in the financial strength of that demand. ΔSalary represents all expenses categorised as 'Wages and Salaries' expenditure under Kuwait's current expenditure budget on a yearly basis. Data comes from the Kuwait Ministry of Finance and via the CBK quarterly statistical publications.

Although the first two proxies represent the amount of demand and its financial strength, another important factor goes into purchasing a house: leverage. Once a Kuwaiti gets employed and starts earning a salary, they are usually qualified for a loan from the bank, capped at KD 70,000 15-year personal loan plus (starting from 2019) a KD 25,000 5-year consumer loan. In essence, this magnifies their purchasing power. We account for this in our third proxy: ΔLending.

ΔLending represents all credit facilities made by Kuwait's banks categorised under 'Personal Facilities'. This includes both consumer and instalment loans but excludes the loans made for the purchase of securities and other loans. Bank lending data is gathered from CBK at the annual level and represents the loans outstanding to private customers in millions KD.

Finally, we account for the CBK discount rate, which is expected to negatively affect real estate prices. Specifically, as ΔCBKt-1 increase, we anticipate ΔPercd,c,t to decrease. Higher interest rates make it more expensive for buyers to finance their real estate purchases. The data on discount rates are gathered from the CBK website at the monthly level, and we average these values to produce a discount rate at the annual level.

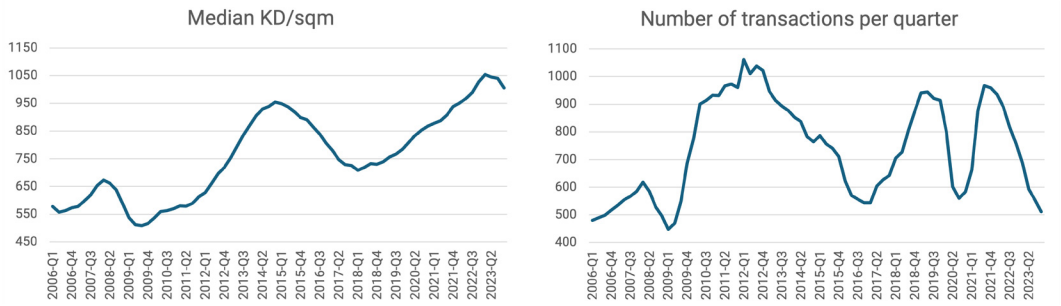
Below is a summary of the predicted coefficient of each explanatory variable:

Increases In	Impact on Price
PAHW Waitlist ($\Delta PAHW_{t-1}$)	+
Wages & Salaries Expenditure ($\Delta Salary_{t-1}$)	+
Bank Credit Facilities ($\Delta Lending_{t-1}$)	+
CBK Interest Rates (ΔCBK_{t-1})	–

Results and Insights

Before examining the results, it is essential to understand the broader trends in Kuwait's residential real estate market during our sample period. Figure 2 illustrates the historical evolution of both median real estate prices and transaction volumes from 2006 to 2023.

Figure 1: Trends in Price and Volume Over Time in Kuwait's Residential Real Estate Market



Several observations can be drawn from Figure 1. First, contrary to the common misconception that Kuwaiti real estate prices are always on an upward trajectory, the market experienced three distinct peaks during the study period: Q4 2007, Q4 2014, and Q4 2022. From the peak in Q4 2007 to the trough in Q1 2009, median quarterly prices dropped by 34.4%. Similarly, from the peak in Q4 2014 to the trough in Q2 2017, prices declined by 27.7%. Notably, real estate prices began to decline again after reaching their most recent peak in Q4 2022. Second, we observe that transactions often precede price declines, except for the COVID-19 period in 2020. The drop in transactions then was partly mechanical, as the MOJ and other government entities were shut down for multiple periods.

Third, during the sample period, median prices per sqm in each quarter ranged from KD 475 to KD 1,128, with an average of KD 768. The number of transactions per quarter ranged from 115 to 1,303, with an average of 750. All prices are adjusted to real 2023 terms. It is important to note that the effects of smoothing are evident in the figures, as the maximum and minimum values are not directly visible. The lowest number of transactions, 115, occurred in Q2 2020 during the peak of the COVID-19 pandemic.

Housing Prices and PAHW Waitlist

Table 1 presents the main results from our regression analysis. We hypothesise that a larger PAHW waiting list may reflect greater unmet housing demand, which could be associated with upward pressure on residential property prices. Our variable of interest, $\Delta PAHW_{t-1}$ shows a statistically significant and positive association with price changes, consistent with this expectation. In Column 4, the coefficient of 0.453 (with the PAHW variable scaled by 1,000) suggests that an increase of 1,000 families on the PAHW waitlist is associated with a 0.453% increase in real estate prices the following year. While this analysis does not establish a causal relationship, the strength and consistency of the result offer a useful benchmark for understanding how public housing backlog dynamics may correlate with broader affordability trends. Table 1 standard errors are clustered at the city level.

From a policy perspective, if the government were to reduce the PAHW waitlist by 6,000 families each year, our estimates suggest this could be associated with a 2.7% reduction in median plot prices – equivalent to approximately KD 9,730 for a 400-square-meter plot.

Table 1: Main Results

	% Change in Price ($\Delta Perc_{c,d,t}$)			
	(1)	(2)	(3)	(4)
$\Delta Perc_{c,d,t-1}$	-0.0734**	-0.0689*	-0.0624	-0.0971**
t	-2.01	-1.87	-1.55	-2.52
$\Delta PAHW_{t-1}$	0.547***	0.522***	0.497***	0.453***
t	13.48	12.05	9.84	8.27
ΔCBK_{t-1}		-1.128***	-1.396***	-2.715***
t		-2.81	-3.14	-5.69
$\Delta Salary_{t-1}$			0.0016	0.0042***
t			1.21	3.05
$\Delta Lending_{t-1}$				0.0075***
t				10.85
$\Delta House_{c-t}$	-2.574***	-2.52***	-2.442***	-2.532***
t	-4.26	-4.15	-3.92	-4.25
City FE	Yes	Yes	Yes	Yes
Observations	2,082	2,082	2,082	2,082
Adjusted R2	0.0502	0.0537	0.0545	0.1002

*Note: *p<0.1; **p<0.05; ***p<0.01*

Our analysis also confirms – unsurprisingly – that the other remaining factors, changes in interest rates, salaries, and private bank lending, have clear association with housing prices.

Our results also highlight the role of monetary policy, as reflected in the Central Bank of Kuwait's discount rate (ΔCBK_{t-1}), in influencing housing prices: a 1% increase in interest rate would cause residential real estate prices to drop by 2.7%.

As for the two factors $\Delta Salary_{t-1}$ and $\Delta Lending_{t-1}$, our results suggest that increases in bank lending have nearly twice the impact on real estate prices compared to salary increases. Specifically, a KD 100 million rise in government wages and salaries is associated with a 0.42% increase in housing prices, while an equivalent increase in bank lending corresponds to a 0.75% rise. This finding underscores the important role of credit availability in driving real estate demand. The result is also consistent with lending practices in Kuwait, where a newly hired employee may qualify for up to KD 95,000 in instalments and consumer loans, amplifying their purchasing power well beyond the nominal salary increase alone.

$\Delta Perc_{c,d,t-1}$ captures the previous year's price change and helps assess whether the market exhibits momentum or mean-reverting behaviour. The consistently negative coefficient across all model specifications suggests a tendency toward mean reversion – where periods of price increases are typically followed by slowdowns, and declines are followed by recoveries. Lastly, the coefficient on $\Delta House_{c,t}$ indicates that transactions involving completed homes tend to experience slower price growth – or faster price declines – compared to transactions involving vacant land.

Do all areas of Kuwait respond in the same way?

For our second analysis, we examine the impact of $\Delta PAHW$ on different areas, enabling a cross-sectional comparison. We aggregate the cities into 12 clusters, following a similar approach to Alshalfan et al.[14], who cluster cities based on their similarities. Our subsample has a total of 85 areas in Kuwait. Clustering is particularly useful because the clientele in expensive area and located closer to Kuwait City might respond differently to the model's factors compared to those in areas closer to the median price point and located farther from Kuwait City. Clustering is more feasible than analysing the data on a city-by-city level because it allows us to use a larger dataset without dealing with missing or volatile observations resulting from cities with no or low numbers of transactions. For convenience and easier reference, each cluster has been given a distinct name in Table 2.

Table 2: The 12 Clusters and Their Respective Cities

#	Name	Cities
1	**Shuwaikh**	Abdullah Al-Salem, Shamiya, Shuwaikh, Faiha, Nuzha, Kaifan
2	**Dasma**	Dasma, Qadisiya, Mansouriya, Daiya, Sha'ab, Salmiya
3	**Adailiya**	Qurtuba, Khaldiya, Yarmouk, Adailiya, Surra, Rawda, Jabriya
4	**Khaitan**	Khaitan, Omariya, Rabia, Rihab, Eshbiliya, Ardiya, Firdous, Sabah Al-Nasser, Abdullah Al-Mubarak, Farwaniya, Jleeb Al-Shuyoukh, Abraq Khaitan, West Abdullah Al Mubarak
5	**Andalous**	Andalous, Sulaibikhat, Garnata, Nahda, Doha, Qeirawan, NW Sulaibikhat, Jaber Al-Ahmad
6	**South Surra**	Sadiq, Shuhada'a, Hateen, Salam, Zahra
7	**Bayan**	Bayan, Mishref, Salwa, Rumaithiya, Mubarak Al-Abdullah
8	**Qurain**	Qurain, Adan, Qosoor, Mubarak Al-Kabeer, Sabah Al-Salem
9	**East Qurain**	Messayl, Abu Fatira, Funaitees, Egaila, Fintas, Messila, Fintas Agricultural
10	**Ahmadi**	Riqqa, Sabahiyya, Hadiya, Fahad Al-Ahmad, Mangaf, Jaber Al-Ali, Dhaher, Abu Halifa, Ahmadi, Fahaheel, Mahboula, Ali Sabah Al Salem, East Ahmadi, East Riqaa
11	**Jahra**	Jahra, Ayoun, Qasr, Waha, Sa'ad Al-Abdullah, Naeem, Naseem
12	**Wafra**	Sabah Al-Ahmad Residential, Wafra

[14] Alshalfan, Alrasheed & Albabtain, 'Housing Kuwaitis'.

In Table 3, we present a summary table detailing the characteristics of each cluster. Cluster 1 is the most expensive, while Cluster 12 is the least. The median plot size sold is 400 sqm for half of the clusters, while Clusters 3 and 6 have the largest median plot size at 600 sqm. For most clusters, most transactions involve houses, except for Clusters 6 and 9, which have a higher proportion of land transactions compared to house transactions. The number of total available homes and land in each cluster as of 2023 is shown.[15] Cluster 10 includes the largest number of cities, with 14 cities, while Cluster 12 has the fewest, consisting of only two cities. In terms of liquidity, Cluster 9 stands out as the most liquid, with 25% of properties trading hands over the last 5 years, while Cluster 8 is the least liquid, with only 5% liquidity over the same period.

Table 3: Summary Statistics on a Cluster-by-Cluster Basis

Cluster	Median plot size	no. of cities	no. of transactions	5-year Liquidity	no. land 2023	no. home 2023	Home KD/sqm	Land KD/sqm
1	500	6	1,904	10%	227	5,477	1,379.7	1,395.1
2	500	6	1,588	13%	100	4,283	1,100.2	1,144.7
3	600	7	3,977	8%	518	12,218	1,038.4	946.0
4	400	13	6,560	7%	1,439	23,065	732.5	634.3
5	400	8	3,414	8%	431	15,783	764.8	721.5
6	411.5	5	4,808	9%	3,087	9,033	1,245.7	941.8
7	536	5	4,619	7%	911	17,982	833.0	881.9
8	400	5	2,863	5%	88	18,690	764.8	708.0
9	400	7	12,024	24%	2,958	7,887	991.6	701.3
10	400	14	5,963	7%	866	23,227	599.4	527.5
11	400	7	4,068	7%	191	16,199	631.7	549.6
12	600	2	1,533	7%	1,723	11,702	404.3	237.0

We present our findings in Table 4 below. We estimate a system of 12 equations using Seemingly Unrelated Regressions (SUR) to allow for contemporaneous correlation across city clusters. The standard errors reported are equation-specific and derived from the estimated systemwide residual covariance matrix. While these do not account for intra-cluster dependence, they improve estimation efficiency relative to separate WLS regressions, particularly in the presence of cross-cluster error correlation.[16]

[15] These figures were sourced from Estater, a provider of real estate data and analysis in Kuwait.

[16] Our results are qualitatively similar when we run separate WLS regressions.

Table 4 reveals that the impact of changes in the PAHW waiting list on real estate prices is not uniform across clusters. The most responsive cluster is Cluster 1, which includes some of Kuwait's most expensive and supply-constrained areas. Despite their affluence, these neighbourhoods exhibit strong sensitivity to fluctuations in public housing demand, likely due to limited available land and substantial demand spillovers from waitlisted families renting in the area. Clusters 9, 7, and 6 also show significant responsiveness. These areas may be particularly attractive to real estate investors who develop rental properties and closely monitor the PAHW waitlist, as rising demand from waitlisted families can translate into higher rental yields and capital appreciation. By contrast, Clusters 8, 11, and 12 show little to no significant relationship between price changes and the PAHW waitlist. These clusters tend to be located farther from Kuwait's centre and include the most affordable areas, such as Wafra and Jahra, which may be less preferred by households on the waiting list.

Table 4a: The Effects of Factors Cluster-by-Cluster

% Change in Price ($\Delta Perc_{c,d,t}$)						
Model	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Constant	5.182	-6.36*	-1.558	2.36	0.449	0.661
t	1.15	-1.68	-0.55	0.64	0.1	0.2
$\Delta Perc_{c,d,t-1}$	-0.39***	-0.388***	-0.34**	-0.383***	-0.178*	-0.0671
t	-4.95	-6.28	-6.42	-5.98	-1.91	-0.84
$\Delta PAHW_{t-1}$	1.144***	0.696***	0.785***	0.603***	0.631***	0.84***
t	4.71	3.41	4.79	3.04	2.81	4.34
$\Delta Salary_{t-1}$	-0.011**	0.011**	0.001	0.002	0.0091*	-0.0027
t	-2.1	2.56	0.039	0.49	1.96	-0.678
$\Delta Lending_{t-1}$	0.0065*	0.0098***	0.01***	0.011***	0.006*	0.008***
t	1.7	3.17	4.07	3.5	1.72	2.77
ΔCBK_{t-1}	5.237**	0.458	-0.807	-4.76***	-3.54*	0.141
t	2.37	0.26	-0.58	-2.95	-1.68	0.086
$\Delta House_{c-t}$	-1.61	1.6	-2.316	-6.56**	-4.349	-3.145
t	-0.5	0.6	-1.12	-2.26	-1.36	-1.32
Observations	166	160	239	279	156	167
Adjusted R^2	0.183	0.159	0.151	0.167	0.124	0.127

Table 4b: Regression Results

% Change in Price ($\Delta Perc_{c,d,t}$)						
Model	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**
Constant	-4.584	-10.18**	1.55	2.98	1.877	-6.42
t	-1.14	-2.47	0.38	0.65	0.24	-0.9
$\Delta Perc_{c,d,t-1}$	-0.25***	-0.02	-0.32***	-0.287***	-0.18	0.427***
t	-3.29	-0.27	-4.73	-3.43	-1.62	2.73
$\Delta PAHW_{t-1}$	0.899***	0.247	1.028***	0.636***	0.504	-0.021
t	3.97	1.55	4.59	2.6	1.52	-0.049
$\Delta Salary_{t-1}$	0.006	0.0049	-0.006	0.0059	0.0066	0.018**
t	1.23	1.46	-1.3	1.16	0.96	2.1
$\Delta Lending_{t-1}$	0.013***	0.006**	0.012***	0.008**	0.0067	0.0058
t	3.62	2.47	3.32	2.17	1.35	0.84
ΔCBK_{t-1}	-3.87**	-2.98**	-3.23	-1.19	-1.42	-5.21
t	-2.01	-2.23	-1.58	-0.59	-0.5	-1.43
$\Delta House_{c-t}$	-3.926	7.19*	-3.556	-6.77*	-6.14	0.55
t	-1.37	1.98	-1.23	-1.96	-0.94	0.1
Observations	173	98	180	281	141	42
Adjusted R^2	0.203	0.052	0.204	0.111	0.058	0.06

*Note: *p<0.1; **p<0.05; ***p<0.01*

To assess whether the effect of changes in the PAHW waiting list differs across city clusters, we perform a joint hypothesis test using the SUR framework. Specifically, we test whether the coefficient on the lagged change in PAHW waitlist is equal across all twelve clusters. The Theil's F-test rejects the null at the 5% significance, indicating statistically significant variation in the estimated PAHW effect across clusters. This finding suggests that housing markets in different parts of Kuwait respond differently to changes in the public housing backlog, potentially reflecting variation in local supply constraints, market segmentation, or demand elasticity.

Do all areas respond symmetrically if the PAHW does well/badly in reducing the waitlist?

To explore whether the response of real estate prices varies across regions depending on the government's performance in addressing the housing backlog, we re-specify our baseline model by replacing the continuous PAHW variable with a binary indicator. This dummy variable equals one in years classified as 'high backlog accumulation' defined as years in which the annual change in the PAHW waiting list exceeds the sample median of

3,075 additional families.[17] Under this classification, we identify nine 'high backlog accumulation' years, during which the average increase in the waiting list was 7,424 families annually, and nine 'low backlog accumulation' years, where the list declined by an average of 3,523 families per year. By interacting this performance indicator with cluster-level dummies, we are able to capture whether the sensitivity of prices differs depending on whether the government is effectively reducing the backlog or falling behind. This approach allows us to assess asymmetric responses in housing prices across regions under differing institutional performance conditions.

Table 5 provides a simple descriptive overview of real estate price changes during years of 'high backlog accumulation' versus 'low backlog accumulation'. While this classification is a practical benchmark, it should not be interpreted as an absolute measure of government performance, as the threshold is endogenous to the sample and the PAHW waitlist may shrink or grow for administrative reasons unrelated to actual housing delivery (e.g., divorce, eligibility changes, or allocations made on paper but unliveable for years). With these caveats in mind, the data reveal that nearly all real estate price growth occurred during 'high backlog' years, where average prices rose by 8.38%, compared to only 0.30% in 'low backlog' years.

Table 5: Bad vs Good Performance Cluster-by-Cluster

	High Backlog Accumulation		Low Backlog Accumulation	
Cluster	$\Delta Perc_{c,d,t}$	Obs	$\Delta Perc_{c,d,t}$	Obs
All	8.38	1015	0.30	1067
1	9.81	79	0	87
2	9.26	77	-0.26	83
3	7.69	119	0.43	120
4	7.62	147	1.10	132
5	8.11	65	-0.86	91
6	10.73	80	-0.48	87
7	11.56	87	2.08	86
8	7.16	47	1.01	51
9	11.81	86	1.92	94
10	7.04	138	-0.27	143
11	7.12	71	0.64	70
12	9.12	19	2.86	23

[17] The following years were categorised as 'bad performance' years within the 2006–2023 sample: 2006, 2007, 2008, 2009, 2011, 2012, 2013, 2018 and 2020.

Table 6 explores how price dynamics across clusters vary depending on the government's performance in managing the PAHW waitlist, using an interaction model between cluster fixed effects and a binary variable ($HighBacklog_t$) indicating whether the annual increase in the PAHW waitlist exceeded the sample median. The specification includes the same control variables as our baseline model and clusters standard errors at the city level. We exclude city fixed effects due to the inclusion of cluster dummies, which would otherwise introduce multicollinearity. A key insight emerges from the cluster coefficients: during low backlog years (when PAHW performance is relatively strong), all clusters – except Cluster 12 – show negative and in several cases statistically significant coefficients relative to Cluster 1. This implies that prices in clusters 6 to 11 tend to decline more during these periods, reinforcing the finding from earlier analyses that government-supplied housing eases affordability pressures more in mid-priced and residential rental areas. In contrast, Cluster 12 again shows a positive and statistically significant coefficient, suggesting that prices there do not decline in tandem with other areas, likely due to its unique remote location and low starting base prices. Additionally, Cluster 12 comprises only two cities, which were part of PAHW housing allocations, potentially making this cluster less comparable to others in the sample.

In contrast, during high backlog years, the main effect of the HighBacklog variable is positive and statistically significant, indicating a general price increase of about 5.65% across Kuwait. However, the interaction terms between HighBacklog and the individual cluster dummies are generally statistically insignificant, with the exception of Cluster 6. This suggests that during times of housing scarcity, price pressures are felt broadly and uniformly across the country. Taken together, these results point to an important asymmetry: while weak government performance drives price increases across all clusters similarly, effective government action tends to reduce prices more meaningfully in lower- and mid-priced areas.

Table 6: Prices Changes per Cluster Interacted with Government Performance in Addressing PAHW Waitlist

Variable	% Change in Price ($\Delta Perc_{c,d,t}$)	*t*
Constant	-0.33	-0.27
$\Delta Perc_{c,d,t-1}$	-0.12***	-2.64
ΔCBK_{t-1}	-2.995***	-6.01
$\Delta Salary_{t-1}$	0.003**	2.28
$\Delta Lending_{t-1}$	0.008***	10.69
$\Delta House_{c-t}$	-2.51***	-4.65
$HighBacklog_{t}$	5.65***	4.29
Cluster2	-1.317	-1.04
Cluster3	-1.816	-1.26
Cluster4	-1.13	-0.88
Cluster5	-1.659	-1.48
Cluster6	-4.1***	-3.68
Cluster7	-2.193*	-1.94
Cluster8	-2.266**	-2.07
Cluster9	-2.57*	-1.87
Cluster10	-2.55**	-2.46
Cluster11	-2.04*	-2.81
Cluster12	4.65***	3.03
Cluster2*HighBacklog	1.579	0.97
Cluster3*HighBacklog	0.705	0.36
Cluster4*HighBacklog	-1.603	-0.85
Cluster5*HighBacklog	-0.618	-0.28
Cluster6*HighBacklog	3.116**	1.98
Cluster7*HighBacklog	1.961	1.12
Cluster8*HighBacklog	-0.441	-0.28
Cluster9*HighBacklog	1.273	0.50
Cluster10*HighBacklog	1.046	0.72
Cluster11*HighBacklog	0.659	0.43
Cluster12*HighBacklog	-0.694	-0.32
Observations	2,082	
Adjusted R^2	0.117	

*Note: *p<0.1; **p<0.05; ***p<0.01*

Conclusion

Kuwait's residential real estate remains one of the least affordable markets globally, with prices at 22 times the average income, well above the 'impossibly unaffordable' threshold. Structural features of Kuwait's welfare model, including politically motivated wage expansion and generous employment policies, contribute to demand-side pressures. Our findings indicate that increases in salaries and, more significantly, private bank lending are associated with higher housing prices. In contrast, tighter monetary policy is linked to price declines, though interest rate tools are largely constrained by Kuwait's currency peg.

With limited tools to curb demand, policymakers are left with one key lever to address housing affordability: supply. Our analysis suggests that expansion of public housing provision – proxied by reductions in the PAHW waitlist – is associated with lower residential real estate prices. Specifically, we find that a decrease of 1,000 families on the PAHW waitlist is associated with a 0.45% decline in housing prices the following year. Notably, this relationship is asymmetric: when the backlog worsens, prices rise across all areas; but when the government performs well in reducing the waitlist, the price declines are concentrated in mid-priced clusters. These areas – home to families most in need of affordability improvements – respond more strongly to supply-side interventions, underscoring the potential of well-targeted public housing delivery.

Our study makes several contributions. First, it is the first empirical paper to quantify the relationship between public housing waitlist dynamics and residential real estate prices in the Gulf region. Second, it provides granular, city-cluster-level insights using a novel real estate dataset covering nearly two decades. Third, we highlight asymmetric responses to government performance, offering a more nuanced understanding of how policy outcomes shape affordability across space.

That said, our paper has limitations. The use of PAHW waitlist changes as a proxy for housing market pressure captures only the public segment of demand and supply. It may be influenced by administrative removals or changes in eligibility criteria – such as divorce, plot allocations on paper, or infrastructure delays – which do not necessarily translate into immediate housing supply. Additionally, our results are associative rather than causal, despite the use of lagged variables and robustness checks. Future research could build on our findings by exploring quasi-experimental designs – such as instrumental variables or natural experiments –that better isolate exogenous variation in PAHW allocations. Moreover, a deeper investigation into land-use regulations, private sector supply dynamics, or spatial equilibrium models could complement our findings.

The findings of this research align with those of previous scholars at the LSE Middle East Centre, including AlShalfan et al.[18] and Oh et al.[19] As Kuwait prepares to address the growing housing needs of over 97,000 families, understanding how different policy levers affect real estate prices will be critical. This paper provides a data-driven foundation for that conversation, while leaving ample room for future research to refine and extend its insights.

[18] Alshalfan, Alrasheed & Albabtain, 'Housing Kuwaitis'.

[19] Do Young Oh & Hyun Bang Shin, 'Locating the Housing Crisis in Kuwaiti State, Land, and Society', *LSE Middle East Centre Kuwait Programme Paper Series* (2023). Available at: http://eprints.lse.ac.uk/118282/12/Housing_Crisis_in_Kuwait.pdf (accessed 28 August 2025).

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Middle East Centre
London School of Economics
Houghton Street
London, WC2A 2AE

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Amira Djuric

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