The Effect of Remittances on the Real Estate Market in Jordan

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Abstract Propose: The Study aims at investigating the impact of remittances on economic in general and on real-estate sector in particular. A few studies have addressed the importance of remittances of expatriates to their countries. The current study examines the impact of expatriates on real-estate sector in Jordan during the period of 1990-2015. Methods and Procedures: The study has adopted both descriptive and analytical approaches to investigate and measure the impact of Jordanian expatriate's remittances on the investment of real-estate in Jordan throughout the period of 1990-2015. To this end, annual data concerning study variables and E-views for conducting analogue analysis have been employed. Testing tools: The following tests were applied, namely: Dickey-Fuller (ADF) for testing the stillness of the time series model to the variables of the study, CUSUM and CUSUM of Square test for investigating the stability of the model parameters, and (ARDL). Findings and Recommendations: The study has a positive impact on real-estate market, building, and the rate of population growth. The study recommends formulating policies and guidelines for Jordanian expatriates in order to invest their money and remittances in long term developmental investments, develop alternative funding sources in case if remittances have been suspended and diverse investment climates have been provided for Jordanian expatriates. Also, the study recommends adopting official decisions concerning the cease of building for a temporary period to prevent the exacerbation of local real-estate crisis.

Keywords: remittances, real-estate sector, Dickey-Fuller (ADF), Jordan,.

I. INTRODUCTION

The subject of Jordanian expatriate's remittances receives considerable attention by researchers, officials, economic experts in Jordan due to the increase of Jordanian expatriate's ratio abroad which, in turn, increase their returns, remittances, and their impact on Jordanian economy. To illustrate, previous studies indicated that expatriates remittances impact revolves around investment and consumption. The investment remittances focus on preparing investment projects which play an important role in revitalizing macroeconomics through increasing the level of income and decreasing both poverty level and income inequality. Moreover, Jordanian expatriates improve creditworthiness which, in turn enhance the capacity of state

on lending from global financial marker with a better conditions. According to the statics issued from Ministry of foreign affairs, the ratio of Jordanian expatriates has reached to million expatriates who are distributed on 70 countries. The data showed that the ratio of Jordanian expatriates are distributed as follows: 79.5% in Arab Gulf States, 11% in both America and Canada, 4.3% in Europe, 3% in the rest of Arab countries. The value of Jordanian expatriates remittances in 1990 reached 331.8 million Jordan dinar and contributed 12.43% from gross domestic product. However, the value of Jordanian expatriates remittances raised in 2001 to 1283.3 million dinar to contribute 20.15% from gross domestic products. And then the value has increased in 2015 to 2423.3 million dinar to contribute 9.09% from the gross domestic product (central bank, various numbers).Knowing that these numbers only reflect the value of sent remittances through units of banking systems, banks and exchange, which might definitely be monitored and defined while the actual value for expatriates exchanges has a higher value that the above mentioned values because there are other actual values of remittances applied through banks and financial apparatus which cannot be calculated such as in-kind transfers represented in goods Jordanian expatriates abroad and direct cash transfers. The investment in real-estate estate sector has contributed an important part for expatriates' investors who are directed towards such as obtaining good revenue with less risks, finding secure investment environment and good infrastructure, providing appropriate climate and geography for recreation and convenience. In addition to the clarity of policies in Jordan and the ability to make ownership procedure and other reasons which encourage Jordanian expatriates to real-estate investment.

II. RELATED LITERATURE

The concern of expatriates' remittances became a dire need for many countries, particularly the developing countries that consider such remittances as a primary income for them. It is worth mentioning that no study tackled the impact of expatriate's remittances and real-estate market in particular. However, some of international, regional, and local studies have tackled the impact of expatriates' remittances on economic growth. One of which are the following studies which have the historical methodology.Bayer (2015) study adopted the Approach of Co Integration Analysis and Unrestricted Error Correction Models. The study tested the causal relation between economic growth, financial remittances, and the net of foreign investment flows with economies in transition in European Union during the period of 1996-2013.

The finding of the study lies in searching for the positive impact for financial remittance on economic growth by contributing in national savings for countries partial foreign cash requirements. However, the direct net of foreign investment flows impact on economic growth by providing sources including capital and technical knowledge.

Besides, creating job opportunities and employment. Moreover, Al-Ghazo (2012) study aims at knowing the Jordanian workers' remittances impact on the significant macroeconomic indicators (investment, private consumption, inflation, and gross domestic product). The researcher has analysed the series of this study variables during the period of (1990-2011). For the purpose of achieving the objectives of the study, the researcher employed various statistical tests, such as Dickey-Filler test, Augmented Dickey-Fuller, and Co Integration test. Afeshat and Dmour (2012) examined the real-estate determinants in Aqaba area. Their study aimed at determining and analysing the motivating factors for real-estate investments in Aqaba area in particular and defining their importance, and knowing the investors satisfaction extent of such motivators. To this end, the descriptive approach was employed. The study reached to the conclusion that the job of immigrants from Ghana to Sydney provided 33% from their income, which, in turn, enable them to build 100000 residential house in Ghana within 3-6 years. Owing to the increased demand for real-estate market in Jordan as well as the expatriate's demand for real-estate investment. Therefore, this study aims at measuring impact of Jordanian real-estate market on expatriates' remittances. As such, this study is considered as the first study in Jordan that tackles such aspect.

A. *The Concept of Real-Estate Market*

The market is considered as an integrated economic and commercial process. Taking into account the diverse human needs which cannot be achieved individually. As a result, the cooperation between the individuals is considered as a necessity in order to provide their needs and necessities. Real-estate market is defined as a market for selling and buying housing stock which is not only the house we live in, but also the agricultural lands, such as farms, gardens, and fish farms, or deserted, or prepared for building such as residential real-estates that are represented in villas, palaces, buildings. In addition, invest for Life Magazine (2015) added that commercial, administrative, industrial, and serviced, such as ships, cars, and airplanes. Real-estate market is considered incompetent market due to its contradiction with the competent market in terms of the following issues:

B. *Real-Estate Investment:*

The investment is the employment of money in any activity or economic project that provide the country with legitimate benefits. It considered as a primary engine for economic activity due to its direct connection with capital formation, the increase of national economic abilities in production, development, and renewal. Moreover, it is associated with machines, equipment, buildings, and real-estates. Mcmahan (1989) believes that real-estate is defined as the economic usage of legal rights for land. He adds that economics consider real-estate as an economic value that emanate from an activity that commensurate with the land and what develops from it.

C. *The factors influence the real-estate investment:*

The real-estate investment for the real-estates concerning the whole factors that might attract the real-estate investment. In this regard, Mubrook (2007) believes that "foreign investment attraction depends on various factors, such as economic, political, and legal. All of which represent the investment climate that affect the resolution that investor might adopt for preferring the investment in a specific country.

1) Natural and Ecological Factors:

Both of them are considered as the most important factors for investment attraction, such as climate and place of real-estate concerning the existence of either natural or ecological hazards.

2) Economic Factors:

The process of investment attraction are affected by economic circumstances, such as exchange rate, its stability, and the extent of banking system development, the size of the domestic market, the extent of raw material, the degree of openness to the outside world, and the competitive strength of economy and the ability of managing it.

3) Legislations Factors and Governmental Legislations:

The existence of absolute transparency in real-estate market and the existence of appropriate legal framework, the current legislations for the purpose of motivating funders on investment are considered from the factors that motivate and create investment, such as the laws related with construction, demolition, and rents.

4) Social Circumstances

The social circumstances impact on real-estate investment, such as the average income, the common sense, the demographic (age) ecological awareness.

5) Market Factors:

The factors resulting from supply and demand are considered from the factors influencing real-estate market in Jordan which are represented by the price of product inputs and costs, the meter price in the area, and the time of the request

6) Planning factors:

An appropriate infrastructure shall be provided in order to guarantee the attraction and creation of real-estate factors and their continuity, such as providing services, essential facilities that are represented in telecommunications and wireless network, water systems, electricity, providing information technology and its accessibility.

7) Political Factors:

Afeshat and Al-Damour (2012) indicted that political factors play an integral part in impacting the local and foreign investor resolution. The degree of political stability occupies the first rank. The findings of the studies pointed out the necessity of political stability factor for encouraging investments. The International Financial Crisis and Real-Estate Investment: The international financial crisis started in February 2007 which emerged from the mortgages in United States of America.

After that, it moved to stock exchanges, banks, and insurance companies, since the world became as a small village due to the rapid changes of international environment and the accession to various countries as Jordan, the openness of markets and economies, removing barriers and obstacles among countries due to the technological development, the accessibility of information, and the transparency.

All of which are defined as economy and market globalization and market i.e. the economy that occurs in a certain country will affect the economy of other countries whether directly or indirectly.

Mortgage Finance:

The jurists opinions concerning the concept of mortgage finance varied, but their opinions were closely related. To clarify, some of the jurists' defined mortgage finance as "the individuals, companies, or institutions need to finance the acquisition or manufacture a real-estate construction.

Therefore, the funder resort to the finance authority, and then paying for this finance to be agreed upon for a return".

This definition has neglected the rest of real-estate financing fields, such as restoration, housing improvement, or administrative units.

Jordanian expatriates outside the kingdom (1990-2015):

Jordanian expatriates constitute national wealth that deserve care and interest. They are an integral part of Jordanian community they have rights and duties to their countries, and they have a significant contribution in both subsidizing local economy and solving a part of unemployment problem in Jordan. The distribution of Jordanian expatriates according to the reason for residence and gender (1994-2004) are illustrated in Table (1-3):

Table (1-3)

Table (1-3) the distribution of Jordanian expatriates during the period (1994-2004)

The reason for residence	Total	%	Males	%	Females	%
Job	14737	50.13	13689	46.56	1048	3.56
Study	8960	30.47	7638	25.98	1322	4.48
Accompany	3685	12.53	1280	4.35	2405	8.17
Tourism	1520	5.17	762	2.59	758	2.57
Remedy	161	0.55	108	0.36	53	0.18
Others	237	0.81	107	0.36	130	0.18
Unindicated	97	0.32	64	0.22	33	0.10
Total	29397		23684	80.56	5749	19.55

Source: Department of Statistics

The number of Jordanian expatriates for job reason surpassed the number of Jordanian expatriates for study, accompany, tourism, and remedy in the whole study years which, in turn, means the continuous increase in Jordanian expatriate's remittances.

The number of Jordanian expatriates until 2004 reached 29397 expatriate, males accounted for 80.56% about 23684 expatriates, while females accounted for 19.55% about 5749 expatriate.

The highest proportion of work indicator reached 50.13%. To illustrate, the proportion of expatriates' males for work reason constituted 46.56% while the proportion of expatriates' females for work reason constituted 3.56%. However, the lowest proportion for unknown reasons constituted 0.22% of males' expatriates and 0.10% of females expatriates.

The statistics of the Ministry of labour in 2006 in 2006 indicated that most of Jordanian labour forces in Arabian Gulf are centred in Saudi Arabia that reached to 50%, followed by United Arb Emirates that reached to 26%, subsequent by Kuwait, Qatar, and Amman. Surprisingly, Bahrain constitutes the least proportion of Jordanian expatriates which constituted 1.3%. Figure No. (2) indicates the distribution of Jordanian workers in Arabian Gulfsss and The development of Jordanian expatriates remittances (1990-2015):

Table (4) demonstrates the development of Jordanian expatriates and its proportion of gross domestic product. In addition, its proportion of foreign reserves during the period (1990-2015):

Amman News Magazine (2015) pointed out that Jordanian expatriates proportion from the gross local product reached to 15% average. Such proportion surpasses the contribution of many sectors. The agriculture contribution in gross domestic product reached to 2.9%, the constructions 4.5%, transportation 9.31%, tourism 6.5%, communication 12.5%.
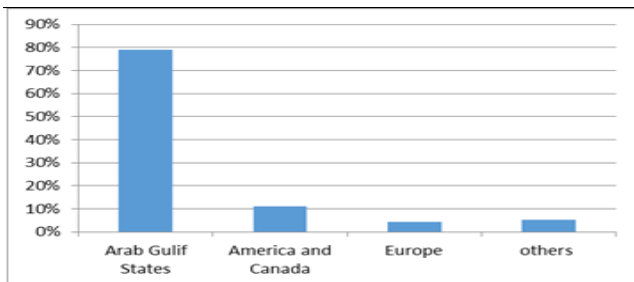

Figure (1-3) the distribution of Jordanian expatriates around the world

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Table (3-3)Jordanian expatriate's remittances during the period of (1990-2015)

Year	Transfers Million jd	The growth In expatriates	Domestic Product	Foreign reserves
1990	331.8	-	12.0	108.5
1991	306.3	7.7-	10.4	34.9
1992	573.1	86.8	15.9	62.4
1993	720.7	25.8	18.6	173.9
1994	763.7	2.9	17.5	252.5
1995	871.7	14.1	18.5	287.7
1996	1094.8	25.5	22.3	221.5
1997	1173.5	7.2	22.8	97.8
1998	1093.8	-6.8	19.5	131.9
1999	1179.8	7.9	20.4	83.6
2000	1177.3	-0.0021	19.6	60.1
2001	1283.3	9	20.2	70.2
2002	1362.3	6.2	20.1	54.9
2003	1404.5	3	19.4	41.8
2004	1459.6	3.9	18.0	42.7
2005	1544.8	5.8	17.3	45.9
2006	1782.7	15.4	16.7	41.2
2007	2122.5	19.1	17.5	43.6
2008	2242.0	5.6	14.4	40.8
2009	2214.2	1.2-	13.1	28.7
2010	2247.3	1.5	11.9	25.9
2011	2152.1	4.2-	10.5	28.9
2012	2229.8	3.6	10.2	47.5
2013	2327.7	4.9	9.8	27.3
2014	2388	2.7	9.4	24.0
2015	2423.3	1.5	9.1	17.1

Source: electronic database for Jordanian central bank

The importance of properties and constructions sector in Jordanian economy:

The properties sector in Jordan plays an important role in economic activity by its contribution in gross domestic product, providing job opportunities, creating new investment opportunities for stakeholders and citizens' savings, to meet the increased demand of residential units, to reduce the costs of these units. There are many indicators that clearly reflect the role of this sector in national economy as follows: The Contribution of Building and construction sector in gross domestic product

Table No. (5) shows that the output in building and construction sector has witnessed significant growth during the years (1990-2015) since the average annual growth reached to 6.09% during this period. The real-estate and construction sector ratio to the gross domestic product reached to 16.3% in 1990, and then declined to 4.39% in 2015.

The real-estate and construction sector increased from (452.3) million Jordanian dinar in 1990 to (1170.8) million Jordanian dinar in 2015. The continued increase in output reflects the increased importance of the real-estate sector concerning Jordanian economy. Table No. (4)

The development of the output in real-estate and construction sector and its contribution proportion in gross domestic product in the current prices for the years (1990-2015)

The Table (4) have been calculated by researcher.

Year	Gross Domestic Product Million Jordanian dinar	The output of Real-estate sectors And construction Million Jordanian dinar	Real-estate Sector and Construction To the gross Domestic produc (%)	The Annual growth rate for For the product of Real-estate and Construction sectors
1990	2760.9	452.3	16.3	———
1991	2958.0	486.6	16.5	7.6
1992	3610.5	503.1	13.93	3.4
1993	3884.2	540.1	13.90	7.4
1994	4357.4	571.5	13.11	5.8
1995	4714.7	610.2	12.94	6.8
1996	4911.3	634.2	12.91	3.9
1997	5137.4	669.9	13.03	5.6
1998	5609.9	694.0	12.37	3.6
1999	5778.1	700.1	12.11	0.9
2000	5998.1	725.7	12.09	3.7
2001	6363.7	737.2	11.58	1.6
2002	6794.0	734.9	10.81	0.3-
2003	7228.6	749.9	10.37	2.0
2004	8090.7	769.6	9.51	2.6
2005	8925.4	855.5	9.58	11.2
2006	10675.4	885.5	8.29	3.5
2007	12131.4	926.8	7.63	4.7
2008	15593.4	951.0	6.09	2.6
2009	16912.2	996.9	5.89	4.8
2010	18762.0	1044.2	5.56	4.7
2011	20476.6	1073.2	5.24	2.8

2012	21965.5	1097.1	4.99	2.2
2013	23851.6	1121.4	4.70	2.2
2014	25437.1	1146.3	4.50	2.2
2015	26637.4	1170.8	4.39	2.1

Source: electronic database to the Jordanian central bank and thetransactions reporting system (ITRS) that are monthly filled Department of Statistics

III. STANDARD ANALYSIS

A. Introduction

After the close relation between the investment in real-estate market and Jordanian expatriates' remittances has been theoretically clarified. The study such relation from the scientific aspect supports the theoretical aspect. For the purpose of achieving the objectives of the study. The primary goal of this semester lies in both knowing the study methodology and examining the impact of Jordanian expatriates on the investment in real-estate market during the period of (1990-2015) in Jordan.

B. Methods and Procedures

∗ The study has adopted both descriptive and quantitative analytical approach to study and examine the impact of Jordanian expatriates remittances on investment in real-estate market in Jordan during the period1990-2015 by the usage if annual data for the study variables. Also, E-views. 8 was used to conduct standard analysis.

1) Study variables:

∗ The study variables were chosen on the basis of economic theory and theoretical forms employed in previous studies. Such variables are boiled down to the following points:

I: Investment in the real estate market for Lands and Survey Department which includes residential units and lands.

Re: Jordanian Workers Remittances which define as Jordanian expatriates remittances outside the kingdom that are headed for current expense purposes in Jordan. These remittances are estimated on the basis of International

by both central bank and commercial banks such as income data with foreign currencies for the banking system. The data of expatriates' remittances (receivables) have been taken from the electronic database website for the central bank.

a) Capita/Y: the average per capital income which is the value of national income divided by the population. The average per capital income has been calculated by the electronic database website for the central bank.

b) **Inf, Inflation:** the consumer price index is considered as a primary indicator of inflation, in which inflation ratio has been calculated from the electronic database website for the central bank.

c) **P: Ren Rate of Housing:** the data of rent rate of housing are taken from the electronic database website for the central bank.

d) **Pop, Population:** the data population were taken from the electronic database website for the central bank and department of statistics.

e) **RR, Real Interest Rate**: it expresses the weighted average to the interest rate on loans and advances minus inflation during a specific period, the actual interest rate after deducting inflation has been calculated from the nominal value for the interest rate by the electronic database website for the central bank.

Figure No. (1-5) indicates the general direction for data:

variable	Stability level	Calculated T	Probability
I	Stable at the first level	-3.8769	0.0073
LINF	Stable at the first level	-6.5574	0.0000
LP	Stable at the first level	-3.1007	0.0400
LRE	Stable at the first level	-4.4750	0.0018
LRR	Stable at the first level	-2.6660	0.0100
LYCAPITA	Stable at the first level		0.0070
LLGPOP	Stable at the first level		0.0000

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Scheduled value at 5% and 10% level.

Accordingly, it can be said that the whole study variables are stable at the first degree (1).   In this respect, Engle and Granger (1987) indicated that upon applying co-integration test the whole study variables shall have the same stability. All of which are achieved by the current study.

C.   Lang Length Selection:

This test has been conducted by employing the above mentioned standards.   The findings of the study are indicated in Table (2-5).   Most importantly, the findings showed that the whole standards have determined   one period for lag length selection.

Table (2-5)
The findings of lag length selection test

The peri of lag len selection	LR	FPE	AIC	SC	HQ
1	NA	2.29e-1	-13.95075*	-11.56176*	-13.28815*

Lang length selection period that has been selected from the concerned test.

LR: Likelihood Ratio**, FPE:** Final Prediction Error Criterion, **AIC**: Akaike information criterion, **SC**: schwarz criterion, **HQ**: Hannan Quinn Criterion.

D.   *CUSUM Stability Test:*

After conducting CUSUM Test on the study variables data. Figure (2-5) shows that stability of the model features and its lack of structural changes that cause a sudden leap in the standard model. However, the curve of the others occur between the standard deviation lines which proves the validity of data stability at 5% level.   As such, other tests will be conducted during the whole temporal period that are covered by the study without the need to be divided into partial period of time.

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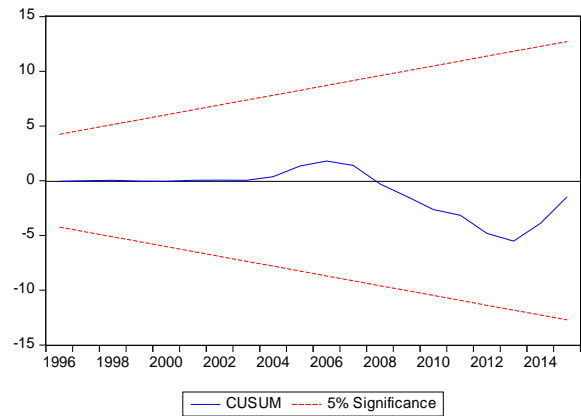

CUSUM ------ 5% Significance

Figure (2-5)

1)   1) Co-integration Test:

The co-integration test in the current study estimates the independent variables, such as workers' remittances, population growth rate, and per capita income, inflation rate, and housing lease rate on the investment in real-estate market.

2)   Bound–Test:

The time-series is unstable, but it becomes stable after the first difference which, in turn, indicates its first degree integrity (1) which leads to the possibility of having long term balanced relationship that are largely included among variables.   Autoregressive distributed lag model (ARDL) was employed for economic slowdown by employing the suggested Bound Test by (Pasaran et al., 2001).

Table (3-5) the Findings of Bound-Test

Models	Calculated F	1%		5%		10%		K=6
		I(1)	I(0)	I(1)	I(0)	I(1)	I(0)	Resolution
(LGPOP, LRE, LRR, LIN, LYCAPITA)I=F	1.66	3.99	2.88	3.28	2.27	2.94	1.99	No-integration
(LGPOP, LRE, LRR, LIN,I)LYCAPITA=F	1.44	3.99	2.88	3.28	2.27	2.94	1.99	No-integration
(LGPOP, LRE, LRR, LP, LYCAPITA)LIN=F	9.35	3.99	2.88	3.28	2.27	2.94	1.99	Co-integration
(LGPOP, LRE, LRR, I, LYCAPITA)LP=F	5.52	3.99	2.88	3.28	2.27	2.94	1.99	Co-integration
(LGPOP, LRE, I, LP, LYCAPITA)LRR=F	8.05	3.99	2.88	3.28	2.27	2.94	1.99	Co-integration
(LGPOP, I, LRR, LP, LYCAPITA)LRE=F	5.90	3.99	2.88	3.28	2.27	2.94	1.99	Co-integration
(I, LRE, LRR, LP, LYCAPITA)LGPOP=F	14.66	3.99	2.88	3.28	2.27	2.94	1.99	Co-integration

The findings of the above mentioned Bound test indicate that some of the variables in the previous models have long term relations by comparing calculated f with borders. Consequently, the null hypothesis regarding (the absence of joint integration). In other words , the existence of integrated relationships at the significance level   The flexibilities estimation in the Long Turn:

The variables showed joint integration which, in turn, suggests the existence of balanced long term relationships among such variables.   The flexibilities estimation in the long term has been used by employing autoregressive distributed lag model (ARDL) for economic slowdown periods. The findings are illustrated as below:

Table (4-5) The flexibilities results in long term equation for real-estate investment

Long Run Coefficients				
Dependent Variable: I				
(2, 2, 0, 2, 2, 2, 2)			Akaike info criterion (AIC)	
Std. Error	ARDL	Prob.	ARDL	
			Variable	Coefficient
1142.04	3.356	0.0202	LGPOP	3832.70
2363.48	3.793	0.0127	LRE	8965.61
2233.66	0.759	0.4821	LRR	1695.34
4731.80	-0.626	0.5588	LP	-2961.69
20215.10	-1.536	0.1850	LINF	-31058.43
1235.96	7.613	0.0006	LYCAPITA	9409.69
3331.03	-9.934	0.0002	C	-33089.30
Mean dependent var	3233.17		R-squared	0.99583
S.D. dependent var	2747.21		Adjusted R-squared	0.98080
Akaike info criterion	14.74		S.E. of regression	380.66
Schwarz criterion	15.67		Sum squared resid	724491.54
Hannan-Quinn criter.	14.98		Log likelihood	-157.84
Durbin-Watson stat	2.54		F-statistic	66.28
			Prob.(F-statistic)	
				0.0001

Table (4-5) indicates the estimated coefficients for the independent variables and cross in the long run. Taking into consideration that expatriates remittances on investment in real-estate sector. The employed ARDL model in EVIEWS 9 determined the slowdown period in (2,2,0,2,2,2,2). Also, the findings show that R squared (R2) accounted for (99%.58) which indicates that the integrated independent variables interprets (%99.58) concerning the average change of real-estate investment. Furthermore, the findings show that the following coefficients: expatriates remittances, population rate, and per capital income are statistically accepted. On the contrary, the following coefficients: real interest rate, inflation rate, and housing lease rate are considered statistically unaccepted.

FLEXIBILITIES ESTIMATION IN SHORT TERM:
There are not much explanations for short-term coefficients because the variables showed joint integration in the long run. However, short term flexibilities are estimated for the objective of detecting error correction criterion (Coint Eq(-1)). The findings of flexibilities estimation are indicated below:

Table (5-5) The findings of short term flexibilities for investment equation in real-estate market

Dependent Variable: I				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(I(-1))	1.65	0.21	7.97	0.0005
D(LGPOP)	660.41	986.05	0.67	0.5327
D(LGPOP(-1))	-2542.52	767.10	-3.31	0.0211
D(LRE)	20211.61	2839.80	7.12	0.0008
D(LRR)	18756.04	3283.64	5.71	0.0023
D(LRR(-1))	8343.40	3212.28	2.60	0.0484
D(LP)	-30421.18	9308.03	-3.27	0.0222
D(LP(-1))	-38646.68	7473.27	-5.17	0.0036
D(LINF)	-37268.96	9660.16	-3.86	0.0119
D(LINF(-1))	-17600.05	7100.71	-2.48	0.0559
D(LYCAPITA)	18842.50	2869.94	6.57	0.0012
D(LYCAPITA(-1))	-22115.38	3209.49	-6.89	0.0010
CointEq(-1)	-2.28	0.28	-8.04	0.0005

Diagnostic Test:
The diagnostic test was conducted for the purpose of assuring the efficiency of the employed method in analysis and its lack of standard problems according to the following test autocorrelation and Heteroscedasticity that are illustrated in Table (5-6) below:

The findings of diagnostic test

Equation	Prob.	Tests Statistic	Tests
I=F (LGPOP, LRE, LRR, LP, LIN, LYCAPITA)	%49.27	F-Cal.=0.90	Serial correlation test
	%15.91	F-Cal.=2.49	Heteroskedasticity test

It is clearly obvious that probability value F is larger than 5% for both tests which, in turn, means the acceptance of null hypothesis (the non-existent of autocorrelation between errors and Homoscedasticity)

IV. CONCLUSION AND RECOMMENDATIONS

According to the findings of standard analysis to the equation which aimed at investigating the impact of expatriates' remittances on real-estate in Jordan during the period (1990-2015). The study has reached to the following findings:

V. FINDINGS

1-The findings show by testing the stillness of the time series model to the variables of the study that the whole study variables are stable at the first difference.

2- The findings of joint integration analysis between expatriate's remittances and investment in real-estate in Jordan the existence of integrated relationship between short term and long term by applying Bound Test. Also, the findings revealed that expatriate's remittances have a positive impact on investment in real-estate market in Jordan. The more Jordanian expatriate's remittances increased (1%), the more the investment in real-estate market in Jordan increased by the value of (8965.61).

3- The findings of joint integration analysis between population rate and per capita income in real-estate in Jordan the existence of integrated relationship between short term and long term by applying Bound Test. Also, the findings revealed that population rate and per capita income have a positive impact on investment in real-estate market in Jordan. The more Jordanian expatriate's remittances increased (1%), the more the investment in real-estate market in Jordan increased by the value of (9409.69).

4- The previous findings investigating the impact of expatriates' remittances on investment in real-estate in Jordan pointed out that expatriate's remittances have a positive impact on investment in real-estate in Jordan. The findings of this study are commensurate with the following studies (Legeng Le, 2012; Koprencka,2011; Koprencka,2011).

2-6 Recommendations:

1-Defining policies and guidelines for Jordanian expatriates to invest their money and transfers in projects and long term developmental investments, and developing alternative sources for financing in case of remittances suspension.

2-Providing various investment climates for Jordanian expatriates due to the significance of both diversifying the investment portfolio in real-estates and enhancing investors' comprehension regarding the force of diversifying interest.

3-Examining real-estate markets by adopting analytical study and taking official decisions regarding suspending the construction activity for a period of time to prevent the escalation of local real-estate crisis and to avoid Dutch disease effect. The reason behind that is attributed to the investment orientations towards real-estate sector and the existence of unused real-estate. The dictum indicates building suspending until the consumption of the existing of real-estate and apartments. All of which currently require to stop the issue of building license.

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