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TURNOVER AND JOB TENURE
FOR PALESTINIAN WORKERS, 1998-2008

Edward Sayre and Yousef Daoud

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Abstract

Understanding the nature of unemployment and employment relationship has been a key research goal of economists since the inception of modern macroeconomics. However, the very policies that have been created in order to protect workers from the harm associated with unemployment were found to lengthen the duration of unemployment. Yet, these policies may also make the employment relationship for workers more stable, leading to longer job tenure. This paper examines how social protection policies affect employment stability in the West Bank and Gaza Strip. More precisely, it looks at the relationship between different characteristics of workers and job tenure from 1998 to 2008 and reflects on how these characteristics are related to the coverage rates of the Palestinian Labor Law of 2000.

ملخص

يعتبر التوصل إلى فهم طبيعة العلاقة بين البطالة و العمل هدف بحثي أساسي بالنسبة لعلماء الاقتصاد منذ بداية الاقتصاد الكلي الحديث. لكن السياسات التي وضعت لكي تحمي العمال من أضرار البطالة هي نفس السياسات التي تبين بعد ذلك أنها تطيل استمرار هذه البطالة. و علي أي حال، فإن هذه السياسات ربما أيضا تجعل علاقة العمال بالعمل أكثر استقرارا مما يؤدي إلي الاستمرار في العمل لمدة أطول. تبحث هذه الورقة تأثير سياسات الحماية الاجتماعية علي استقرار التوظيف في الضفة الغربية و قطاع غزة. و بمعني أدق، تركز الورقة علي العلاقة بين الخصائص المختلفة للعمال و الاستمرار في العمل خلال الفترة من 1998 إلي 2008 و انعكاسات ذلك علي علاقة هذه الخصائص بمعدلات التغطية التي يحققها قانون العمل الفلسطيني لعام 2000.

1. Introduction

This paper examines the disparate job market turnover experiences of Palestinian workers. Job market turnover is caused by some of the same factors that may affect unemployment duration. Specifically, if firms are more cautious about hiring workers because of high firing costs, then that will lead to both longer unemployment duration and longer tenure. This paper will examine empirical regularities in job market tenure for Palestinian workers.

The first question we will ask is simply what demographic and employment factors affect job tenure in the West Bank and Gaza Strip. Two series of graphs will be used to demonstrate these trends. First, we will show the pattern, over time, for the proportion of workers that hold their jobs for less than 1 year, less than 2 years and then less than 5 years. By observing this pattern we can examine whether or not there were changes in the pattern of job tenure over time and whether or not these changes were dependent on demographic factors including region, age and education.

The second question will examine what the survival functions of staying in a job look like for workers in the West Bank and Gaza Strip, and how these survival functions differ across demographic variables. Using Kaplan-Meier survival functions, we will show the impact of age, education, location, industry and occupation on tenure survival. Finally, we will also explore whether or not the implementation of the Palestinian Labor Law of 2000 had a positive or a negative effect on worker tenure. Previous work has shown that it had a negative impact on the probability of finding a job for someone who was out of work, and a consistent finding would be that those who have a job are more likely to keep it for longer, since the labor law had increased the cost of firing workers.

2. Literature Review

One of the earliest papers that developed a model predicting the relationship between a number of attributes and job tenure was that of Jovanovic, 1979. This model, like many others in the literature, is based on imperfect information. The author explains several important empirical regularities with this model, but the most significant one is the negative dependence between tenure and job separation. Essentially, if a job match is a bad one (workers and employers are mismatched), then they are more likely to find this out early on, leading to longer job tenure being associated with a lower probability of separation over any fixed amount of time.

Other observed relationships are as follows: women, young workers, production workers, those with less schooling and those in the private sector tend to turn over more, as do those workers not covered by a pension plan and those who work in industries with lower concentration ratios or with smaller average firm size. (Jovanovic, 1979)

This topic was popular in the United States during the 1980s and 1990s, a time when job security appeared to be weakening and the popular impression was that the days of the lifetime job were long gone. In an important article, Jaeger and Stevens (1999) used current population survey (CPS) and panel study of income dynamics (PSID) data to track the changes in job stability in the US. They used data from 1973 to 1996 to explore what had happened to the overall trend for the number of people who reported being at a job for less than one year and the number who report being at a job for less than 10 years. They found a decline in the job stability using the 10 year measure, and that, unlike previous studies, the trend shows up similarly in both the PSID and CPS data.

Thus, one can use the empirical and theoretical findings from earlier work, such as Jovanovic (1979) and others to create hypotheses about which sets of workers are more likely to experience longer or shorter job durations. Some studies have examined this hypothesis in industrialized and developing countries. For example, Cho (2004) looks at the increase in job

instability in the Korean labor market surrounding the 1997 financial crisis. The author notes that while there was a recent deregulation of dismissal laws following a number of years with very low unemployment rates (under 3%) and increasing nominal wages, that because of institutional weakness, it was not certain how effective this deregulation had been. The author uses similar methodologies as those found in Jaeger and Stevens (1999) and Neumark, Polsky and Hansen (1999). The author starts with a simple description of average tenure over time and then shows the trend of workers with less than one year of tenure. He then goes directly into estimating the Neumark-style retention rates.

Givord and Maurin (2004) examines some of the same issues examined in the Neumark, Polsky and Hansen (1999) and Jaeger and Stevens (1999)—basically, what happens to job stability over time. However, this paper focuses on France during the 1980s and 1990s rather than on the US. The US has been the main source of this debate because the US labor market is more flexible, and so changes are more likely to appear in the US case. One of the most important aspects of this paper—for our research—is that as part of the descriptive statistics, the authors present a transition matrix. This is somewhat the converse of the retention rates that Neumark, Polsky and Hansen (1999) use, but it is useful when thinking about where people end up going when they leave employment. Not surprisingly, they find the highest risk of job loss amongst the youngest and the least educated.

3. Trends in Job Tenure for Palestinian Men 1999-2008

Figure 1 shows the overall pattern of job tenure for Palestinian men from 1999 to 2008 by showing the proportion of men with less than five years, two years and one year of job tenure. The first two categories include the numbers in latter categories; thus, the less than five years group also includes those with less than two and one year of tenure. What this pattern shows is that the proportion of workers with less than one and two years of job tenure stayed relatively stable during the period under study, indicating that it wasn't a time of increased turnover. At the same time, the proportion of workers with less than five years of tenure increased, implying that the proportion of workers with more than five years of tenure had increased, leading to a lengthening of job tenure for average workers over this time.

Figures 2 through 4 show the proportion of workers with less than one year (figure 2), less than two years (figure 3) and less than five years (figure 4) of job market tenure, separately for the West Bank and Gaza Strip. These figures show a similar basic pattern for job market tenure in both areas, albeit at slightly different rates. Figures 2 and 3 show that less than one and two year tenure—in both the West Bank and Gaza Strip—fell between the pre-*intifada* period and 2001 and 2002. One year tenure rates fell from approximately 13 percent of workers in 1999 to about 7 percent in 2001. These proportions then rebounded from 2002 to 2006 with both the West Bank and Gaza Strip stabilizing at around 10 percent.

In the West Bank and Gaza Strip, the proportion with less than two years of tenure (Figure 3) dropped from highs around 25 percent before the *intifada* to only about 15 percent by 2001. However, the West Bank saw its proportion in this group increase from its 2001 nadir to 20 percent again by 2004 while in the Gaza Strip, no more than 17 percent of the workforce was in this tenure category after 2001.

Finally, the five year (and less) tenure category (figure 4), shows a slight reversal of tendencies over this time period for the West Bank and Gaza Strip. The Gaza Strip had a larger proportion (60 percent) than the West Bank with fewer than five years of tenure in 1999, but this group's proportion fell more rapidly during the *intifada*. This was to such an extent that by 2008 only 40 percent of all workers had fewer than five years of tenure. In the West Bank, the proportion also fell during this time, but it was a more gradual decline from about 53 percent to approximately 45 percent by the end of the period.

Figures 5 through 7 show the proportion of workers with less than one, two and five years of job tenure by education level. Figure 5 depicts the rates for less than one year of tenure. The educational groups follow one another with regard to the time trend, and there are no clear divergences between groups. However, the pattern clearly shows the educational group with the largest proportion of workers in this very short job tenure category: the less educated. As the education level of the group increases, the proportion with less than one year of tenure declines. Figure 6 shows a similar pattern for workers with less than two years of job tenure. Specifically, while approximately 30 percent of workers with less than twelve years of schooling had less than two years of job tenure in 1999, only 18 percent of workers with 16 or more years of schooling had less than two years of tenure. One noticeable pattern in figures 5 and 6 is that the gap between the educational groups narrows, and that several groups have indistinguishable proportions in these categories. This pattern is even clearer in figure 7 which shows the proportion of workers with less than five years of tenure. Here, the proportion between the most and least educated groups in 1999 falls to only ten percentage points. However, it is also worth noting that those with less than five years of tenure are not uniformly more proportionate from the lower educated groups as one can see in figures 5 and 6. Specifically, the group with 16 years of schooling had a similar proportion of workers with less than five years of tenure, for several years. However, the least educated group (less than 12 years of schooling) also remains disproportionately the most likely to have fewer than five years of tenure.

Finally, figures 8, 9 and 10 show the proportion of workers with less than one, two and five years of job tenure by age group, respectively. This is perhaps the most relevant set of figures for considering the effect of changes in the employment laws that we will examine later in the paper. Specifically, employment protection legislation is supposed to enhance the ability of older workers to keep their jobs. However, it has the unintended drawback of creating less stability for younger workers, especially when employment regulations allow for short term temporary contracts. Since this is similar to what happened in the Palestinian case (where there is no severance payment for workers who were employed for less than one year). What we see in these three figures is what one would expect: older workers have much longer tenures than younger ones. However, as seen in figures 8 and 9, the proportion of 15 to 19 and 20 to 29 year old workers with less than one year and less than two years of tenure increased steadily after 2001. Thus, this appears consistent with younger workers getting jobs more quickly after the peak of the intifada, but that these jobs may have been disproportionately short term.

4. Kaplan Meier Survival Functions

The following series of graphs will describe the pattern of job tenure for workers. Specifically, they will track the proportion of workers who survive in the state of employment over time. The vertical axis is the proportion that remains employed, and the horizontal axis is the number of months of job tenure. This is largely due to positive duration dependence for unemployment and the negative duration dependence for tenure. Since we are only tracking workers over one and a half years, the probability that a worker is separated from a job during that time is fairly low, especially for those at their jobs for many years. Thus, these workers exit the survey sample before their job tenure ends and they are still listed as survivors at the end of the sample time period. However, for unemployment duration, many workers become increasingly desperate as time goes by, making it more likely that they will eventually leave unemployment after a long duration.

Figure 11 shows overall job tenure for all workers. According to this figure, job tenure in the West Bank and Gaza Strip is very stable. Three quarters of all workers will keep their jobs at least 10 years, 50 percent of workers will work for at least 20 years and a quarter will keep

their job over their entire working lifespan. However, these numbers need to be viewed with caution, since it is clear that with all of the changes in the Palestinian economy, the job trajectory for the older workers—who report tenure over 500 months or 40 years— will not necessarily be replicated by these workers’ grandparents. While the median tenure is more than 15 years, the mean is only 75 months or 6 years and three months. The difference between the median and the mean in this case is due to the large numbers of young workers with very short tenure.

One of the first differences to note is the tenure experience of men and women in the Palestinian economy. Figure 12 presents the Kaplan Meier survival estimates for men and women in the West Bank and Gaza Strip during our sample period. As seen in this graph, men have a greater chance of surviving with continued employment at every level of tenure. The proportion of men lasting to ten years of employment is approximately 5 percent greater than women during the same timeframe. This is also reflected in the difference in mean levels of tenure. While men have an average tenure of 68 months, the mean tenure for women is less than half, at only 32 months. This is primarily the result of very short tenure for many women who are employed for less than a year or two, while even young men tend to keep their jobs for longer than that. This is also largely because women exit to leaving the labor force, while men primarily exit to unemployment.

Figure 13 plots the survival functions of all workers by age group. As one would expect, older workers have much longer job tenures than younger workers, but a few interesting patterns do emerge. In general the proportion of an age group that has had their job for any given length of time is directly proportional to age. For example, the portion of 50-59 year olds that tenure of at least 200 months is greater than the proportion of 40-49 year olds that have that much tenure, which is, in turn greater than the proportion of 30-39 year olds with that much tenure. However, this pattern breaks down for the 60-69 year old workers. These oldest workers have shorter job tenures than most age groups. One possible explanation of this is that these workers have already left their primary jobs that they worked during most of their lifetimes, and the jobs they are currently in are relatively new jobs.

Figure 14 plots the survival function for all workers by education group. As expected, workers with more schooling have longer job tenure and are less likely to leave employment at any given stage. While the returns to not completing a Bachelor’s degree (13 to 15 years or some college) are sometimes questioned in the developing context, the impact on job tenure is easy to note. While only half the high school graduates last in their jobs for 20 years, those workers with some years of college see their 20 year survival rate increase by 75 percent. The difference between some years of college and actually graduating from university is also notable, where it increases the rate of survival by 10 percent at most levels of work tenure. On the other hand, there seems to be little difference between finishing a Bachelor’s degree and attending or completing graduate school, as the survival functions for these two levels of education are almost identical.

Figure 15 shows survival estimates by industry. The construction and agricultural sectors had the shortest tenure duration of any of the employment sectors. Median duration for these sectors is just under 200 months, while median duration for commerce, transportation and services sectors is over 300 months.

Figure 16 plots the survival functions for job tenure by occupation. There are seven broad occupational categories (from white-collar skilled jobs such as legislators and managers to semi-skilled tradesmen to elementary occupations). The returns to a high skilled occupation are clear, as evidenced by the differential rates of job tenure shown in Figure 16. Basic occupations show the greatest degree of turnover, with only a quarter of workers staying at the same job for 200 months. Other occupations such as legislative and managers have nearly

90 percent of the workers in these occupations last 200 months. However, there are a couple of interesting features in the intermediate occupations. Skilled manufacturing workers and craftsmen have fairly short job tenure, even when compared to relatively unskilled service sector jobs. Three quarters of service sector workers remain at their jobs for more than 20 years. On the other hand, only half of skilled manufacturing workers are likely to remain in the same job past 10 years.

5. Conclusions

This paper has examined the characteristics which determine job tenure for Palestinian men over the years 1998 to 2008. Several characteristics seem to be tied to shorter job tenure. The most striking is that education has a significant and clear impact on job tenure; those workers with the most secure jobs are those with the highest level of education, or nearly the highest level. While there appears to be some disadvantages to having an “intermediate” level of education, (for example, unemployment rates are high for those with 13-15 years of schooling), it is not the case for tenure. Those with 13-15 years of schooling have significantly longer job tenure than those with 12 or fewer years of schooling.

The question as to whether or not job security regulations that were introduced by the Palestine Labor Law of 2000 had a positive or negative impact on job tenure is difficult to assess without direct evidence. Much of the previous research, (see Freeman, 2010) focuses on the fact that job security regulations tend to be biased towards older, experienced workers, while hurting younger workers. One way this bias works is that if firing costs increase, the firms tend to hold on to their current workers (especially if their contracts are ‘grandfathered’ and not subject to the higher costs), and are more reluctant to hire new workers. This aids in decreasing employment for young people (and increasing their unemployment duration) and in increasing the tenure of more experienced workers.

There is scant evidence concerning the impact of this labor law on current job tenure in Palestine. However, the following general statements can be made. From 1998 to 2008 there was a decrease in the proportion of workers with 5 years or less tenure, implying that those with more than 5 years of tenure increased. This happened across most age and demographic groups. While the youngest workers saw no change, the prime-aged worker (from 30-39 and 40 -49) saw a steady increase in the proportion with more than 5 years of experience during this time. Likewise, it happened to a much greater extent for workers with more than 12 or more years of schooling, and to a much lesser extent to those with less than 12 years of schooling. In summary, there was an extension of job tenure (between 2000 to 2008), but it is difficult to tell whether it was due to the Palestinian Labor Law of 2000 or due to other changes in the job market and the demographic structure of the Palestinian population.

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Figure 1: Proportion of Employees with Less Than 5, 2, and 1 Year of Tenure: 1999-2008

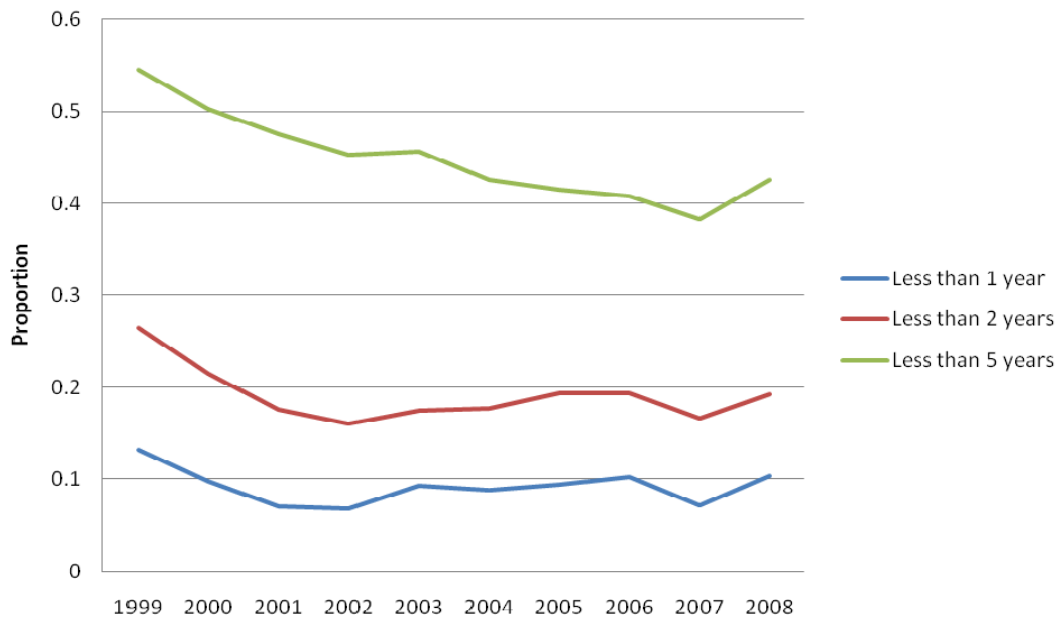


Figure 2: Proportion of Employees with Tenures of One Year of Less by Location



Figure 3: Proportion of Employees with Tenures of Two Years or Less, by Location

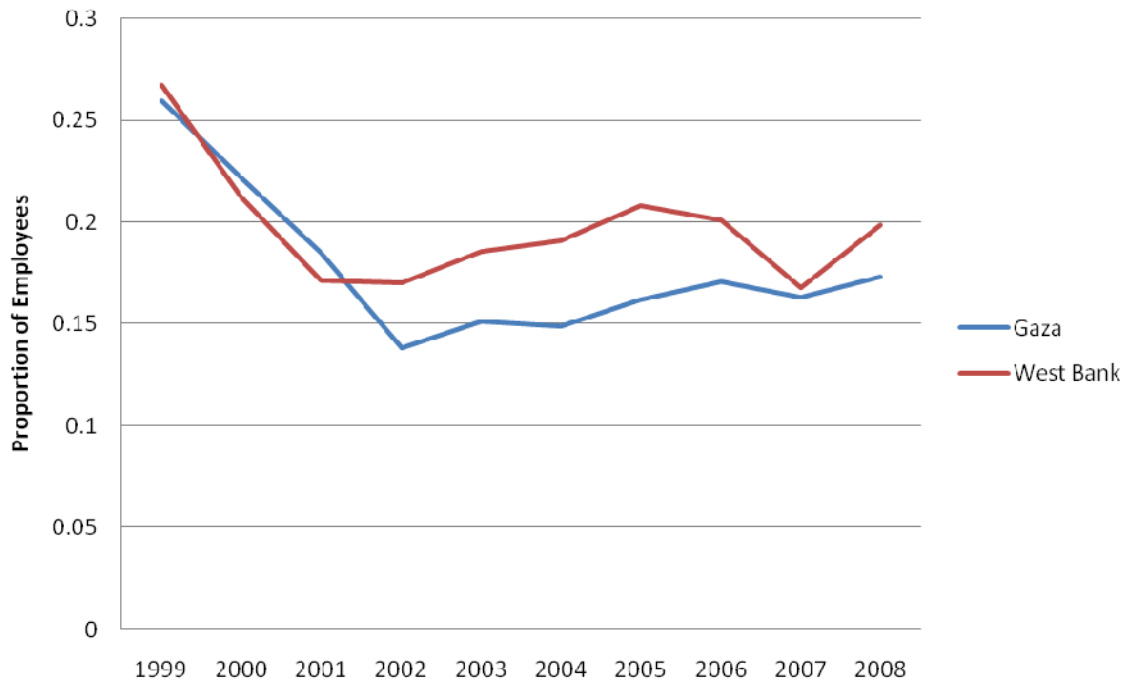


Figure 4: Proportion of Employees with Tenure of Five Years or Less, by Location

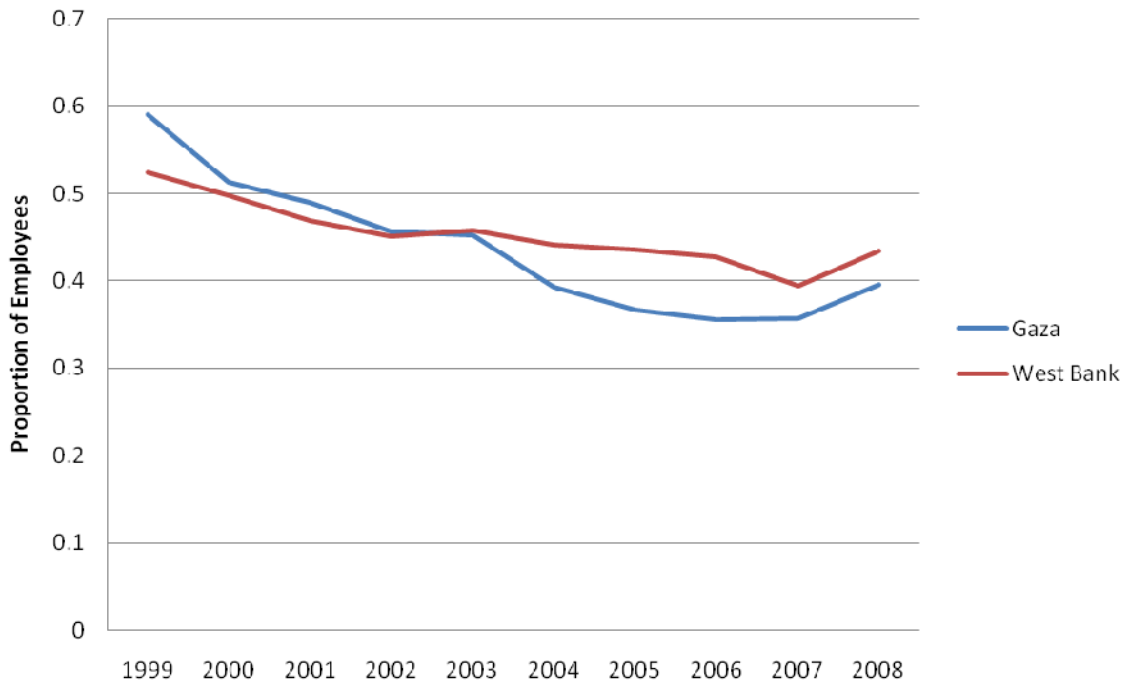


Figure 5: Proportion of Employees with Less Than One Year of Tenure, by Schooling Level

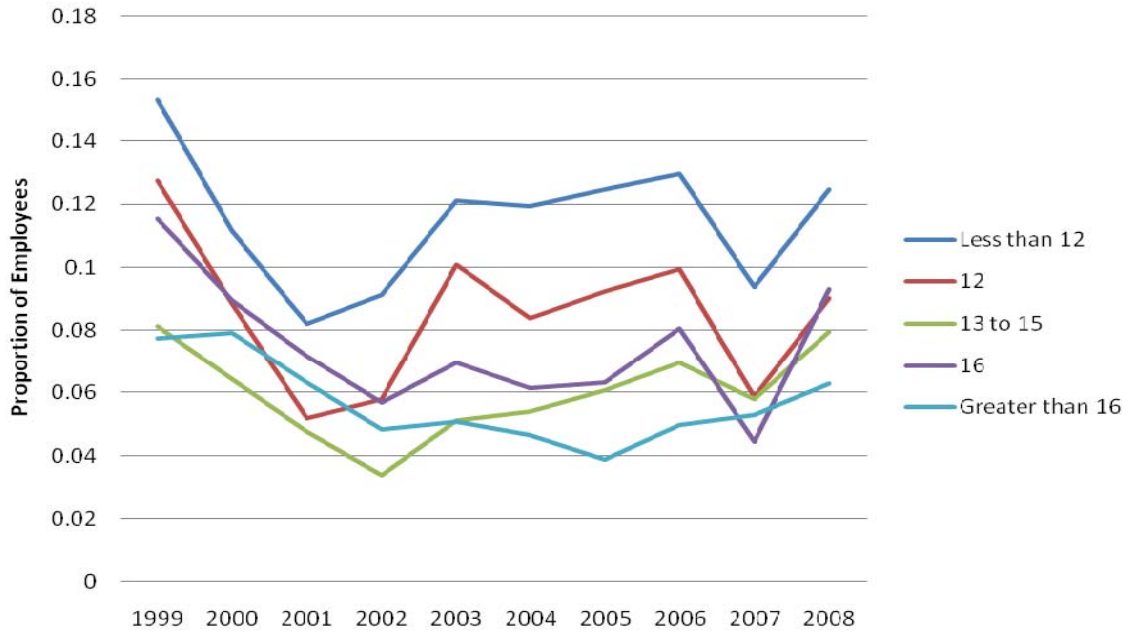


Figure 6: Proportion of Employees with Less Than Two Years of Tenure, by Schooling Level

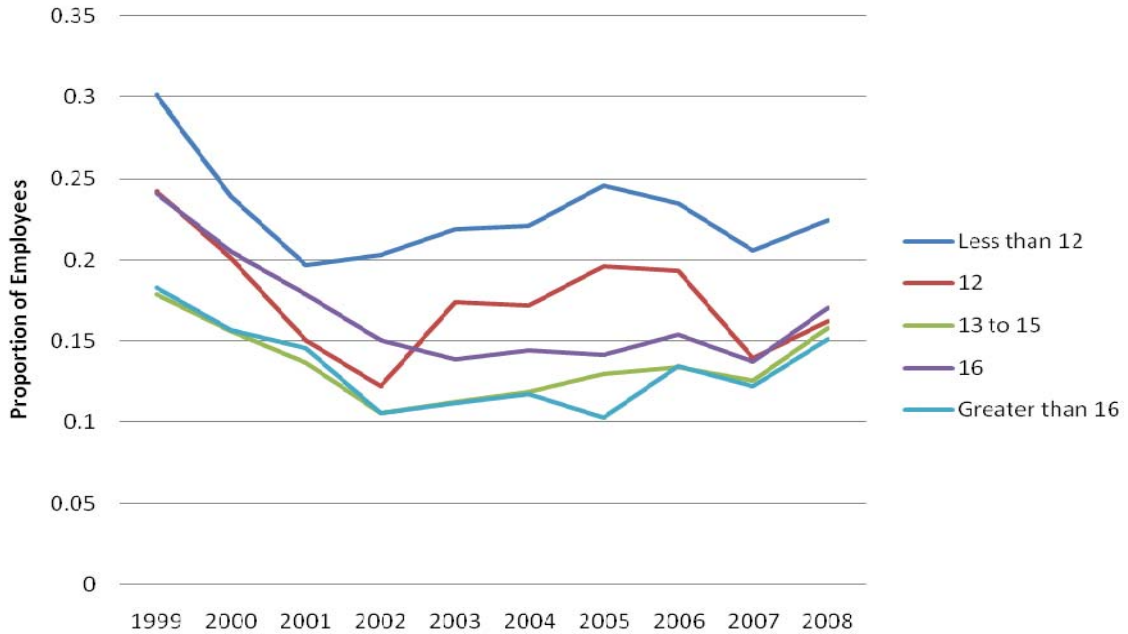


Figure 7: Proportion of Employees with Less Than Five Years, by Schooling Level

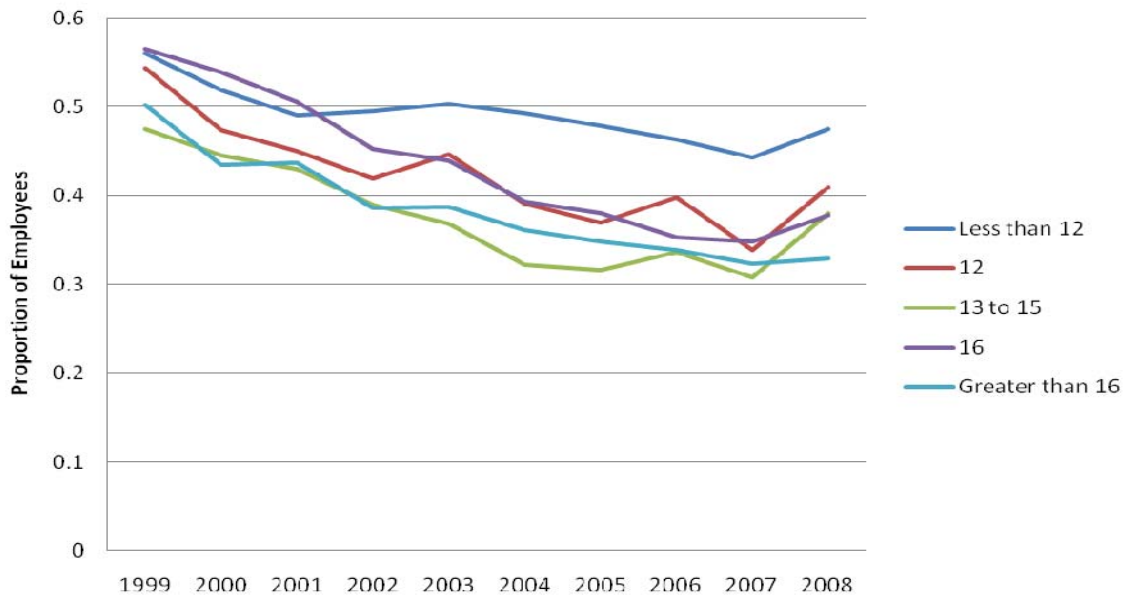


Figure 8: Proportion of Employees with One Year or Less Tenure, by Age Group

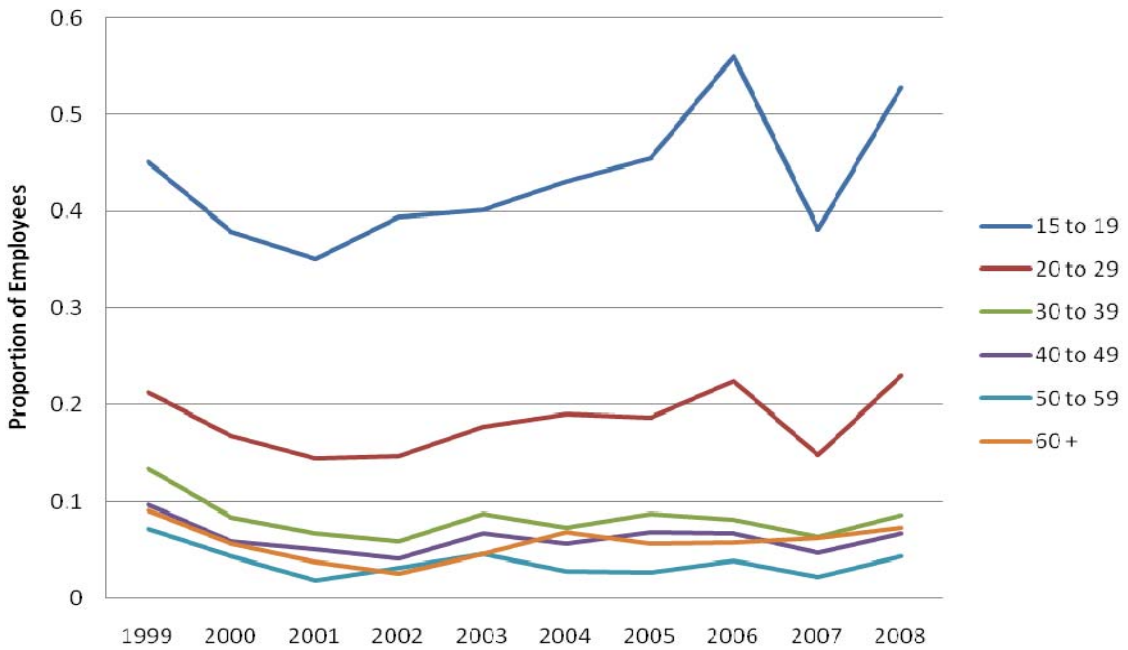


Figure 9: Proportion of Employees with two Years or Less Tenure, by Age Group

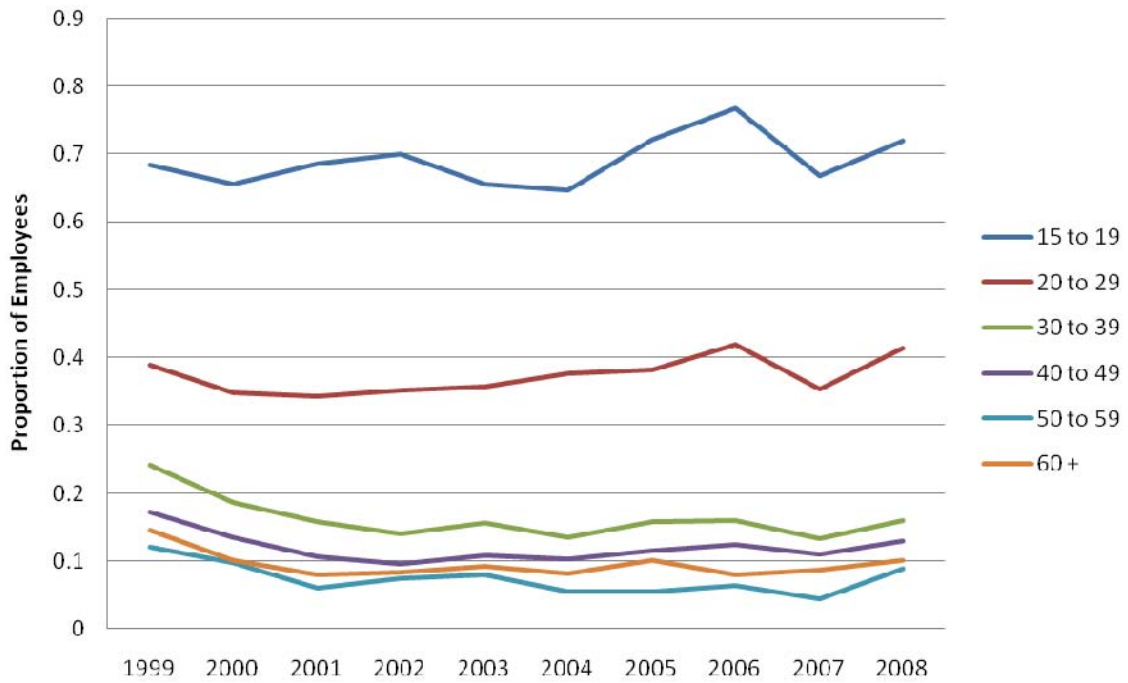


Figure 10: Proportion of Employees with Five Years or Less Tenure, by Age Group

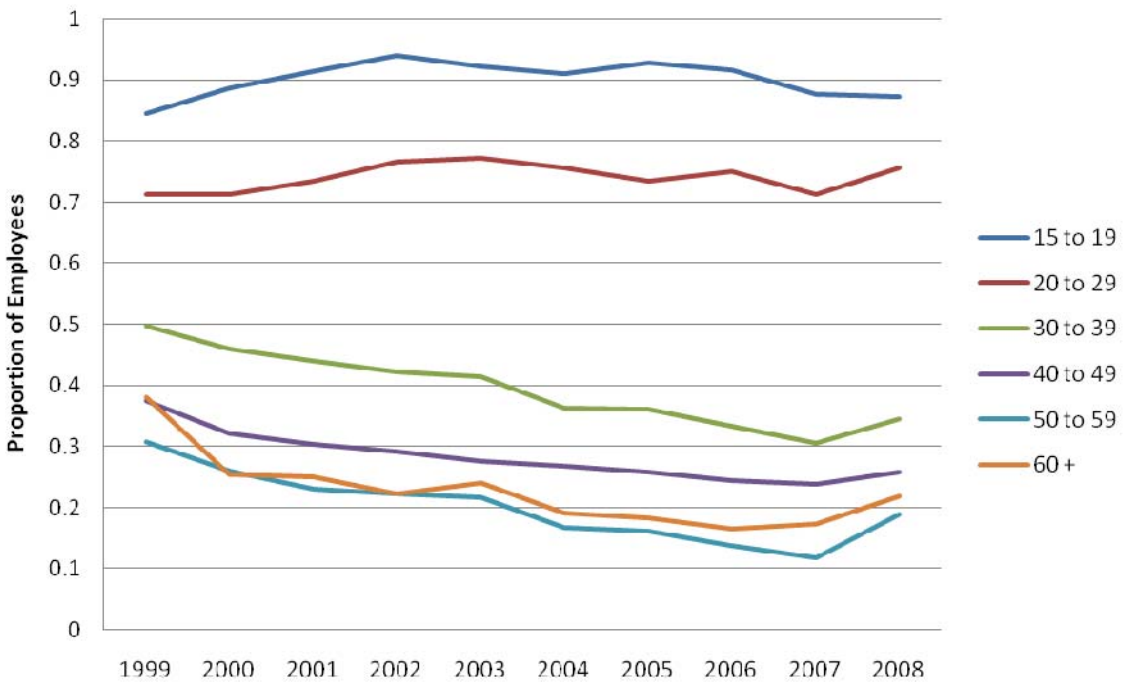


Figure 11: Survival Estimate Tenure of All Workers

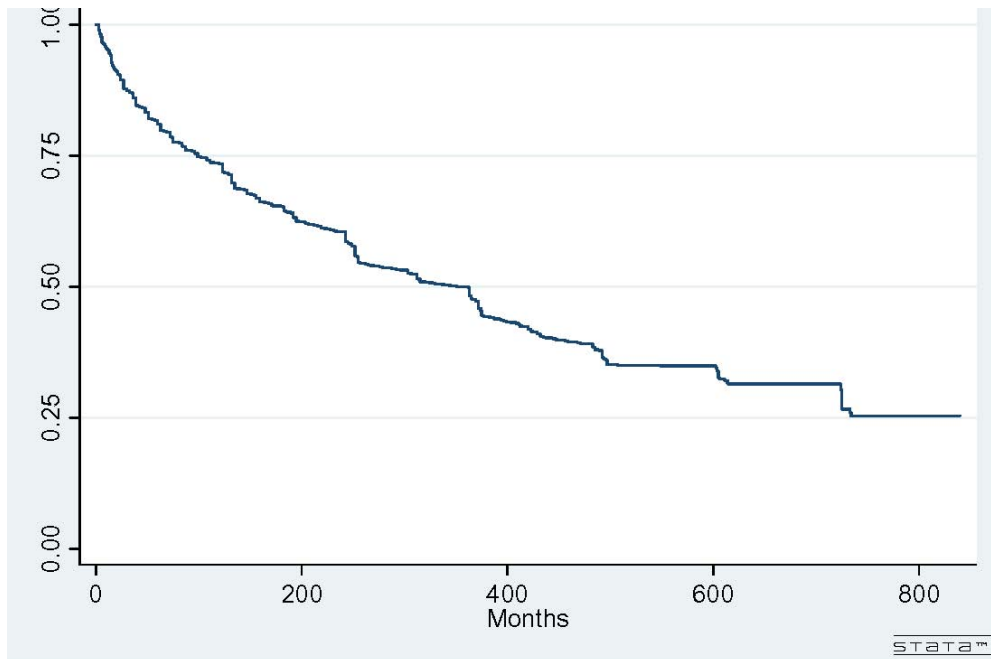


Figure 12: Survival Estimates by Gender

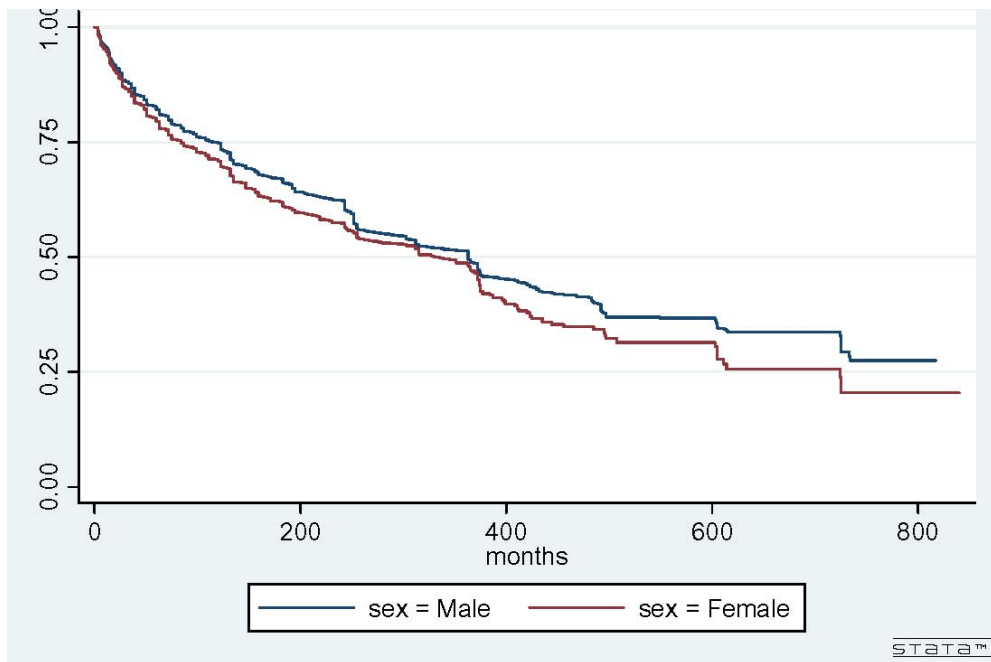


Figure 13: Survival Estimates by Age Group

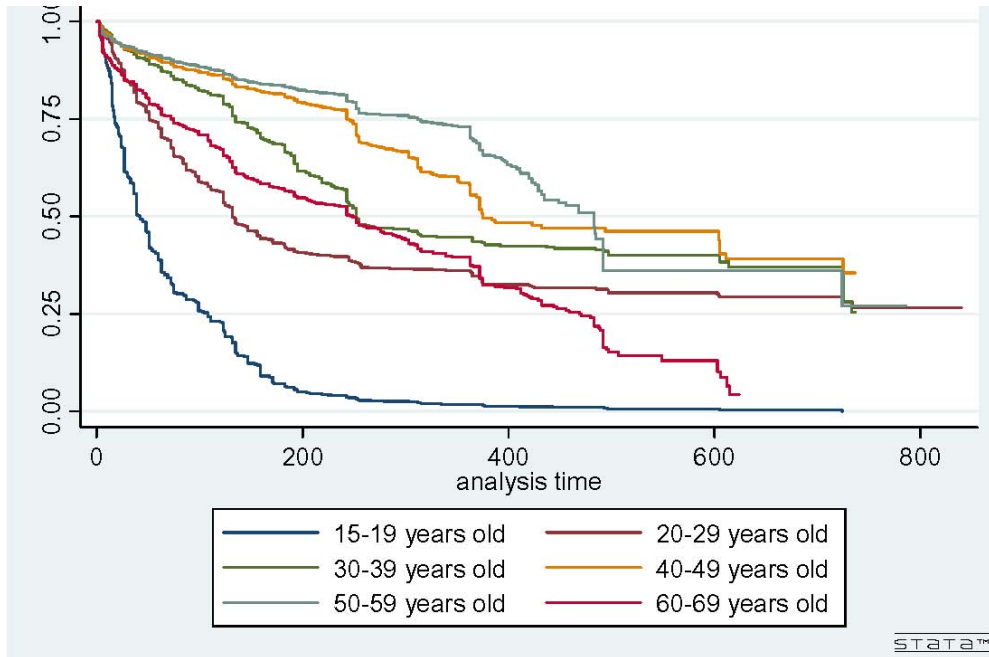


Figure 14: Survival Estimates by Education Group

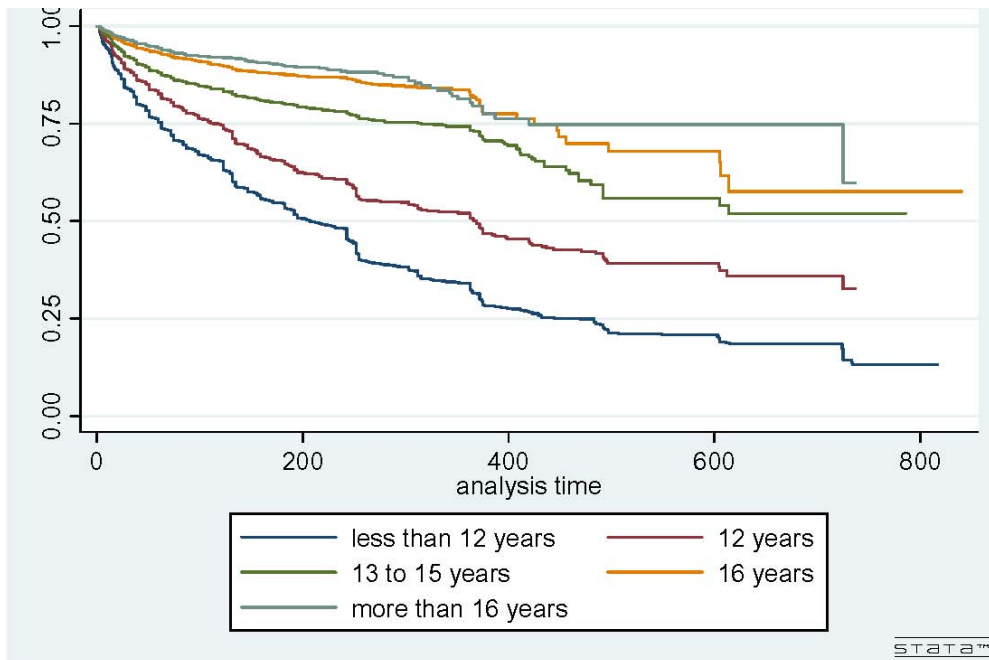


Figure 15: Survival Estimates by Industry

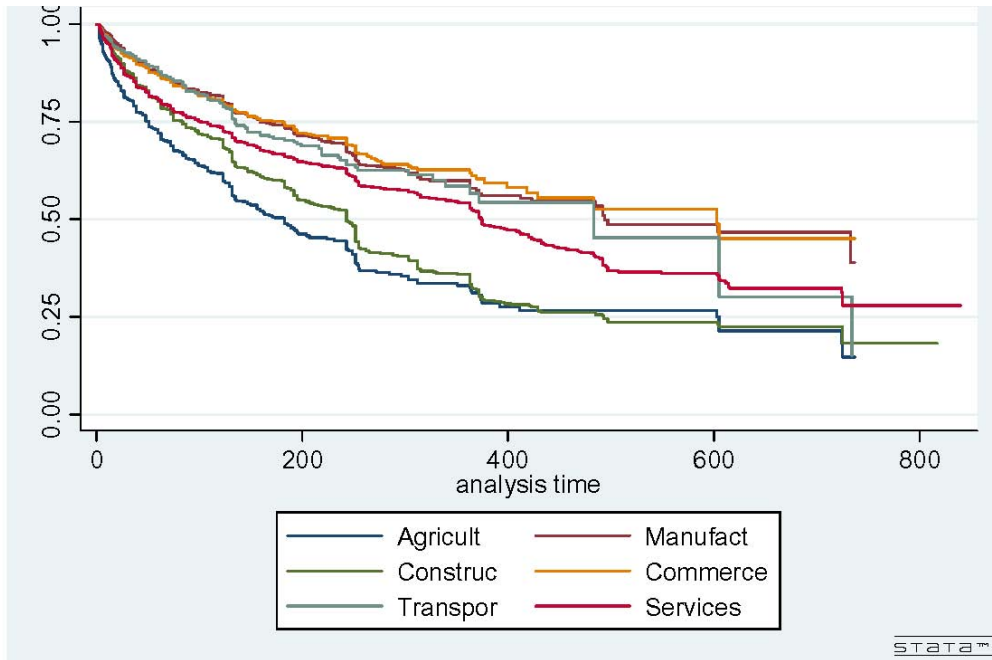


Figure 16: Survival Estimates by Occupation

