Palestinian Labor Market Demand Changes for Educational Outcomes Under the Israeli Occupation

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Abstract

This paper aims at studying the changes in labor market demand for different educational attainment levels during Al-Aqsa Intifada, on the basis of the PCBS Labor Survey results. To cover all aspects of analysis, three different analysis methods were used. The first was based on a descriptive analysis. The second was based on the calculation of the rates of return on education through linking the wage levels with unemployment. And the third focused on the utilization of the Dynamic Probit Model to examine the probability for unemployment during the Intifada for four educational attainment levels. The results showed that educational attainment has a key role to play in reducing unemployment, and that the Palestinian Labor market is saturated with persons with low educational attainment.
1. Introduction:

The problem of unemployment is still occupying the targets concern among the principals and the decision-makers in the Palestinian Territory because of its negative effect on poverty and the low levels of living. The last four years unemployment rate has exceeded the rate of unemployment in the previous time or the neighboring countries. According to the results of many national and international studies (World Bank), the main reason of unemployment is the Israeli measures which Israel do to make Palestinian people starve like hampering the traffic between the cities and imposing curfews for a long time, in addition to not allowing Palestinian workers to go work in the Israeli work market after it was forming one forth of Palestinian workers before October, 2000.

The direct and the indirect effect of the Israeli action on the economical situation in the Palestinian land was a result of the economical subordination, which we inherited from the Israeli occupation for several years. This inheritance has imposed a new condition, which cannot be a voided, and we can’t keep on waiting for a solution without resorting to changes in policies that suit this new condition. Many studies showed the importance of reconstructing the Palestinian labor market which needs a reconstruction of learning out comes. There are national and international studies that showed the importance of education and its main role in increasing the probability of work opportunities, and it is the only way to reach equilibrium between demands and supply which at the end leads to a decrease in the unemployment.

Education is the main entrance to achieve a complete development, assuming that investment in human being is the resource of the real wealth to the society, and the good learning is the active instrument to overcome the social and economical problems. This is what we look for through participation to make studies that help in linking the learning process with labor market. There is a gap between learning outcomes and labor market according to the primary indications of many studies and researches; this gap led to a high rate of unemployment and incoherence with labor market needs especially to new sectors that resulted from the reconstruction of the labor market, besides inequality of unemployment rate among the levels of learning. So, we need a clear vision to the future of employment that explains the strategies and the plans to afford the qualified human factor that meet the needs of economics and it guarantees safety and stability to the society. It is worth to mention that there is privacy to the Palestinian lands; the features of the unemployed people are most of the time addressed to unlearned groups of people because of their previous work in the Israeli labor market, which needs no scientific qualifications. But in return, the rate of illiteracy is decreasing, and this needs to put a new strategies that encourage the young to keep on their learning by guiding and directing them to the fields that get along with the labor market needs.

That is why the paper will mainly focus on three pivotal directions by studying the changes that happened to the rates of return to education before and during AL-Al-Aqsa Intifada, and to analyze it on the regional level form one hand and the sex on the other hand. In the next direction, we will study the affecting factors on the rates of return to education. The third direction will focus on role of education in reducing the damages of the Israeli actions on the Palestinians laborers, by using probit model and data that use the rotation sample.

Through these three directions, it will be concentrated to put a clear image about the importance of investment in education and the most ideal stage to the levels of education that gives the maximum level of profit.
The separation between men and women will help to know the education outcomes for each of them and the justice level. A separation on the regional level will occur between Gaza Strip and West Bank to compare between two different societies that live under different economical conditions. This separation will help to know the role of education in each region.

The paper is divided into five sections; the first section is the introduction. In the second section, we will discuss the conditions of Palestinian Labor Market, the education, and the changes that happened in the period of the first quarter of the years 2000, 2002, and 2004. The return of education will be shown in the third section of the paper, which will include clarification to the data resources, and then the results of analyzing of the probability to be unemployed through Intifada will be in the fourth section, and at the end the conclusions in the fifth section.

2. Labor market and education outcomes.

The Palestinian Labor Market has admitted fundamental changes after the Israeli reoccupation to the Palestinian lands in October 2000. The unemployment rates raised and kept on rising to the highest level. This was reflected on the demand of education outcomes, after the demand was concentrated on the low scientific qualification, it now focuses on the high scientific qualifications, this is the case if we look at the results form the percentage side of the unemployed laborers according to their scientific qualifications. But the absolute values show that the main reason is the Israeli forbidding to Palestinian Laborers to work in Israel, whereas one fourth of Palestinian workers were working in Israel and settlements before October 2000, through their work doesn’t require sleeping outside the Palestinian lands.

The indications of the Palestinian labor market has shown the best rates before Al-Aqsa Intifada, since the participation of labor force of the 15 years old people has reached 44% in the third quarter of the year 2000, 45% in West Bank and 40% in Gaza Strip, where the percentage did not reach this value before.

The rates of unemployment kept on decreasing since the modification that started after Oslo Agreement (except the crisis that happened in 1996) till it reached the lowest rate (before the first Intifada) that reached 10% in the third quarter of the year 2000 (before the second Intifada) – 8% in West Bank and 16% in Gaza Strip. That was the most important factor to the economical development that happened in the Palestinian lands, though it was not separated. The effect of the Israeli occupation forces control on the passing of Palestinian workers to Israeli and settlements by closing roads was the direct one to the changes that happen to the unemployment rates. Figure (1) shows this relation clearly.

The percentage of workers in Israel and settlements has for the first time since 1990s reached 22% in the third quarter of the year 2000 and because of the separation fence that surrounds Gaza, the Israeli occupation forces were able to control the number of Gaza Strip workers, where their percentage reached to 15% in the same period. But it was hard to control the number of West Bank workers because of the borders length and the easy passing to Israel, since the percentage of workers reached 25%, despite the dangers that Palestinian workers face in Israel.

The changes that happened to the education outcomes have been fundamentally changed, since the rate of unemployment among these who possess low educational qualifications
reached the lowest point before October 2000. Whereas the percentage of low education (Less than Tawjihi) was 8% in the second quarter of 2000 against 11.8% of the high educational level (BA/BSc and above). This case reflected during Al-Aqsa Intifada since the rate of the lowest educational rate reached 26.5% against 15.5% to the highest level of education (BA/BSc and above) that was in the second quarter of the year 2000, the main reason was the stopping of the Palestinian workers to work in Israel and the settlements. On this base, the change among men has mainly happened. In the other side, education for the women did not help them to get jobs which warns that women might not complete their studying in the future.

In addition to the changes of the unemployment rates on the different educational qualification level which resulted from the reoccupation of the Palestinian Territory, The wages of the male employees who possess a diploma certificate decreased, while it did not change fo the group who does not possess more than high school certificate. In the other side, the female’s wages decreased in general. These indications have positive and negative aspects. The positive aspect, the group who posses a high scientific qualifications did not face the danger of loosing jobs during the period of the economical crisis that the Palestinian Territory faced and still facing. But the risk increases to those who posses low scientific qualifications (Kafri, 2003). The negative aspect is the decrease of wages among those who have a high scientific qualification, while wages of those who have low scientific qualifications won’t be affected.

The effect of the Israeli actions is clear again on the rates of leaking and the relation between leaking and the market demand for the skilled or non-skilled workers or workers in the elementary occupations. The main factor of causing fundamental changes in the labor market was the closure of the Israeli labor market on face of the Palestinian workers (Kafri, 2003) which was main reason to make changes in the percentage distribution of the unemployed persons according to the scientific qualification as shown in figure (1).

Of the 118,000 Palestinian working in Israel, there were 33,000 Palestinian youth (ages between 15 -24) working in Israel on the eve of the outbreak of Al-Aqsa Intifada. Of the remaining 85,000, 72,000 were between the ages of 25 and 44. Of these, 6,000 had a college diploma or higher, 17,000 had a secondary education diploma, and the rest had lower level of educational attainment (i.e. 8 out of 10 workers did not finish secondary education). This brings out the necessity to design and implement training and rehabilitation programs for more than 70,000 workers, with special focus on skills needed by the local and external markets. The focus of Palestinian employment in Israel and in settlement was on construction (81,000 workers), industry (21,000 workers), and trade, restaurant, and hotels (20,000 workers). Of these workers 62,000 possessed special skills, such as tiling, aluminum design and installation, and other acquired professions and skills. There were 8,000 workers who were experience in machinery operation and assembly. However, 80,000 workers were employed as unskilled laborers.

The attractiveness of the Israeli labor market and the gravitation of many laborers towards it in the past has left the Palestinian people a legacy of 112,000 Palestinian laborers without any educational credentials that could be tapped for the building of a statehood. The high wages paid to Palestinian workers in Israel and in settlements, accompanied by the dire economic conditions in the Palestinian Territories, were among the most important factors forcing Palestinian youth to drop-out of schools (academic and vocational) for employment within the Israeli labor market. The technical skills honed by the Palestinian laborers through the
experience gained from working in Israel, the most important of which being construction skills, cannot be absorbed by the local labor market, even with employment generation programs.

The high demand for uneducated, unskilled laborers before Al-Aqsa Intifada increased the drop-out rates of school-age children. By the same analogy, the closure of borders and crossing points between Israel and the Palestinian Territories decreased the drop-out rates. This is the preliminary conclusion that can be drawn from comparing the unemployment indicators and school drop-out rates as illustrated in Figures 1 and 3 and as indicated in S. Kafri, 2002. The figures show that the drop-out rates among school children increased dramatically in the years 1999/2000, in both the West Bank and Gaza Strip. At the same time, the percentage of Palestinian laborers employed in Israel in the year 2000 noticeably increased, noting that this increase began in 1997.

Since the gaining employment in the Israeli labor market does not require an educational credential prerequisite, and since the wages paid for unskilled Palestinian laborers in Israel are 33% higher than those paid in the Palestinian labor market as exhibited in figure 2, one can see how this can be an incentive for school children to drop-out to gain employment in Israel.

3. Returns to Education:

When analyzing the economic return to education according to the place of employment and the educational attainment, we can clearly observe that Israeli labor market plays a key role in creating an uneducated generation on the long-term. In this section I will analyze the rates of return to education through simple techniques that are based on the following formula (Psacharopolous, 1987):

\[
r = \frac{\bar{w}_h - \bar{w}_{h-1}}{s \cdot \bar{w}_{h-1}} = \frac{1}{s} (b - 1),
\]

Where \( b = \frac{\bar{w}_h}{\bar{w}_{h-1}} \)

\( \bar{w}_h \) stands for the average wage at educational level \( h \) and \( \bar{w}_{h-1} \) for the average wage at the next lower level of education. \( s \) are the years of schooling necessary after \( h-1 \) to reach level \( h \).

If we introduce unemployment, we get:

\[
r' = \frac{\bar{w}_h (1-u_h) - \bar{w}_{h-1}(1-u_{h-1})}{s \cdot \bar{w}_{h-1}(1-u_{h-1})} = \frac{1}{s} \left[ b \cdot \frac{1-u_h}{1-u_{h-1}} - 1 \right],
\]

where \( u_h \) and \( u_{h-1} \) represent the unemployment rates for the respective educational groups. We can see, that conventional rates of return are not biased, when unemployment rates is identical for two consecutive educational groups. If however unemployment rates vary with the educational level, rates of return should be adjusted (Barceinas-Paredes and other, 2001). In order to get (3) we solve (1) for \( b \) and substitute it in (2):
\[
\begin{align*}
    r' &= r - \frac{1-u_h}{1-u_{h-1}} + \frac{1}{s} \left[ \frac{1-u_h}{1-u_{h-1}} - 1 \right] 
\end{align*}
\]

Equation (3) gives the rule, how conventional rates of return should be corrected, when unemployment rates vary with the educational level. If the unemployment rate decreases with the level of education, then \( \frac{1-u_h}{1-u_{h-1}} > 1 \) and the conventional rate of return should be corrected upwards.

Equation (3) gives only a rough idea of the magnitude of the bias of rates of return to education, since several simplifying assumptions have been made (Barceinas-Paredes and other, 2001).

When calculating the above formula on the basis of the Palestinian Central Bureau of Statistics (PCBS) Labor Survey results since 1995, we found some results that clarify the changes that took place on the demand for education before and during \textit{Al-Aqsa Intifada}, and the changes in rates of economic return for persons aged 24-62 according to the level of educational attainment (the level of educational attainment was broken down into four categories: those who did not complete their secondary education, those with secondary education diploma, those who hold a two-year college diploma, and those who have a Bachelor degree or higher). As can be noted from Figure 5, which was based on formula #2 above, there is clear evidence that there are substantial changes on the rates of return on education between the period preceding \textit{Al-Aqsa Intifada} and that following it, as well as the differences evident by region and gender.

In the West Bank, the rates of return on education before the Intifada for men with low educational attainment levels was better than those of men with secondary education diplomas. The holders of college diplomas fared better than those with secondary education. The holders of Bachelors degrees earned less than those with college diplomas. During the Intifada, the situation changed. The college diploma holders fared the worst among all other levels, and the returns of holders of Bachelors degrees and higher began improving in comparison to the other level of educational attainment. It should be noted, however, that the general conditions in the Palestinian Territories became worse during the Intifada, and that the increase in returns here was in comparison to the same time period and not for previous periods. Accordingly, the improvement simply means that employment of Bachelor degree holders increased in comparison with other groups.

The situation is different in the Gaza Strip. The rates of return on education for those with Bachelors degrees were higher than those of college diploma holders. After the Intifada, a reverse trend began. Men with high educational attainment began suffering from diminishing returns till it became the lowest between the four levels. As for females with Secondary education diplomas in the West Bank, their returns were higher than those with lower levels of education, and the holders of college diplomas higher than those with secondary education. In the Gaza Strip, the situation for females was identical to that in the West Bank before the Intifada. However, it changed after the Intifada in such a way that college diploma holders had the highest returns.
In general, it can be observed that the rates of return on higher levels of education were affected the most in all regions and by both sexes. The holders of college diplomas fared the best among all levels. When comparing the levels of unemployment for the different levels of educational attainment, one can observe that those who fare the best are the ones with Bachelors degrees and higher. The difference in results between the first analysis and the second (the first being a comparison between wages and unemployment, and the second only comparing unemployment) reveals that it is not enough to look at unemployment only from the perspective of the numbers of unemployed, but also from the perspective of wage levels which could give a clearer picture of the labor demand in the labor market.

The average wage for those in the age group of 24-65 years and holders of secondary education diplomas is higher than those with college diplomas, both before and during the Intifada. In the Gaza Strip before and during the Intifada, the average wage for males was found to be positively related to the level of educational attainment. Females with high educational attainment in the Gaza Strip suffered from diminishing average wages, where as females at the same level in the West Bank were not affected. In terms of quantitative levels of increase or decrease, one can observe clear differences (Figure 6). The average wages of college diploma holders from both sexes is the best in terms of percentage increase during the Intifada, whereas the average wages for holders of Bachelors degrees in the West Bank was the highest of all other levels.

The difference in average wages by educational attainment level and the demand for it provides a the society with a clear picture for making the decision to pursue educational attainment from the perspective of labor market feasibility and return. This sort of results can be clearly read by the public through common knowledge, and this is what we find when examining the changes that have occurred to educational enrolment rate over the past few years. The question often repeated is “what is the benefit of education”? The poverty suffered by the Palestinian people as a result of the occupation shapes the way people think in such a way that undermines the future prospects for education, and makes one only think for the day. The poor seek the job that provides high income in a short period without having to spend time in education, especially when considering the high unemployment levels among the “educated” before the Intifada.

In light of this, we can see the future of education through the general conditions of the labor market. The upsurge in unemployment over the past few years among those with high level of educational attainment encourages students to drop-out. Consequently, it is important for society to give priority to the educated in employment to give an incentive for those considering to drop-out from school not to.

4. Prospects for Unemployment during the Intifada:

The unemployment rate on the eve of the outbreak of the Intifada was estimated at 10%. This rate surged to 25% during the first few months of Intifada. This considerable increase made it worthwhile examining which groups of people are most likely to be unemployed, by level of educational attainment. To do this I relied on the PCBS previously mentioned surveys, which utilize the rotation sample principle, where it is easy to track the changes in an individual’s life over a year an a half period.

Through the use of the Dynamic Probit Model, we can realize this goal (Kafri, 2003). The dependent variable is a dummy variable identified as follows:
The employed person before Intifada become unemployed through Intifada

\[ EU = \begin{cases} 
1 & \text{if the employed person before Intifada become unemployed through Intifada} \\
0 & \text{if other} 
\end{cases} \]

The other variables are based on the four levels of educational attainment identified earlier, and identified here as dummy variables. The age is another variable as age is related to experience and the probability of being retained. Another variable is the place of residence, whether urban, rural, or refugee camp. This variable is highly related to the Israeli closures. The main variable, however, is the previous place of employment, where it is assumed here that those persons who were employed in Israel before the Intifada are the most prone to be affected during the Intifada, especially in the Gaza Strip.

The analysis of data was done at the region level (West Bank and Gaza Strip) and by sex. This, in turn, is based on the assumption that men are the most affected by unemployment during the Intifada as a result of closures. In addition, the tight closure of the Gaza Strip makes the situation between Gaza and the West Bank different.

Table 2 reveals the results of the analysis for males only. It can be unequivocally concluded that education plays a major role in reducing the probability of unemployment: The higher the educational attainment level the less the probability of unemployment. This conclusion was clearly evident in the West Bank, where the probability for holders of Bachelors degrees and higher is 14% less than the average, while the same probability for holders of college diplomas, secondary education is 7% and 6% respectively. In the Gaza Strip, the rates are 9%, 7%, and 5% respectively.

On a different level, the results show that there is an inverse relationship between age and unemployment, albeit relatively low. As for the place of residence, it can be observed that workers from urban areas in the west bank are 4% less prone to be unemployed than others, whereas they are 2% more prone to be unemployed in the Gaza Strip. The main factor for unemployment during the Intifada was the previous employment in Israel. Palestinian workers from the West Bank and from the Gaza Strip who used to work in Israel and in settlements before the Intifada are 14% and 16% more likely to be unemployed respectively. The reason this rate is higher in the Gaza Strip is due to the relatively tighter closure imposed in and around it.

5. Conclusions:

The Israeli policies had a direct effect on the changes in labor market demand for educated Palestinian laborers, despite the fact that the level of demand for laborers dramatically decreased. This proves that education had a very important role in reducing the probability of unemployment. The situation in both the West Bank and the Gaza Strip was different in terms of the demand for laborers with different levels of educational attainment. In the West Bank the demand for workers with college diplomas or higher was high, whereas the return on mid-level educational attainment (college diploma) was the highest. Women with high educational attainment face greater difficulties in employment than men with the same level of attainment. Women with low levels of educational attainment find jobs quicker than women with higher level of educational attainment. The opposite is true with men, where men with high levels of educational attainment are more likely to find jobs than those with low levels of educational attainment.
The current perspective on education has had an indirect effect on educational enrollment, especially since society is seeking out the more “educated” for jobs. Accordingly, we should take into consideration the level of educational attainment when formulating legislations. For example, the Emergency Employment Policies should give employment priorities for those with “high” levels of educational attainment and at the same time provide them with higher compensation. This provides an incentive for parents to encourage their children to continue their education. We should rid ourselves of the inclination towards unskilled labor, which was evident before the Intifada as a result of the higher than average wages.
References


Figure 1: Education Levels in Palestinian Territory

Unemployment Rate for Females 18-65 years

Unemployment Rate for Males 18-65 years

Unemployment Rate in Gaza Strip

Unemployment Rate in West Bank

Percentage of Distribution of Females 24-34 years by Education Levels

Percentage of Distribution of Males 24-34 years by Education Levels
Figure 2: Daily Wage

Daily Wage in NIS for Male Wage Employees (CPI used - 2000 base year)

Daily Wage in NIS for Female Wage Employees (CPI used - 2000 base year)


Daily Wage in NIS for Wage Employees by Place of Work: Q3/2000

Figure 3: Drop-out rate

Drop-out Rate For Males: 1994-2003

Drop-out Rate For Females: 1994-2003
Ratio of Daily Wage Changed Between the Education Levels by Sex and Region: 1999-2004

**Ratio of Daily Wage changed between the Education Levels for Male in WB**

**Ratio of Daily Wage changed between the Education Levels for Male in GS**

**Ratio of Daily Wage changed between the Education Levels for Female in WB**

**Ratio of Daily Wage changed between the Education Levels for Female in GS**
### Table 2: Probit Model For Male in West Bank

| Dep. Var. = EU | dF/dx (%) | Std. Err. | P>|z| | [ 95% C.I. ] |
|----------------|-----------|-----------|--------|-------------------|
| age            | -0.26     | 0.001     | 0.00   | -0.38             | -0.13     |
| BA/BSc and more* | -13.91   | 0.016     | 0.00   | -16.98            | -10.85    |
| diploma*       | -7.32     | 0.021     | 0.00   | -11.34            | -3.29     |
| tawjehee*      | -6.44     | 0.017     | 0.00   | -9.75             | -3.12     |
| Work in Israel before Intifada* | 14.34     | 0.022     | 0.00   | 10.10             | 18.57     |
| urban*         | -3.60     | 0.014     | 0.01   | -6.39             | -0.81     |

Log likelihood: -1325.0
Number of obs: 2942
Pseudo R2: 0.0642

### Table 2: Probit Model For Male in Gaza Strip

| Dep. Var. = EU | dF/dx (%) | Std. Err. | P>|z| | [ 95% C.I. ] |
|----------------|-----------|-----------|--------|-------------------|
| age            | -0.22     | 0.001     | 0.01   | -0.39             | -0.05     |
| BA/BSc and more* | -8.71    | 0.020     | 0.00   | -12.66            | -4.77     |
| diploma*       | -7.35     | 0.025     | 0.02   | -12.26            | -2.44     |
| tawjehee*      | -5.34     | 0.019     | 0.01   | -9.15             | -1.53     |
| Work in Israel before Intifada* | 15.73     | 0.083     | 0.02   | -0.62             | 32.08     |
| urban*         | 1.73      | 0.018     | 0.35   | -1.87             | 5.34      |

Log likelihood: -578.751
Number of obs: 1435
Pseudo R2: 0.0341