Patterns and Determinants of Early Retirement: The Case of Jordanian Men

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ABSTRACT

By utilizing data from Jordan Labor Market Panel Survey (JLMPS), this study shows that nearly 85% of the male retirees had retired early, where, around 45% of them returned to the labor market and occupied jobs characterized to some degree by informality. Economically active early pension receivers, however, appeared to suffer from high unemployment rates, particularly those men retiring from the private sector. The results of the logistic regression indicate that army and security forces were more likely to retire early and to return to labor market. While household wealth appears to inversely influence the probability of early retirement, family size has a positive impact. In contrast, education and area of residence are found to be inconsistently and weakly associated with early retirement and post-early retirement choices of men.

Keywords: Early Retirement, Post-Early Retirement Choice, Labor Force Participation, Informal Sector.

INTRODUCTION

It is needless to say that labor force participation (LFP) contributes to the economy's capacity to produce goods and services. The prevalence of a high rate of early retirement lowers LFP and has negative consequences on the economy (Hofacker, 2010; Glomm *et al*., 2009.; Conde-Ruiz and Gallaso, 2004; Gruber and Wise, 1998). Therefore, interest in early retirement behavior and patterns has grown markedly in developed economies (Oorschot and Jensen, 2009). However, existing studies on developing countries are limited (Glomm *et al*., 2009; El-Hamidi, 2007).

Jordan's labor market has been specially characterized with very low LFP even in comparison with developing countries, (Mryyan, 2012). The LFP in Jordan has averaged during the last 10 years around 40% even in high growth periods. In addition to women, men older than 40 contribute to this phenomenon. Female LFP, which is as low as 15%, has received sufficient consideration at all levels (see Spierings, 2007; Rebecca, 2002). In contrast, little systematic assessment has been conducted to handle the LFP of elderly males and the early exit of middle-aged male workers from the labor market.

Early withdrawal from the labor market for Jordanian men is particularly exceptional and deserves more attention from academic and policy-making circles. The available evidence shows that the incidence of early retirement has increased over time and has become the rule rather than the exception (Social Security Corporation-SSC, 2009). This is confirmed in Assaad and Amer (2008) who document that the decline in activity rates in Jordan starts as early as age 40, and the propensity toward early exit also seems to have been increasing over time.

The current study is timely as it examines early retirement among Jordanian male workers. Not only is this valuable as an academic exercise, but also important for policymaking. To the best of our knowledge, this is the first study to offer a microdata-based analysis of early retirement in Jordan. It primarily examines the

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following two questions:

1. What do early retirees do after retirement? Do they return to the labor force? Do early retirees take up other more informal employment?

2. What can be learned from the available evidence and data regarding early retirement decisions and post-early retirement choices at the individual level?

The paper proceeds as follows: Section 2 examines the legal background of retirement in Jordan. Section 3 presents an overview of the determinants of early retirement, as emphasized by the literature in this field. Methodological and data issues are discussed in section 4. Section 5 shows descriptive analysis of the result of the study. On the other hand, in section 6, the results of the logistic regression models of early retirement decisions and post-early retirement choices are reported. Finally, the study concludes in section 7.

2. Institutional Background

Currently, there are three major retirement legislations covering civil servants and workers in public and private sector as well as the military and public security forces. These are: the Military Retirement Law (MRL), the Civil Retirement Law (CRL), and the Social Security Law (SSL). Other accompanying private occupational pension schemes also exist for a few labor unions (e.g. Jordan Engineers Association). Employer and employees' monthly monetary contributions constitute the main sources of financing pension funds in Jordan.

The MRL no. 33 (1959) and its amendments organizes retirement of the Jordanian armed and security forces. It permits early retirement after a limited number of years in service starting from 16 years (modified in mid-2004 to 20). Furthermore, individuals with special circumstances, like those with partial disability can retire after serving the military for at least 10 years. On the other hand, the law does not allow staff to continue in duty after the age of 60 except for very special cases. MRL does not condition a minimum age for a service member to obtain pension and other related benefits. Thereby, military men may retire in their early thirties or even before that. In 2003, government started a new initiative to gradually make the Social Security Corporation (SSC) take over the responsibility of covering new entrants to the military. However, the arrangements applicable to military forces in the MRL remained in place.

Most of the public sector workers recruited before 1994 are covered by the CRL no. 34 (1959) and its amendments. Since 1994, new entrants to the public sector have been insured by the SSLs (see below). Under CRL, early retirement is allowed for men who have spent at least 20 years in service (modified in 2006 to 25 years). This law does not identify a minimum age for retirement, whereas it specifies 60 years as the compulsory age of retirement for men. The law also gives flexible conditions for retirement for workers with special needs i.e, with partial or full disability.

A pivotal year in the formulation of social policy in Jordan and particularly in the development of the pension systems is the year 1978 when the government introduced a law for social security for the first time (Al-Zoubi, 2013). A substantial proportion of private sector and public sector workers were not covered by the other two laws mentioned above. Therefore, it was of great importance for Jordan to widen social protection through the introduction of the SSL. The SSL was subject to some modifications in 2001 and to major restructuring and reshaping in 2010. The SSL no. 19 (2001) modified SSL no. 30 (1978), enhancing social protection but was arguably considered as very generous. The SSL no. 7 (2010) is less generous and applicable primarily to new entrants.

As far as male workers are concerned, SSL no. 19 and no. 30 sets the early age of retirement at 45, and the old age retirement pension at 60 years of age. Those who do not have enough contributions may continue working until age 65 so as to benefit from a pension. The SSL no. 7 2010 adjusts retirement regulations by increasing

the number of monthly accumulated contributions and the minimum age required to make one eligible for early retirement. New entrants to labor market will not be able to retire before the age of 50, except for some categories of labor (e.g. those employed under severe working conditions, such as mining workers). It is worth mentioning here that the recent amendments to social security laws have received enormous criticism, particularly from labor syndicates. The law is being currently reconsidered by the newly-elected parliament.

3. Early retirement determinants in the literature

Voluntary labor supply decision, at the individual level, depends mainly on real wages and leisure, (Borjas, 2007). Importantly, economic theory does not give a precise expectation on the effect of real wages on working hours or on retirement decisions, due to the income and substitution effects of changes in real wages, (Borjas, 2007). Accordingly, retirement decision may vary from individual to another, influenced by several monetary and non-monetary variables, including forgone earnings, amount of pension, savings and wealth. In sum, workers' choice of retirement age is a dynamic one and is partially based on an assessment of future streams basically of monetary payments and losses (Dorn and Sousa-Poza, 2005).

Early retirement decisions are not necessarily voluntary as individuals may retire early as a result of demand-side factors. Firms may find it more profitable, by economizing on pension regulations, to bush older employees to retire and then substitute them with younger low-waged or more-productive workers. This is referred to in the literature as age discrimination (Dorn and Sousa-Poza, 2005).

Empirically, research on early retirement behavior and patterns in developed economies has grown noticeably (Oorschot and Jensen, 2009). On the other hand, the available literature in the developing countries is scant (Glomm *et al*., 2009; El-Hamidi, 2007). It seems that the lack of detailed data plays a significant role on constraining scientific research in this field in the developing countries. In general, the studies that utilized detailed and representative data particularly through self-reporting surveys managed well to model workers' choice regarding retirement.

The available empirical studies on retirement consider and emphasize myriad financial, occupational, institutional, personal, household, and health factors and characteristics (Fischer and Sousa-Poza, 2009; Blundell *et al.*, 2002). Macroeconomic cycles, policies, and circumstances also appear to intervene in shaping retirement decisions, particularly on the push side (Glomm *et al.*, 2009; El-Hamidi, 2007; Duval, 2003). Employment policies that come with macroeconomic restructuring and privatization are also reported to induce early exit from the labor market (El-Hamidi, 2007).

4. Data and Methodological Issues

This study utilizes new original cross-sectional data obtained from the first wave of Jordan Labor Market Panel Survey (JLMPS), which collected micro-level information in 2010. The survey and its procedures were designed and administered by the Economic Research Forum (ERF) in co-operation with the (DoS) and the National Centre for Human Resources Development (NCHRD). JLMPS involved gathering detailed information on education, labor market experiences, and demographic characteristics (e.g. employment status, household composition and income, parental education, education history, ownership of assets and monetary transfers). The survey covered about 5000 households incorporating about 26000 individuals, and applied appropriate sampling methods to make the gathered data nationally representative.

The JLMPS contains, for the first time, novel features that make it suitable to study early retirement and elderly LFP. Surveyed individuals were asked to self-identify the amount and type of monetary transfers received by them or any of their household members, such as pension and other

governmental transfers. The survey, furthermore, tracks retrospectively the employment status of workers. It also incorporates a variety of questions that directly address social security, pension coverage and household wealth index, which was composed using different sources of wealth inside and outside the household. The JLMPS was not, however, designed especially for studying retirement behavior. Therefore it does not facilitate a complete multivariate investigation of early retirement behavior, as it provides insufficient information on some important variables. This particularly includes push-side variables (e.g firm-level variables) and current and future monetary streams.

Those who receive pension were classified as retirees, with full awareness of the possibility of other sources of pension (e.g. inherited pension for children and dependants). The age of 60, which is the legal age for retirement in Jordan, was considered as the cutoff point between early retirement and old age retirement. In effect, early retirees were defined as those retirees who received retirement pensions for the first time when they were below the age of 60. In addition, early retirees were divided into two groups according to their labor market status after retirement (active and inactive).

To gain better understanding of the determinants of early retirement decision and post-early retirement decisions, besides descriptive statistics, the study employs logistic regression techniques.

Typically, logistic regression represents one of the main econometric choices when a research involves dichotomous dependent variables, such as to retire or not, or to work after retirement or not.

5. Data Descriptive Analysis

5.1. General characteristics of early retirees

Figure (1) demonstrates the cumulative distribution of male retirees in Jordan by source of retirement pension and age of retirement. It appears clearly that early retirement in Jordan is the rule rather than the exception. Most men retirees, almost 85%, regardless of the sector, receive retirement pensions well before the age of 60. In general, male retirement starts from the early 30s and noticeably after the age 33 for service members in military and security forces and by the late thirties for civilian public and private sector workers. Those who retire under the age of 50 comprise about 86% of the total number of retirees in military and similar forces, while they are about 40% and 45% for public and private sector civilian workers, respectively.

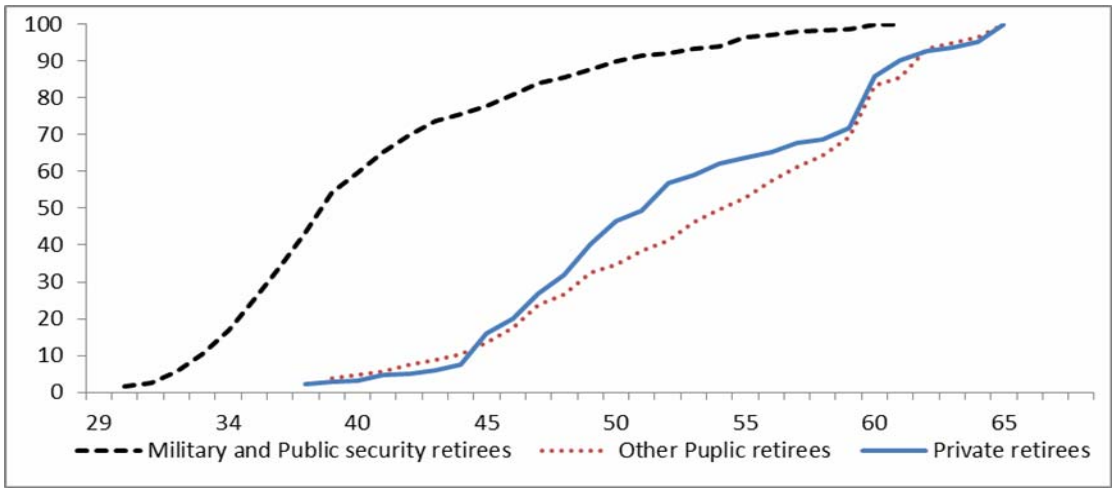

Figure 1. Cumulative distribution of male Jordanian retirees by sector and age of retirement.

Source: Author's calculations based on JLMPS

Table (1) displays general characteristics of early retirees. An important feature is that most early retirees, about 78%, have secondary and lower education. On the other hand, more than two thirds reside in urban areas.

Table 1. Overall characteristic of male early retirees in Jordan

	Category	***Percentage***
Current education	Illiterate	8%
	Reads and writes	24%
	Basic	28%
	Secondary	18%
	Post-secondary	10 %
	University and higher	12%
Sector of retirement	Public (including military)	84%
	Private	16%
Current area of residence	Urban	71%
	Rural	29 %
Current marital status	Single	0.5%
	Married	97.5%
	Divorced	0.1%
	Widowed	1.9%
Current region of residence	Middle	45%
	North	42%
	South	13%

Source: Author's calculations based on JLMPS.

5.2. Do early retirees return to labor market after retirement?

Interestingly, the results indicate that a considerable fraction of male early retirees return to the labor market after receiving their retirement pension. Nearly 45% of those classified as early retirees are currently economically active (see figure 2). Predictably, LFP amounts to nearly 55% for early pensioners from military and other similar forces, as most of them retire relatively very early. It appears also that as male pensioner in Jordan gets older, he is more likely to become inactive. In other words, LFP tends to decline dramatically as the ages of pensioners increase, as shown in figure (3). Also, a little over 30% of the male early retirement receivers from both the private and public sectors continue in the labor market after they acquire their early retirement.

In addition, figure (2) reveals the employment status of male early retirees in the case that they reappear again in the labor market. Generally, nearly 52% become wage employees, while the others are distributed either as self-employed (35%) or employers (13%). The analysis also shows that wage employees come mostly from those returning particularly from the army and public security forces. On the other hand, self-employment serves as the chief labor market route for private sector early

retirement receivers. Such a trend probably indicates some labor market opportunity differences available for these different groups and may reflect some deficiencies in pension systems in Jordan. For instance, public sector workers and the armed forces covered by MRL and CRL retain the right to be socially covered by the SSL if they return to the labor market, unlike private sector workers.

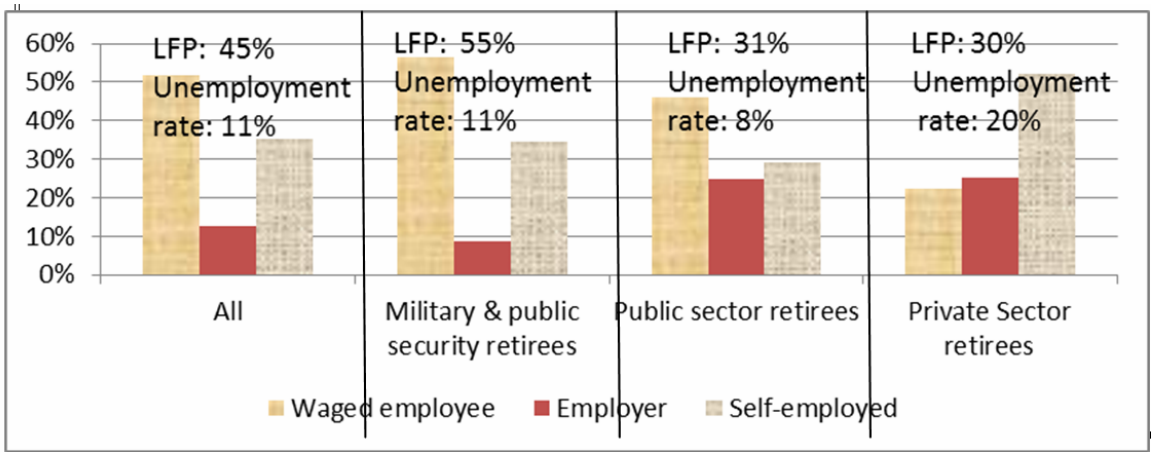

Figure 2. Employment status distribution of early retirement receivers after first retirement.

Source: Author's calculations based on JLMPS

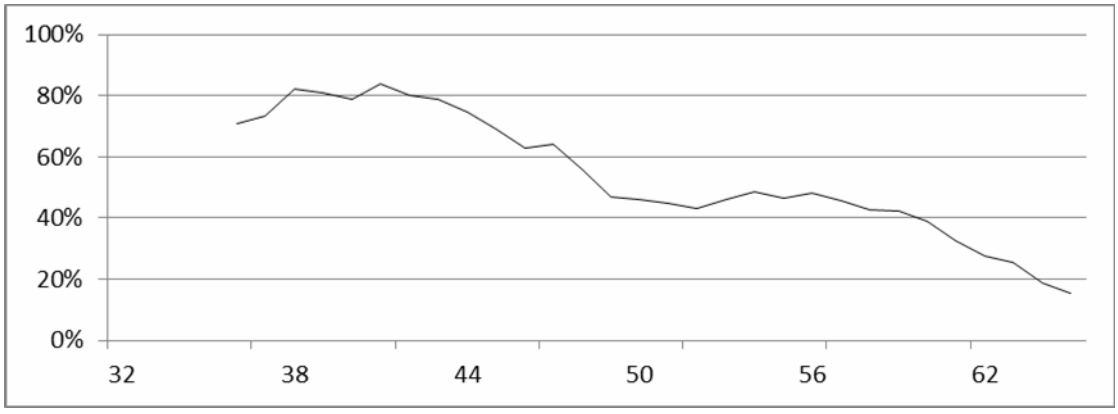

Figure 3. LFP of male early retirement pension receivers by current age (moving average trend).

Source: Author's calculations based on JLMPS

It is also evident from the figure that private sector retirees are at higher risk of unemployment if they return to the labor market. Their rate of unemployment exceeds their counterparts from the other two categories (20% compared to 8% and 11% for public sector and military forces, respectively). Education tends to contribute to differences in unemployment among returnees, see figure (4). However, the role of education in retirees' decision to enter labor market again is ambiguous, as depicted in figure (5).

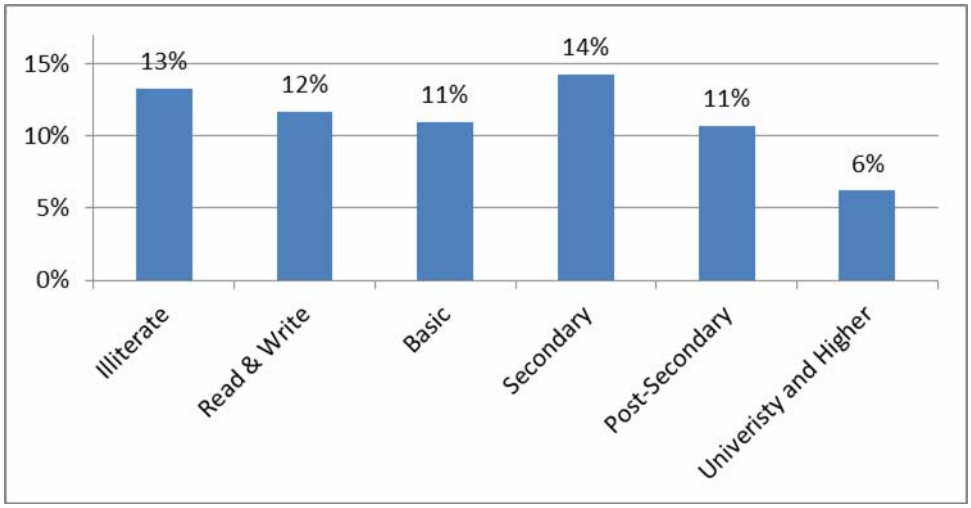

Figure 4. Unemployment rates for male early retirees by level of education.

Source: Author's calculations based on JLMPS.

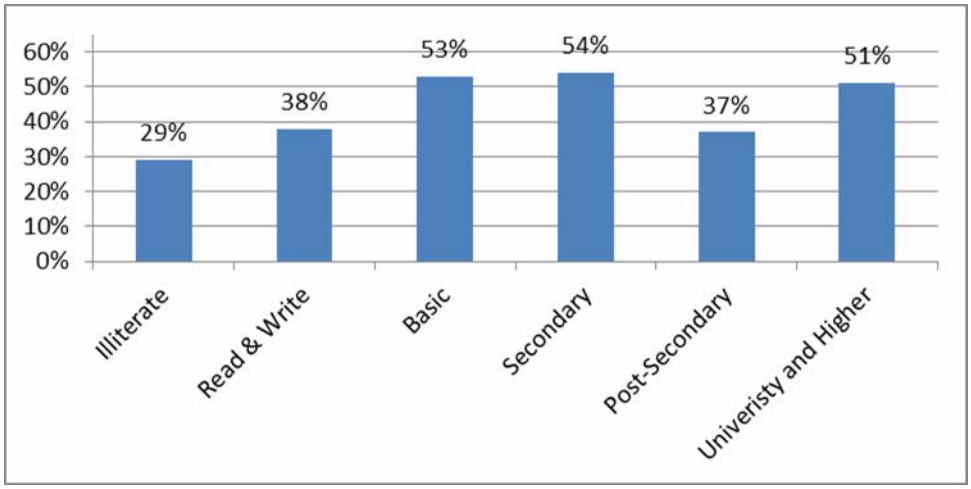

Figure 5. LFP for male early retirees by level of education.

Source: Author's calculations based on JLMPS.

The study shows that urban early pension receivers have a lower LFP (44 % compared to 51% for rural); however, they have lower unemployment rates (10.6% against 12.6%). This is possibly due to the fact that public and military careers comprise the main source of employment in rural areas. Furthermore, some 21% of inactive early retirement pension receivers identify illness, old age and disability as the reasons they are currently out of the labor force, while 78% of them mention the availability of income as the chief factor for economic inactivity. This suggests that such variables might be somewhat responsible for the early withdrawal from the labor market and the inability of retirees to return to employment again. As shown below.

5.3. Economic activities of active early retirement pension receivers

Figure (6) presents the economic activities of those

early retirees returning to work in comparison with other Jordanian workers in the economy and reveals some interesting patterns. First, the former are concentrated mainly in wholesale and retail trade in addition to the transportation and storage sectors. These activities involve private and informal occupations as examined below. Second, agriculture-related activities seem to attract Jordanians more after securing pension entitlements. This is one of the main sectors that typically incorporate foreign labor. Nevertheless, construction activities, which are also foreign-labor intensive is negligible in importance for active pensioners. Occupations in this sector are characterized by hard work and severe working conditions, despite the reasonable level of wages relative to other sectors. Such circumstances expectedly tend to exert a stronger impact on active retirement pension receivers.

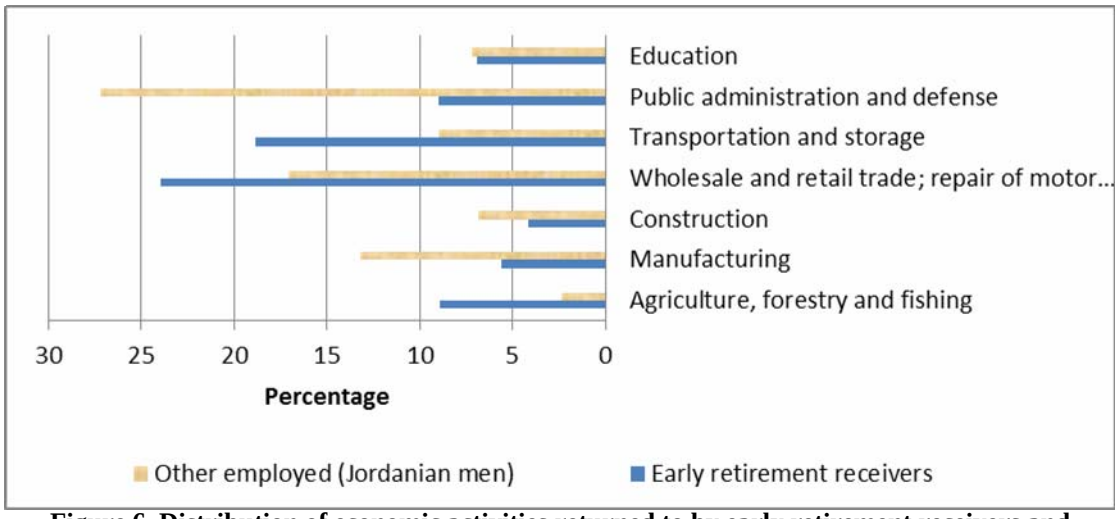

Figure 6. Distribution of economic activities returned to by early retirement receivers and employed workers in the economy.

Source: Author's calculations based on JLMPS

5.4. Occupations taken up by active male early retirement pension receivers

The descriptive analysis finds that a substantial proportion of early retirement receivers end up in informal occupations once they re-enter the labor market. The classification of the employed from this group according to major and sub-major occupations corroborates this observation (see figure 7 and table 2). More than 33% of the employed engage in service and sale occupations, while nearly 22% work as plant and machine operators and as assemblers (a category which includes drivers). These major occupations attract retirement pension receivers more than other employed men in the economy. This is of great importance and gives rise to the issue of unemployment in Jordan and the procedures to formalize such occupations in order to make them more attractive to domestic workers. Early retirement receivers are more likely to end up in informal employment since some of them—particularly the private and public sector civilian retirees—cannot take up jobs covered by social security without losing their early retirement benefits.

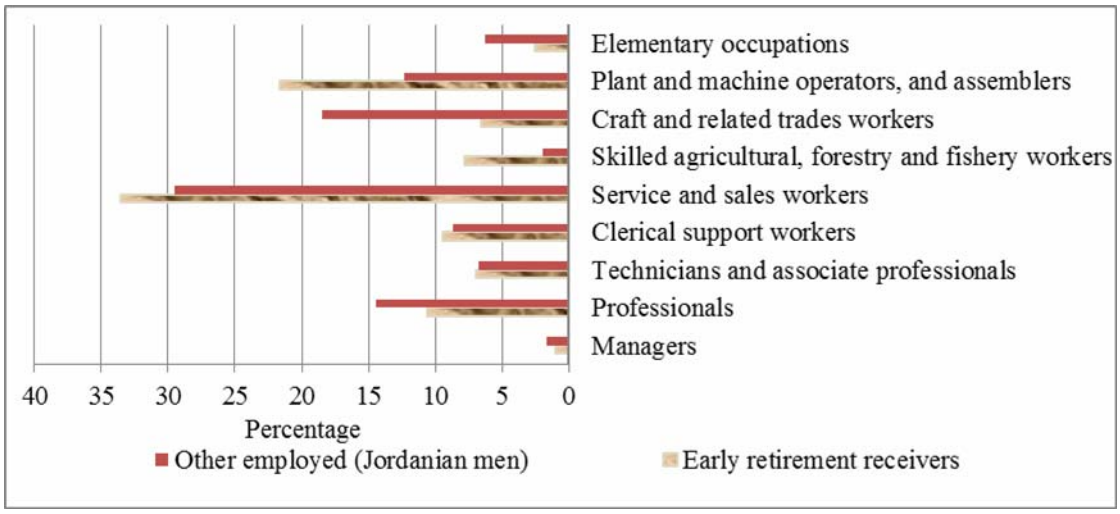

Figure 7. Major occupational distribution for jobs taken up by early retirement receivers after returning to the labor market compared with other employed workers in the economy.

Source: Author's calculations based on JLMPS

Table 2. Sub-major occupational distribution of employed early pension receivers by sector

Private	***Public sector***	***Military and public security forces***
Drivers and mobile plant operators 29.5%	Drivers and mobile plant operators 11.4%	Drivers and mobile plant operators 22.6%
Health professionals 9.6%	Business and administration professionals 13.9%	Protective services workers 15.7%
Sale workers 21.9%	Sale workers 17%	Sale workers 17.2%
The other workers are distributed on other 6 occupations	**The other workers are distributed on other 18 occupations**	**The other workers are distributed on other 24 occupations**

Source: Author's calculations based on JLMPS.

The distribution of sub-major occupations, as reflected in table (2), identifies more precisely the jobs captured by pensioners returning to work. There tends to be an occupational concentration among them, as they crowd into a limited number of jobs. The most common are drivers and mobile plant operators, protective services workers and sale workers (vendors). Having broken down the distribution by sector of retirement, the analysis additionally finds that almost 14% of employed public sector pension receivers become business and administration professionals, while 9.6% of the private counterparts become health professionals. An important feature of the analysis presented in the table is the limited occupational choice available to those retiring from the private sector, compared with the other two groups. This is in line with the discussion provided above on the potential role of social security regulations in distributing labor market opportunities.

Further examination of the characteristics of the occupations of the early retirement pension receivers

reveals interesting findings confirming the informality of most of the jobs they acquire post- early retirement. About 80% of the jobs are private, and 66% are individual activities. The majority of the employed, about 73%, work in unskilled jobs, while 91% of them are not members of a syndicate or trade union. Social security covers about half of the jobs taken up by those currently employed and previously retiring from public sector and military forces, unlike private counterparts who are not entitled to such coverage. Overall, health insurance in the new jobs is available for only 34%. On the other hand, 59% have no paid vacations in the jobs occupied after returning to employment. Those who return to the labor market after early retirement tend also to accept comparatively lower wages in contrast with the other wage workers in the economy aged 30 and over, see figure (8).

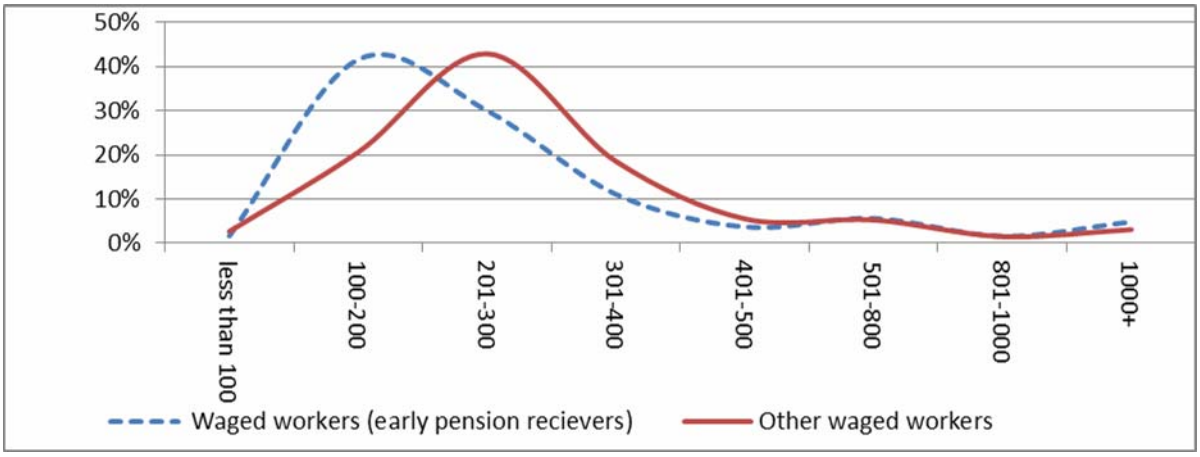

Figure 8. Wage categorical distribution of wage employed early retirement pension receivers and other counterparts aged 30+ in the economy.

Source: Author's calculations based on JLMPS.

6. Logistic regression estimation results

This section delves more deeply into examining early retirement and economic activity after early retirement by estimating logistic regression models. Table 3 and 4 depict estimation results obtained from several logistic regression models, for determinants of early retirement decisions and post-early retirement choices, respectively. Model (1) controls only for the basic variables, while the models from (2) to (5) include progressively more variables that are assumed to influence the dependent variables. Finally, the last model, model (6), concentrates on those variables that are found significant in the previous models.

All the estimated models, in both tables, are significant in term of goodness-of-fit measures, particularly *Pseudo* R^2 and *Log Likelihood* statistics. Of course, the models would yield better goodness-of-fit if one incorporates more factors, which are not readily available in the JLMPS. Anyway, econometric estimation based on cross-section data usually show low R^2, particularly logistic regression (Gujarati, 2003).

The analysis in the previous sections suggests some variables to account for *early retirement decisions* and *post-early retirement choices* for Jordanian men. For example, economic activity after retirement, and the retirement decision itself, are apparently determined by the institutional source of retirement pensions, with those formerly working in the army and security forces

being more likely to retire and return to labor market. Returning to labor market is evidently more prevalent among younger retirees suggesting age as an important determinant of the probability of a retiree to return to labor force. The econometric estimation integrates additional variables into the models, including amount of pension entitlement, education level, family size, household wealth as represented by scores of the composed wealth index.

The monthly amount of pension usually makes up the prime source of income for most retirees in Jordan. On the other hand, education lies at the heart of the labor market theories. It augments earnings through either enhancing productivity or signaling innate ability. Also, educated workers are theorized to be more efficient in job search, on-the-job training and to be more capable in accumulating experience. Finally, family size and the availability of other breadwinners, either working or retired, in households may act together with the previous variables in determining inactivity/ retirement and returning to labor market. In this regard, the data of JLMPS indicate that nearly 52% of households of inactive early retirement receivers consist of less than five compared to only 30 % for the active. Wealth scores approximate household accumulated wealth and income, which may strongly intervene in individual-level labor market decisions.

6.1. Determinants of Early Retirement Decisions

As expected, the logistic estimation reported in table (3) emphasizes that military and security forces are significantly more likely to exit early in comparison with the other two sectors.

The estimation does not find significant evidence on the role of area of residence, whether it is rural or urban. Despite that, the descriptive analysis finds that early retirement percentage is more prevailing in rural areas (more than 80% compared with about 75%).

Although, the coefficients of education levels are statistically significant, particularly in the last model, the influence of education on early retirement decision tends to be ambiguous. The relationship is negative in case of post-bachelor diplomas and positive otherwise. Although positive in comparison with the reference category (illiterate), coefficients of education levels are contradictory.

The coefficients on family size are positive and highly significant in all models. On the other hand, household wealth appears to have a negative role with a lower significance level. In general these two results point to the potential role of income insufficiency in leading workers to retire early, probably to get pension and secure more income sources by other formal or informal jobs. In contrast, current employment status of a pensioner's wife and monthly pension amount received by him are found not to significantly manipulate early retirement decisions, though their coefficients are positive. This finding raises important questions, requiring further research, on the real level of generosity and the incentive structure offered by pension schemes in Jordan. Obviously, the magnitude and direction of effects of the net discounted monetary differences between old-age and early pensions on retirement decisions must receive particular attention. In this regard, one would expect higher early withdrawals from the labor market if current earnings (e.g. wages, overtime, bonus, incentives and so on) and other monetary and non-monetary benefits do not deviate much from eligible early pensions Therefore, as mentioned elsewhere in this study, multivariate analysis of early retirement decisions indeed requires more detailed information particularly the monetary factors, which are not covered completely in JLMPS.

Table 3. Results of logistic regression models of determinants of early retirement decision (not to retire early=0)

Variable	*Model 1*	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*
	Odds R	***Odds R***	***Odds R***	***Odds R***	***Odds R***	***Odds R***
Intercept	4.23 [a]	3.86 [a]	3.98 [a]	3.97 [a]	4.08 [a]	**4.19** [a]
Sector (Military =0)						
Public	-4.91 [a]	-4.87 [a]	-4.88 [a]	-4.88 [a]	-4.92 [a]	**-4.90** [a]
Private	-5.02 [a]	-4.99 [a]	-4.95 [a]	-4.94 [a]	-4.94 [a]	**-4.95** [a]
Education (Primary or less=0)*						
Preparatory	1.10	1.12[b]	1.22[b]	1.21[b]	1.13 [a]	**1.21** [a]
Secondary	0.78[b]	0.82[b]	0.99 [a]	0.98 [a]	0.90[b]	**0.99** [a]
Int. Diploma	2.03[b]	2.09 [a]	2.31 [a]	2.33 [a]	2.32 [a]	**2.30** [a]
University	0.52	0.56	0.91[b]	0.90[b]	0.94[b]	**0.92**[b]
Diploma (post university)	-0.81	-0.74	-0.41	-0.44	-0.42	**-0.43**[c]
Masters	1.22	1.30	1.78[b]	1.71[c]	2.42[b]	**1.78**[b]
PhD	0.78	0.84	1.33	1.30	1.34	**1.33**
Family size	0.23 [a]	0.22 [a]	0.22 [a]	0.22 [a]	0.22 [a]	**0.22** [a]
Area (Urban=0)		0.29	0.18	0.17	0.11	
Wealth scores			-0.26[c]	-0.27[c]	-0.30[c]	**-0.28**[c]
Spouse current ES (employed =0)**				0.19	0.32	
Pension amount					0.001	
Pseudo R^2	*0.354*	*0.356*	*0.360*	*0.361*	*0.362*	***0.359***
L. likelihood	*-205.39*	*-204.92*	*-203.54*	*-203.45*	*-195.81*	***-203.69***
LR χ^2	*D.f (10) 225.15 [a]*	*D.f (11) 226.10 [a]*	*D.f (12) 228.86 [a]*	*D.f (13) 229.03 [a]*	*D.f (14) 221.78 [a]*	***D.f (11) 228.54*** [a]
a, b, c significant at 1%, 5% , 10% respectively. * Vocational education holders were dropped as all of them belong to the early retirement group. **ES: employment status						

6.2. Determinants of Post-Early Retirement Choices

As shown in table (4), post-early retirement choice is apparently determined by the institutional source of retirement pensions, with those formerly working in the army and security forces being more likely to remain active. Also, living in rural areas appears not to increase the probability of returning to the labor market for men early retirees.

Table 4. Results of logistic regression models of determinants of post-early retirement choice (not to return to labor market=0)

Variable	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*	*Model 7*
	Odds R	***Odds R***	***Odds R***	***Odds R***	***Odds R***	***Odds R***
Intercept	2.12 [a]	2.19 [a]	2.34 [a]	2.34 [a]	2.86 [a]	**2.87 [a]**
Sector (Military =0)						
Public	-0.75 [a]	-0.75 [a]	-0.75 [a]	-0.75 [a]	-0.75 [a]	**-0.75 [a]**
Private	-0.71 [a]	-0.71 [a]	-0.77 [a]	-0.77 [a]	-0.72 [a]	**-0.73 [a]**
Age	-0.06 [a]	-0.06 [a]	-0.06 [a]	-0.06 [a]	-0.06 [a]	**-0.06 [a]**
Education (Primary or less=0)						
Preparatory	0.12	0.12	-0.02	-0.02	-0.01	**-0.01**
Vocational	0.60	0.59	0.36	0.36	0.39	**0.39**
Secondary	0.28	0.28	0.05	0.05	0.11	**0.11**
Int. Diploma	-0.07	-0.08	-0.38	-0.38	-0.28	**-0.28**
University	0.74[b]	0.74	0.36	0.36	0.48	**0.48**
Diploma (post university)	0.42	0.41	-0.18	-0.16	-0.07	**-0.06**
Masters	4.14 [a]	4.12 [a]	3.53 [a]	3.55 [a]	3.72 [a]	**3.73 [a]**
PhD	1.78 [b]	1.77 [b]	1.15	1.16	1.59	**1.59**
Family size	0.09 [a]	0.09 [a]	0.11 [a]	0.11 [a]	0.11 [a]	**0.11 [a]**
Area (Urban=0)		-0.04	0.02	0.02	0.01	
Wealth scores			-0.33 [a]	-0.34 [a]	-0.37 [a]	**-0.37 [a]**
Spouse current ES (employed =0)*				-0.07	0.03	
Pension amount					-0.01 [a]	**-0.01 [a]**
Pseudo .R^2	*0.12*	*0.12*	*0.13*	*0.14*	*0.13*	***0.14***
L. likelihood	-516.96	-516.93	-512.14	-502.96	-512.11	**-502.96**
LR χ^2	*D.f (12)* 144.2[a]	*D.f (13)* 144.26[a]	*D.f (14)* 153.84[a]	*D.f (14)* 159.36[a]	*D.f (15)* 153.9[a]	***D.f (16)*** **159.37**
a, b, c significant at 1%, 5% , 10% respectively. *ES: employment status						

Table (4) especially shows that younger men early retirees in Jordan are more likely to return to labor market. This result confirms what is observed in figure (3). On the other hand, education plays negligible role in labor market decisions after early retirement, as the coefficients pertaining to education levels are neither consistent nor significant. Higher pensions are likely to result in lower participation for those retiring early. In other words, active early retirees may be return to labor market due to the insufficiency of income from pension they receive. In the same vein, household wealth appears to be inversely and significantly associated with the

probability of an early retiree to reappear in labor market after retirement. Furthermore, family size is estimated to have a significant positive impact on the dependent variable, a result matches well with the role of family income, approximated by pension, and family wealth. Expenditure obligations facing households amplify with larger family size and therefore may influence individuals' decisions after retirement.

Finally, the data of the study indicate that 9 % of active early retirees' wives are employed compared to 10% for inactive early retirees. This explains why this factor is not significant in predicting economic activity of men retiring early in Jordan, as shown in table (4).

7. Conclusion

Early retirement has been a neglected topic in the literature in Jordan. This is regrettable, because Jordan's labor market has suffered from a noticeable low LFP. From an economic point of view, early exit from the labor market is seen as a serious loss in a nation's potential productive capacity that would restrict it from reaching full employment and sustainable economic growth (Hofacker, 2010; European commission 2004). It further increases financial pressures on pension funds.

This paper provides, for the first time, descriptive and multivariate analyses of retirement in Jordan using JLMPS. It tries to fill in the gap by exploring patterns in retirement and relating early retirement decisions of Jordanian men to important variables such as education, family size, area of residence, economic sector, pension and household wealth.

The study finds that the majority of the male retirees retire well before the age of 60, which is the legal age of old-age retirement in Jordan. Nearly, 45% of them return to labor market and compete for the available jobs in the labor market. However, most of employed early retirement receivers occupied jobs that were generally characterized to some degree by informality (e.g. no health insurance, no social security, comparatively lower wages, no paid leaves). They were also concentrated in limited number of occupations, notably sale workers, drivers and protective services workers. Our analysis moreover shows that those who retire early face high unemployment rates once they decide to return labor market.

This study testes, using logistic regression, the role of the would be major variables in the early retirement decision and post-early retirement choice. Education appears to have inconsistent and weak effects on both the probability to retire early and the probability to return to labor market after early retirement, respectively. On the other hand, public security and armed forces are found the most likely to retire early and to become economically active again. Among the set of variables, the analysis finds that less household wealth and bigger household size increase the probability of early retirement. This implies a certain role for income and monetary calculations in such a decision although pension amount turnes out to be insignificant predictor. Equally, the latter two predictors significantly exerte the same impacts in terms of predicting post-early retirement choices. More wealth is found to lead to less probability of a retiree becoming active, while bigger family size to increase such probability.

The results in general form a structure for future researches in this field in Jordan. More research on this theme in Jordan is very desirable to cover the potential effects of other important microeconomic and macroeconomic deriving forces that are not handled in the current paper. Hence, other variables may probably be partly responsible for the increasing propensity to retire early in Jordan such as privatization. Many formerly public-owned corporations and projects have been privatized and have undergone major labor restructurings. For example, the selling of the Jordanian Cement Factories Company involved labor arrangements allowing for generous early retirement schemes. This extends to other institutions, particularly the phosphate and

telecommunication sectors. Push variables are of the utmost importance particularly in the aftermath of macroeconomic restructuring or recessions. During economic downturns in general one would expect firms to pressure older employees to get early retirement once they reach the age at which early retirement becomes available. Also, more attention should be paid to the role of health in such a process. Finally, future research is advised to delve more into the distinction between voluntary and involuntary decisions of early retirement.

To overcome the scarcity of information, particularly in gauging fully the influence of monetary variables, future research on retirement decisions needs to gather detailed, retirement-focused and representative data, may be through a self-reporting survey.

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أنماط ومحددات التقاعد المبكر: حالة المتقاعدين الأردنيين من الرجال

إبراهيم الهوارين [1]

ملخـص

وجدت هذه الدراسة باستخدامها بيانات المسح التتبعي لسوق العمل الأردني لعام 2010، أن ما يقرب من 85 % من المتقاعدين في الأردن سبق أن تقاعدوا تقاعدا مبكرا. وتظهر الدراسة أيضا أن حوالي 45% من المتقاعدين مبكرا من الرجال يعودون إلى سوق العمل بعد التقاعد. ويشغل هولاء عند العودة وظائف تتسم إلى حد ما بالمحدودية، وبخصائص القطاع غير المنظم. ووجدت الدراسة أن هذه الفئة من الناشطين اقتصاديا يعانون من ارتفاع معدلات البطالة، لا سيما المتقاعدين من القطاع الخاص. وأظهرت نتائج تحليل الانحدار اللوجستي أن الرجال العاملين في الجيش والأجهزة الأمنية هم الأكثر احتمالية للتقاعد المبكر. وكلما انخفضت ثروة العائلة زادت احتمالية التقاعد المبكر. ووجدت الدراسة أن اثر المستوى التعليمي ومنطقة السكن في قرارات الرجال للتقاعد المبكر والعودة إلى سوق العمل مرة أخرى ضعيف، وغير مستقر إحصائيا.

الكلمات الدالة: التقاعد المبكر، ما بعد خيار التقاعد المبكر، مشاركة اليد العاملة، المتقاعدون الأردنيون.

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