The Choice between Welfare and Employment:

Differences between Older and Younger Individuals

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Abstract

The employed and unemployed who are considering giving up work or seeking employment, respectively, have to consider the pecuniary and non-pecuniary benefits of both positions. What is the minimal allowance that motivates an individual to move from employment to unemployment? What is the minimal salary that motivates an unemployed individual to seek employment? This study examines those questions, specifically with regard to the differences between older and younger individuals. Our findings demonstrate that age has a strong impact on the threshold incomes and behavioral factors. Older people demand more money than younger people for giving up their jobs. Older workers also have a stronger status-quo bias and demonstrate a greater preference for work. However, there is no significant difference between young and old with respect to the income needed to motivate a switch from unemployment to employment.

Introduction

Unemployment benefits are an important tool for helping people cope with a loss of income as well as other psychological and social stresses. However, at the same time, these benefits may prompt those who are employed to give up their jobs and motivate those who have lost their jobs to remain unemployed. Striking a balance between providing temporary help for the unemployed and encouraging people to seek work is crucial for economic growth as well as for alleviating poverty and the unequal distribution of income.

Both the employed and unemployed consider the pecuniary benefits as well as the non-pecuniary benefits of seeking work. The non-pecuniary benefits of work include satisfaction, interest and social status (Jahoda 1982; Winkelmann and Winkelmann 1998). Studies in behavioral economics have demonstrated that people do not act according to the classical rational theories of economics. Results from these studies have led to attempts to integrate ideas from behavioral economics into the decision to enter the labor market. Ideas such as the status quo bias, endowment effect, and loss aversion have been applied in various models, particularly in finance. Loss aversion in economics refers to people's tendency to strongly prefer avoiding losses to achieving gains. Some studies suggest that, psychologically, losses are twice as powerful as gains. In the field of labor economics Sherman and Shavit (2009) argue that loss aversion affects the decision to seek employment or go on welfare.

Three of the best-known natural phenomena that have been explained by loss aversion are the status quo bias (Samuelson and Zeckhauser 1988), the endowment effect (Knetsch and Sinden 1984; Thaler 1980), and underinvestment in stocks (Benartzi and Thaler 1995). The leading explanations of all three phenomena assume

a general loss aversion bias (Eret and Erev 2013). The status quo bias is an irrational preference for the current state of affairs. The current baseline or status quo is taken as a reference point, so any change from that baseline is perceived as a loss (Kahneman, Thaler, and Knetsch 1991; Samuelson and Zeckhauser 1988). Finally, the endowment effect posits that a person's willingness to accept compensation for a good is greater than their willingness to pay for it once their property right to it has been established. The endowment effect contradicts the Coase theorem, which asserts that a person's willingness to pay for a good should be equal to their willingness to accept compensation to be deprived of the good, a hypothesis that underlies consumer theory and indifference curves (Kahneman, Knetsch, and Thaler 1990). Other studies show that when adding deliberation time constraints to a standard willingness to accept/willingness to pay paradigm, the endowment effect grows (Ashby, Dickert and Glöckner 2012).

A specific category of research in labor economics deals with the difficulties of older workers (age 45 and above) have finding employment if they lose their jobs. Lahey (2005) found that older job applicants (defined as those aged 50 or older) are treated differently than younger applicants. A younger job applicant is more than 40 percent likely to be called back for an interview than an older applicant. In addition, employers make little effort to recruit older workers despite the benefits of employing them (Van Dalen et al. 2009). Therefore, it is very difficult for older workers to re-join the work force after they have exited from it. Difficulties in integrating older adults into the labor market also stem from biased stereotypes that employers have about them, particularly with regard to their reliability and adaptability. Biased stereotypes might lead to the inefficient allocation of workers in the labor market,

resulting in the hiring of younger workers even if their productivity is less than the real productivity of older workers (Axelrad, Luski and Malul 2013).

Our goal in this study is to investigate the role of behavioral effects in the re-employment difficulties of older workers. Our research has several purposes. First, we present a conceptual framework about the decision to seek employment vs. remaining on welfare that incorporates behavioral aspects. Second, we estimate the non-pecuniary benefits of an employed worker as well as the status quo bias effect, and investigate the impact of age on these parameters. Finally, we discuss the policy implications that can be derived from the analysis.

Welfare vs. Employment: A Conceptual Framework

(a) Moving from Work to Welfare

Let us define I_W^* the level of welfare benefits such that an individual is indifferent about being employed with an income of I_E^0 and being unemployed with welfare benefits of I_W^*.

(1) $I_W^* = I_E^0 + U_E + SQ$

Where,

U_E- the net non-pecuniary utility from work (the non-pecuniary benefit from work minus the utility from leisure)

SQ- status quo bias

(b) Moving from Welfare to Work

The question for unemployed individual is, if you have a given allowance I_W^0 , what salary I_E^* would make you indifferent about being employed or being on welfare?

(2) $I_E^* = I_W^0 - U_E + SQ$

Summing equations 1 and 2 allows us to estimate the status quo bias

(3) $I_W^* + I_E^* = I_E^0 + I_W^0 + 2SQ$

The gap between equations 1 and 2 allows us to estimate the non-pecuniary benefit of work

(4) $I_W^* - I_E^* = I_E^0 - I_W^0 + 2U_E$

In the next section, we will estimate the value of the status quo bias as well as the value of the non-pecuniary benefits from work.

Empirical Estimation

The Questionnaire

We constructed a three-part questionnaire. The first part of the questionnaire examined the opinions and experience of the respondents with allowances. Most of the questions were closed questions whose answers were yes / no, or 5-point scale questions. The second part of the questionnaire included questions about barriers to finding a job such as health status, geographical distance, type of job and the nature of the work. Respondents were asked to indicate on a 5-point scale (1=strongly disagree to 5=strongly agree) the degree to which they agreed with statements about those topics. This part also included five questions about salary barriers. These questions simulated hypothetical situations in which the respondents had to decide on the amount of the welfare benefit that would make them move from employment to retirement or welfare, and the salary that would entice them to move from welfare to work. These were open questions, and the respondents were asked to fill in the requested amount.

The two main scenarios were as follows:

(1) You work in a full-time job, and earn a salary of 5,000 NIS a month (NIS stands for new Israeli shekels. At the time of writing, there were 3.6 NIS in

one American dollar). You are offered the opportunity to give up the job and salary in return for a monthly allowance from the state for six months. After the end of the eligibility period, you will return to your work. Specify the minimum allowance you would require to give up your work.

The answer to this question is I_W^* , the amount of allowance an employed person demands to agree to switch to welfare.

(2) Suppose you can get a monthly allowance of 5,000 NIS a month for six months, and then you would no longer receive any money, but you will have the option to work full time. Specify the minimum monthly salary that would make you give up the allowance and go to work.

The answer to this question is $IE*$, the monthly salary an unemployed person demands in order to give up his allowance.

If the respondents noted a range of salary or allowance rather than an exact amount, we used the average of the stated range. Extremely excessive amounts were excluded in order to avoid bias in the results[1]. For I_W^* some individuals answered: "I will not quit work for any amount of money". We think that it reflects a strong preference toward work and it is replaced by the value of the average answer plus three standard deviations (similar treatment used for I_E^*).

The third part of the questionnaire referred to the respondents' personal characteristics such as age, gender, education, income and occupation.

The Sample

The questionnaire was distributed to individuals in Israel via the Internet during April - June 2012 (sample 1) and during September- October 2013 (sample 2).

[1] This part of the questionnaire was based on a questionnaire from the research of Sherman and Shavit (2010).

For sample 1, we uploaded the survey to the Internet through the Qualtrics survey software and sent out email invitations to participate in it. The questionnaire was distributed via social networking, forums for the unemployed and job seekers, as well as through direct acquaintances who met the requirements of the sample in terms of their characteristics. In addition, a direct request was made to the unemployed and recipients of income support in several employment agencies in an attempt to reach out to the unemployed who did not have access to a computer and the Internet, and possibly had different characteristics. For the second sample, we used the services of a company that specializes in distributing surveys. It has a pool of registered individuals who are willing to participate in various surveys for a monetary reward.

The two samples include 560 Israeli citizens, 192 in sample 1 and 368 in sample 2. In term of age, the participants were between 21 and 67, and the average age was 42.8 (SD 11.85), 44.16 in sample 1 and 42.08 in sample 2. With regard to employment, 63% were working (60% in sample 1 and 65% in sample 2). As for gender, 45% were males (47% in sample 1 and 44% in sample 2). With regard to higher education, 52% had an academic education (70% in sample 1 and 42% in sample 2). As for marital status, 41% were single (75% in sample 1 and 25% in sample 2). While there are significant differences between the two samples with regard to marital status and academic education, the main results of our analysis reveal no significant differences between the two samples. Therefore, we will present our results for the aggregate dataset.

Results

When analyzing the results, we use the term "replacement rate", which is the ratio of unemployment benefits to income from employment. Analyzing the sample together without differentiation between younger and older individuals reveals

surprising results that are similar to those of Sherman and Shavit (2010). For the move from welfare to work, the replacement rate is 0.75, significantly less than 1 (t-test significance < 0.01). This average replacement rate means that the allowance for the unemployed is 75 percent of the minimum salary required to move to employment. For the move from work to welfare, the replacement rate is 1.24, which is greater than 1 (t-test significance < 0.01). This average replacement rate indicates that when moving from work to welfare, individuals on average ask for 24 percent higher welfare allowances than the salary they receive from work. See Table 1.

Table 1: The average amounts of (I_W^*) and (I_E^*) and the standard deviations

	Variable			
	(I_W^*)	(I_E^*)	$(I_W^*) + (I_E^*)$	$(I_W^*) - (I_E^*)$
Average	6,213.18[1] (4,882.04)	6,655.12[1] (3,413.98)	12,682.41[2] (5,498.69)	-480.31[3] (5,715.83)
Replacement rate	1.243[4]	0.751[4]		

(1) Differs significantly from 5,000 NIS (at the 0.001 level of significance).
(2) Differs significantly from 10,000 NIS (at the 0.001 level of significance).
(3) Significantly different from zero (at the 0.1 level of significance)
(4) Differs significantly from1 (at the 0.001 level of significance).

Another interesting result is that the sum of $(I_W^*) + (I_E^*)$ is significantly different from 10,000 NIS, meaning that there is a behavioral factor involved in the decision about whether to move from either welfare to work or work to welfare. The focus of this paper is to explore whether this behavioral factor is different for older and younger individuals.

In Table 2 we present these averages disaggregated between those who are older or younger than 45 years of age.

Table 2: Average income demanded by those older and younger than 45 years of age

	Minimum allowance for giving up work I^*_W	Minimum wages for giving up allowance I^*_E	$I^*_W + I^*_E$	$I^*_W - I^*_E$	No. of observations
Younger than 45	5,605.93[1] (4,017.95)	6,595.96[1] (2,980.08)	12,117.07[2] (4,872.26)	-1,074.86[3] (5,200.76)	309
Replacement rate	1.12[4]	0.76[4]			
Older than 45	7,009.86[1] (5,736.99)	6,731.93[1] (3,941.44)	13,441.94[2] (6,172.09)	318.46 (6,265.62)	230
Replacement rate	1.40[4]	0.74[4]			
Total	6,213.18 (4,882.04)	6,655.12 (3,413.98)	12,682.41 (5,498.69)	-480.31 (5,715.83)	539

1. Differs significantly from 5,000 NIS at the 0.01 significance level.
2. Differs significantly from 10,000 NIS at the 0.01 significance level.
3. Significantly different from zero at the 0.05 level of significance.
4. Differs significantly from 1 (at the 0.001 level of significance).

The hypothesis that the I^*_W of those under 45 and the I^*_W of those over 45 is equal is rejected at the significance level of 0.01. The hypothesis that the I^*_E of those under 45 and the I^*_E of those over 45 is equal is not rejected at the 0.05 significance level. The hypothesis that $I^*_W + I^*_E$ of those under 45 and that of those over 45 is equal is rejected at the 0.01 significance level. The implication of these findings is that the SQ of those over 45 is larger than the SQ of those under 45 (equation 3). The hypothesis that the $I^*_W - I^*_E$ of those under 45 and that of those over 45 is equal is rejected at the 0.01 significance level**.** The implication of this result might be that the non-pecuniary benefit from work is greater for older workers than for younger workers.

Econometric Analysis

Several equations were estimated where the dependent variables were I^*_W, I^*_E, their sum and their difference. The explanatory variables are AGE—the respondent's

age, measured as a continuous variable, WORK--a dummy variable indicating whether the respondent is employed or unemployed, ACADEMIC--a dummy variable for those who have an academic education, GENDER--a dummy variable: male=1 female=0, MARRIED-- a dummy variable: single=0, otherwise, 1.

We also tested the interactions between the variables and present the interactions that had a significant effect on the models. The main results are presented in Table 3.

Table 3: Econometric results

	Ln(IW*)	Ln(IE*)	Ln(IW*+IE*)	IW*-IE*
Constant	8.177***	8.816***	9.111***	-3,502.543**
Age	0.012***	-0.002	0.007***	102.348***
Academic	-0.073**	-0.162	-0.032	-1,093.290**
Work	0.086**		0.060**	773.074
Married	0.250*	-0.008	0.227**	1,907.439
Gender	-0.070*	-0.024	-0.029	-612.748
Interaction age and married	-0.009***		-0.07***	-84.483**
Interaction age and academic		0.005**		
N	536	539	534	534
Adjusted R square	0.077	0.006	0.052	0.036

* Significant at the 0.1 level
**Significant at the 0.05 level.
***Significant at the 0.01 level.

By using the estimations from Table 3 and the conceptual framework, we reached several conclusions. First, age, being employed and being married have a positive effect on the status quo bias as reflected in its impact on IW*+IE*. The replacement rate when moving from work to welfare is higher for older individuals, for those who are already working and for married individuals, but is lower for individuals with an academic education and for males. This result implies that individuals who are already working, especially older individuals, place a higher non-pecuniary value on work than younger people. In contrast, when moving from welfare to work we found

no significant differences between younger and older individuals. Older workers place a higher non-pecuniary value on work as reflected in the positive coefficient of age in the IW*-IE* regression.

To check the robustness of our results we created a new set of variables that take into account the directions of the values of IW* and IE*. When IW* or IE* is less than 5,000 NIS, we give the variable the value -1. If IW* or IE* is greater than 5,000 NIS, it receives the value +1. Finally, if IW* or IE* is equal to 5,000 NIS, it receives the value 0. We can see from Table 4, the results remain in the same direction.

Table 4: Regressions with sign variables

	SignIW*	SignIE*	SignIW*+SignIE*	SignIW*-SignIE*
Constant	-0.410***	0.701***	0.313	-1.109***
Age	0.013***	-0.003	0.010**	0.015***
Academic	-0.108		-0.098	-0.129
Work	0.121*	0.059	0.168*	
Married	-0.192***		-0.224**	-0.138
Gender	-0.188***	-0.135**	-0.317***	
N	541	541	534	534
Adjusted R square	0.050	0.003	0.026	0.034

Discussion and Conclusions

This research seeks to determine how older and younger individuals differ with regard to two questions. The first one is the minimal allowance that motivates an individual to move from employment to unemployment (I_W^*). The second question is the minimal salary that motivates an unemployed individual to give up unemployment (I_E^*) . By using data collected from the questionnaires, we determined that the two threshold incomes, I_W^* and I_E^* are greater than 5,000 NIS. In other words, there are strong behavioral factors that depend on the initial situation.

The behavioral factors, denoted by SQ, are crucial for deciding whether to seek employment or stay on welfare. We find that the effect of the status quo is positive and quite large. SQ is estimated to be equal to 1,341 NIS, which is about one quarter of the base income.

Furthermore, we also determined that older people demand a higher I_W^* than younger people in order to give up working. However, there is no significant difference between young and old with respect to I_E^*, the income needed to motivate a switch from an allowance and unemployment to employment. The effect of the status quo for older individuals (estimated to be about 1,721 NIS) is greater than that of younger individuals (estimated to be 1,059 NIS).

The results show that older workers who are employed feel a much greater need to continue working than younger workers. The latter need a stronger incentive to move from welfare to being employed. Therefore, layoffs hurt older workers more severely than younger workers. However, there is no difference between younger and older individuals when it comes to incentives to move from welfare to being employed. Neither group has a strong motivation to seek employment if their welfare checks are large enough and secure.

Public Policy Implications

We should note that the status quo bias has a onetime effect on the individual while the non-monetary utility from work increases the utility for several years. This finding implies that the status quo bias might lead to an inefficient allocation of the work force. For example, older individuals currently on welfare will choose to remain unemployed even if offered a job with a wage that is 34 percent higher than their welfare benefits. In order to weaken the effect of the status quo bias, which is particularly strong for older individuals, the government should improve the

attractiveness of employment for those not currently working. One possible measure might be offering a higher level of earned income tax credits to older workers than younger workers (see Malul and Luski 2009). Another measure might be to create programs that would make welfare payments conditional on activities that might weaken the status quo bias effect. Examples of such activities would be training programs for the unemployed that would disrupt the effect of the status quo. Note that our results imply that these measures are more critical for older individuals who have a much stronger status quo bias.

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