employment as a poverty trap

Liran Korn, Miki Malul, and Israel Luski

Using an experiment conducted with 384 young Israelis, the authors find that if young people are actually working as unskilled workers, the status quo bias increases the premium that they require for giving up their jobs and seeking more education. This excess premium may make some individuals choose to remain employed as unskilled workers rather than pursue higher education. Such a decision may trap them in a life of poverty. The authors maintain that their results prompt a reexamination of the widely held belief that early employment is an advantage for young people.

The common wisdom maintains that finding and keeping a job is the first step out of the jaws of poverty. However, we argue that finding and keeping an unskilled job at the expense of enhancing one’s education is actually a lure that entices people into a life of poverty. Tantalized by the opportunity to make money, people who opt for the short-term rewards of an unskilled job rather than continuing their education damage their future employment prospects and may fall into the trap of poverty.

In this article, we examine two situations to determine how people make this decision. In the first situation, the individual is offered the theoretical opportunity of working as an unskilled worker. In the second case, the individual is already working in such a job when he or she decides to pursue higher education. From a purely economic point of view, these two scenarios are similar (Shavit, Rosenboim, & Malul 2011). However, we posit that workers who are already employed will overestimate the value of their current work compared with those who are not working. Overestimating the value of having a current job might be the result of a status quo bias, 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, Knetsch, & Thaler, 1991; Samuelson & Zeckhauser, 1988). Samuelson and Zeckhauser (1988) described a series of experiments involving issues such as pensions and health care insurance to illustrate that the status quo bias plays a significant role in individuals’ economic decisions. Therefore, we suggest adding the status quo bias to the conventional analysis. We believe that adding behavioral factors to the conventional analysis is essential for improving

Liran Korn, Department of Economics, and Miki Malul, Department of Public Policy and Administration, Ben-Gurion University of the Negev, Beer-Sheva, Israel; Israel Luski, Western Galilee College, Akko, Israel. Correspondence concerning this article should be addressed to Miki Malul, Department of Public Policy and Administration, Guilford Glazer Faculty of Business and Management, Ben-Gurion University of the Negev, Beer-Sheva, 8410501, Israel (e-mail: malul@som.bgu.ac.il).
counselors’ understanding about the relationship between early job experiences and employment outcomes in later adulthood. Therefore, we present a labor market model that highlights the possible effect of the status quo bias on the decision of younger workers to acquire human capital. After testing the model with data from Israel, we discuss its policy implications.

LITERATURE REVIEW

Investment in human capital is one of the best weapons a job seeker can wield in the fight for employment and earnings (Carnevale, Cheah, & Strohl, 2012). A major factor that should be considered when deciding to acquire human capital in the form of increased education is the opportunity cost, that is, the cost of working instead of going to school (Catsiapis, 1987; Heymann & Bloom, 1990). When the alternative to work is more attractive, individuals will be less likely to pursue higher education. For example, using national data from 1990 to 2009, Hillman and Orians (2013) found that a one percentage-point change in unemployment is associated with a 1.1% to 3.3% increase in community college enrollments.

A recent review of the literature (Danziger & Ratner, 2010) addresses the relationship between early jobs (i.e., jobs held in the first 5 years after leaving school) and employment outcomes in later adulthood using conventional economic theories. For example, Neumark (2002) demonstrated that early job stability has a positive effect on adult wages. Lynch (1993) showed that an individual’s characteristics and human capital as well as local labor market conditions have a strong influence on the ability to move from dead-end jobs (i.e., occupations with a generally low level of wage mobility for employees remaining with the same employer over time) into higher paying jobs with better long-term employment prospects (Bihagen & Ohls, 2007).

The Labor Market Model

Individuals have to choose between two alternatives: working as unskilled workers or pursuing higher education and becoming skilled workers. Models exist that illustrate these alternatives (Agell & Lommerud, 1997; Malul & Luski, 2009). Nevertheless, we maintain that the actual decisions people have to make about these issues are more complex than what is illustrated in these models. Specifically, we argue that the alternative of working is a significant factor in the decision about whether to acquire higher education (Catsiapis, 1987). Therefore, we present a new model that includes this factor in its analysis.

Our basic theoretical model makes several assumptions. First, we assume that all individuals are identical. Second, we assume that each person has a utility from income and a nonpecuniary utility, such as the utility of being educated. Therefore, the utility of an individual working as an unskilled worker is

\[ V_{US} = W + U_{US}, \]
where \( W_0 \) is the wage of an unskilled worker and \( U_{US} \) is the nonpecuniary utility from working as an unskilled worker, which might be positive or negative. The utility when working as a skilled worker is

\[
V_s = W - C + U_s,
\]

where \( W \) reflects the wage for a skilled worker, \( C \) is the cost of acquiring an education, and \( U_s \) is the nonpecuniary utility derived from being a skilled worker.

Assume that \( W, C, U_{US}, \) and \( U_s \) are the current values of all of the future results that stem from each position. It can be shown that individuals choose to pursue higher education if their forecasted wages, \( W \), are greater than \( W^* \), where

\[
W^* = \left( U_{US} - U_s \right) + W_0 + C.
\]

When an individual is already working as an unskilled worker, we hypothesize that a status quo bias may exist. In that case, the individual who changes his or her status faces a disutility, which is denoted by \( SQB \). In that case, the individual will choose to pursue higher education if \( W > W^{**} \), where

\[
W^{**} = \left( U_{US} - U_s \right) + W_0 + C_0 + SQB.
\]

If \( SQB \) is positive, the likelihood that an individual will choose to work as a skilled worker is lower because \( W^{**} = W^* + SQB \). In other words, because of the status quo bias, an individual who is already working as an unskilled worker might need a higher return for giving up his or her job to pursue an education compared with an individual who is not working when making this decision. This possibility implies that employment as an unskilled worker might actually be a poverty trap because individuals who are unskilled workers may not be motivated to upgrade their skills. Loath to give up their current salary, they may decide to remain in their relatively low-paying job until retirement.

The Labor Market Model With Heterogeneous Individuals

Our basic model assumes that all individuals are identical. However, following Malul and Luski (2009) and Agell and Lommerud (1997), we explored how the status quo bias affects individuals with different abilities when deciding whether to acquire higher education. As in the basic model, each individual has to choose between two alternatives: working as an unskilled worker or pursuing higher education and becoming a skilled worker. In this model, the level of education is continuous, so each individual decides if he or she wants to acquire higher education and how much.

Assume that \( e_i \) is the level of higher education that individual \( i \) acquires. The level of education \( e_i \) is determined by the investment in training and learning, where the minimum value is assumed to be 0 (corresponding to compulsory schooling). Workers consider raising their educational level by investing time and money in training and learning. The value of a worker’s output, \( y_i \), is a function of his or her level of higher education. For simplicity, we assume that \( y_i = e_i \).
The worker’s wage is denoted by $w_i$. We assume perfect competition in the labor market so that $w_i = y_i$.

Each individual is characterized by a parameter $\mu_i$ that determines his or her ability to learn and to be trained. An individual can achieve a higher level of higher education, $e_i$, by investing $C_i$ in higher education, where

$$C_i = 0.5 \frac{1}{\mu_i} e_i^2. \quad (5)$$

Note that the cost of acquiring higher education is negatively correlated with an individual’s ability. All individuals strive to maximize their utility. The utility of each individual is

$$U = L(w_i - 0.5 \times \frac{1}{\mu_i} e_i^2 + U_s) + (1 - L)(W_0 + U_{US}). \quad (6)$$

The value of the utility of a skilled individual, $L = 1$, who invests optimally in higher education is $0.5\mu_i + U_s$, whereas an individual who prefers to remain unskilled receives a utility value of $W_0 + U_{US}$. Therefore, an individual whose parameters satisfy $\mu_i \geq 2(W_0 + U_{US} - U_s)$ chooses to invest in training. Individuals whose abilities do not satisfy this criterion, that is, $\mu_i < 2(W_0 + U_{US} - U_s)$, remain unskilled and choose the lowest possible level of higher education ($e_i = 0$).

**The Effect of the Status Quo Bias**

Consider an individual who is already employed as an unskilled worker. That individual has the option to become a skilled worker by investing time and money in higher education.

The utility available to this individual is

$$U = L(w_i - 0.5 \times \frac{1}{\mu_i} e_i^2 + U_s) + (1 - L)(W_0 + U_{US} + SQB). \quad (7)$$

In this case, only individuals whose abilities satisfy the following condition will choose to change their status to skilled workers:

$$\mu_i \geq 2(W_0 + U_{US} - U_s + SQB). \quad (8)$$

In other words, those individuals whose abilities are in the range of

$$2(W_0 + U_{US} - U_s) < \mu_i < 2(W_0 + U_{US} - U_s + SQB) \quad (9)$$

will decide to remain unskilled. However, had they not found unskilled jobs in the first place, they would have decided to become skilled workers. This result implies that only individuals with relatively high abilities will be able to escape from the trap of working as unskilled workers. Those who have abilities in the range delineated in Equation 9 will remain unskilled workers.

In summary, the main results of the theoretical model are as follows. In the basic scenario, in the case of individuals who are not working but have the option to do...
so, those with medium and high abilities will choose to acquire higher education. In the second scenario, among individuals who are already working, only those with high abilities will decide to acquire higher education.

**METHOD**

We tested our model using data about the 2011 labor market in Israel (Israeli Central Bureau of Statistics, 2011). In that time period, the average wage for an unskilled worker was about 6,286 Israeli new shekels (NIS; about $1,800) per month, whereas the average wage for a skilled worker was about 11,769 NIS (about $3,400) per month. Unskilled workers usually work in the following industries: agriculture, construction, wholesale and retail trade and repairs, accommodation services, and restaurants (Israeli Central Bureau of Statistics, 2011).

**Sample**

We used a snowball procedure to find our sample population, distributing invitations to participate through e-mails and social networking sites. In accordance with the procedure that Malul and Luski (2009) used, each participant was asked to fill out the questionnaire we provided and send the link to other individuals who fit the criteria for the study. Responses to the questionnaire were made anonymously. Our sample included 384 young people in Israel between the ages of 18 and 35 years. The mean age was 26.12 years ($SD = 2.70$; $Mdn = 26.00$). Of the participants, 36% were male and 64% were female. With regard to marital status, 81% were single, 17% were married, and 2% were divorced or widowed. As for employment, 76% were working, whereas 24% were unemployed.

**Questionnaire**

The participants were asked to complete a six-part questionnaire. The first section included demographic questions about their age, gender, marital status, education, income, employment status, and parents’ education and income. The second section asked questions regarding personal attributes, such as time preferences (e.g., willingness to postpone income) and risk preferences (e.g., willingness to pay for a lottery). In the third section, the participants were asked to choose between working in an unskilled job for a monthly wage of 5,000 NIS (about $1,250) or pursuing higher education in a 3-year program with an annual tuition of 10,000 NIS (about $2,500). The participants were asked to indicate the minimum salary they would be willing to accept after graduation that would make acquiring this education the preferred choice. At this stage, we presented this question in two forms. Each time, the alternative to working as an unskilled worker was working in either a factory or an office. In the fourth and fifth sections, we repeated the procedure described in Section 3. However, this time, the participants were asked to assume that they were already working as an unskilled worker (once in a factory and the second time in...
an office) for a monthly salary of 5,000 NIS. Participants were asked to indicate the minimum salary they would be willing to accept to give up their current employment in favor of the 3-year training program.

Sections 3, 4, and 5 of the questionnaire were based on a similar questionnaire used by Sherman and Shavit (2009). Their questionnaire asked about the trade-off between welfare and work. We adapted this questionnaire to investigate the trade-off between being unskilled and having an academic degree. We presented the participants with two hypothetical scenarios:

**Hypothetical Scenario 1 (W*)**: Assume that you are currently not working. You have the option to work as an unskilled worker in a factory for a monthly salary of 5,000 NIS. Another option is to pursue an academic degree or professional training in a 3-year program in which the tuition is 10,000 NIS per year. After completing the educational program, what is the minimum monthly salary that would make this alternative worthwhile?

**Hypothetical Scenario 2 (W**): Assume that you are currently working as an unskilled worker in a factory for a monthly salary of 5,000 NIS. You have the option to pursue an academic degree or professional training in a 3-year program in which the tuition is 10,000 NIS per year. After completing the educational program, what is the minimum monthly salary that would make this alternative worthwhile?

We repeated these two scenarios for employment in an office instead of a factory. In the last section of the questionnaire, we asked questions about attitudes toward investing in human capital and self-perceptions about the participants’ ability to succeed in higher education.

**Variables**

According to the status quo bias hypothesis, individuals tend to overestimate their current position as unskilled workers if they work in a factory or in an office. In our theoretical model, the gap between the answers to the two questions about the amount of salary increase that would make returning to school attractive reflects the status quo bias. We express this bias as \( W^{**} - W^{*} = SQB \).

**Excess premium.** The gap between \( W^{**} \) and \( W^{*} \) is the excess premium required to motivate individuals to acquire higher education when they are currently working compared with the premium required when they are unemployed.

**Risk aversion.** One might argue that risk aversion is a factor when analyzing the decision to give up a job (Guiso & Paiella, 2005). Therefore, we measured risk aversion using the willingness to pay for entering a lottery. The lottery presented in the questionnaire was a 50% chance of winning 10 NIS and a 50% chance of winning 30 NIS. This measure of risk aversion is similar to those used by Rosenboim and Shavit (2012) and Belzil and Leonardi (2007). The lower the level of willingness to pay for the lottery, the higher the level of risk aversion. Using the median responses,
we divided the participants into two categories: those who were very risk averse and those with relatively low risk aversion.

**Gender.** We used a dummy variable in which 0 = female and 1 = male.

**Self-perceptions about academic ability.** We measured the self-perceptions of the participants about their ability to succeed in higher education using their response to the question “I am capable of succeeding in academic education.” Responses were made on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

**Attitudes toward investing in human capital.** We measured the attitudes of the participants with regard to their feelings about investing in human capital using their response to the question “What is your opinion of a person who has acquired higher education?” Responses were made on a 5-point Likert-type scale ranging from 1 (strongly negative) to 5 (strongly positive).

**RESULTS**

Table 1 presents the minimum monthly wage that the participants would demand after completing the educational program that would make this alternative worthwhile. Using actual data to analyze the move from employment to education is very complex because of selection bias. However, our experiments allowed us to avoid the selection bias and focus on the decision to move from employment to education. To support the validity of our results, we used real data regarding the return to education in Israel and showed that our results are a good proxy for the real data. According to Table 1, on average, the participants would demand a 67% return on their investment in education—from 8,151 NIS for factory work to 8,526 NIS for office work. These numbers correspond with real-life figures. For example, using Israeli data, Caplan, Furman, Romanov, and Zussman (2009) found that, after graduation, students with a bachelor of art degree could expect to earn 8,449 NIS per month. Similarly, Frish (2007) demonstrated that the return on a bachelor of art degree in Israel is 55% more than the average salary.

In Table 2, we present the results for the status quo bias separately for men and women. Although the status quo bias exists in both genders, it is slightly weaker for

### TABLE 1

**Minimum Monthly Wage When the Status Quo Is Either Employment or Unemployment**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Minimum Monthly Wage in NIS</th>
<th>Factory</th>
<th>M</th>
<th>SD</th>
<th>Office</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td></td>
<td></td>
<td>8,505</td>
<td>3,191</td>
<td></td>
<td>8,864</td>
<td>3,151</td>
</tr>
<tr>
<td>Unemployed</td>
<td></td>
<td></td>
<td>8,151</td>
<td>2,871</td>
<td></td>
<td>8,526</td>
<td>3,157</td>
</tr>
<tr>
<td>t test</td>
<td></td>
<td></td>
<td>3.55**</td>
<td></td>
<td></td>
<td>3.54**</td>
<td></td>
</tr>
</tbody>
</table>

*Note. N = 384. NIS = Israeli new shekel (1 NIS = approximately $0.25). **p < .01.*
women than for men. The premium that reflects the status quo bias is approximately 5.0% (factory) and 4.4% (office) for men and approximately 3.6% (both factory and office) for women, but this difference is not statistically significant. Table 3 presents the impact of risk aversion on the excess premium.

**DISCUSSION**

As shown in Table 1, individuals who have a job, even an unskilled job, demand a higher minimum salary for leaving that job and pursuing further education compared with those who are not currently employed. The excess premium required is approximately 4% in both cases. This result implies that a status quo bias exists. Such a bias may prove to be a poverty trap for youngsters who start working before acquiring higher education. As expected, in both cases (employment and unemployment), the salary required when completing one’s education is higher than the basic wage that individuals might make without an education. However, the premium that employed individuals seek is higher by 4%. This additional economic premium may cause these individuals to make inefficient decisions about investing in education and choose instead to remain unskilled. Note that individuals with relatively high abilities will manage to overcome this trap.

As the simultaneous regression analysis in Table 3 shows, the constant is always significant, which means that the excess premium required is positive (i.e., significantly greater than zero). This difference cannot be explained by either risk aversion or gender. The result is in line with that of Belzil and Leonardi (2007), who found that differences in attitudes toward risk do not appear to be a significant determinant of educational decisions. We also added the independent variables of ability (self-perceptions about the participants’ ability to succeed in higher education) and attitudes toward investing in human capital to the regression. As with our previous results, these variables proved to be not significant in the various

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**TABLE 2**

<table>
<thead>
<tr>
<th>Gender Differences in Status Quo Bias</th>
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<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Minimum Monthly Wage in NIS</td>
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<tr>
<td></td>
</tr>
<tr>
<td><strong>Variable</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Men (n = 140)</td>
</tr>
<tr>
<td>Employed</td>
</tr>
<tr>
<td>Unemployed</td>
</tr>
<tr>
<td>t test</td>
</tr>
<tr>
<td>Women (n = 244)</td>
</tr>
<tr>
<td>Employed</td>
</tr>
<tr>
<td>Unemployed</td>
</tr>
<tr>
<td>t test</td>
</tr>
</tbody>
</table>

*Note. NIS = Israeli new shekel (1 NIS = approximately $0.25). *
*p < .05. **p < .01.*
models we tested. Indeed, even after the independent variables were added, the constant remained positive and significant. These results imply that the excess premium might reflect a status quo bias that traps youngsters who enter the labor force early in poverty.

CONCLUSION

In this article, we analyzed how a status quo bias might affect the decision to acquire higher education. The results of our questionnaire distributed among 384 participants in Israel support our hypothesis that the status quo bias increases the premium required for education. This demand for an increased premium may cause some individuals to choose to remain employed as unskilled workers rather than pursue higher education. This bias exists for both men and women, but it is slightly stronger for men. Our results also contradict some conventional economic studies that have found a positive relationship between early job and wage growth and employment opportunities in later adulthood (Holzer & LaLonde, 1999; Mortensen, 1978; Neumark, 2002).

The implication of these results is that for the labor market it is inefficient for youngsters to take unskilled jobs right after leaving high school. A government whose goal is higher gross domestic product growth and a higher rate of participation in higher education might consider making it less attractive for younger individuals to take unskilled jobs. One method of doing so is to follow the suggestion of Malul and Luski (2009) and set a higher minimum wage for younger individuals and a lower minimum wage for older workers. Doing so would offer an advantage to older individuals in unskilled jobs and make the threshold for entrance into the labor market for younger workers relatively high, thus discouraging them from getting unskilled jobs. In such a case, the alternative cost of pursuing higher education would be reduced and younger individuals’ incentive to acquire further education would increase. At the macrolevel, such an approach would increase the accumula-
tion of human capital in the economy and improve the competitive advantage of the economy through efficient use of the labor force.

Providing access to training is also important. Lynch (1993) found that young workers who find themselves employed in situations in which training opportunities are limited or nonexistent may be stuck in dead-end jobs. Thus, policies that enhance the educational and training opportunities for these younger workers would be beneficial.

Employment counselors for younger individuals should take our findings regarding the status quo bias into consideration when advising their clients. Younger individuals should be encouraged to first seek an education before entering the workforce to avoid falling into a possible poverty trap. Another alternative is to combine a part-time job with higher education to weaken the negative effect of the status quo bias. When advising younger individuals who are already working, counselors will need to use a different strategy. For example, counselors could encourage these youngsters to take a few courses and integrate the training program into their lives gradually.

Our study has several limitations. First, we analyzed our data using average responses to each scenario. However, each individual or group of individuals may have different attitudes toward education (Luce, 2010; Malul, Rosenboim, & Shavit, 2013). Future research should test our model with other groups of individuals, such as racial/ethnic minorities and older workers. Second, we tested our model using data from one country, Israel. Future studies should use statistics from other countries to validate our results. Nevertheless, despite the study’s limitations, we maintain that its results prompt a reexamination of the widely held belief that early employment is an advantage for young people.

REFERENCES


