

Overlooked and Invisible: A Profile of the Japanese Educated Working Poor

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ABSTRACT

Expanding the work proposed by Murakami et al. (2011), we seek to discover and profile a subset of the Japanese working poor, namely those who are educated to degree level. Using data from the Japanese Household Panel Survey, we build up a profile into the educated working poor, and show they have significantly lower self-reported levels of income satisfaction and life satisfaction. Further, we explore the extent to which geographical factors play a key role in explaining the newly identified educated working poor, and find that there are significant spatial differences in the poor rate, and that job location, occupation, and firm size is significantly different for the educated working poor compared to the working poor.

Keywords: Japan, working poor, educated working poor, poverty. JEL: I32 I31

INTRODUCTION

Poverty, often relegated to the shadows, has remained a persistent yet overlooked concern in the context of Japan. Scant academic attention has been devoted to this pressing issue, leaving an important research gap. As highlighted by Sekine (2008) and Inaba (2011), individuals experiencing poverty in Japan have, historically, concealed their economic struggles, striving to blend into society and escape notice. Only in the past decade has the Japanese government begun to acknowledge this hidden demographic as a group in need of support. Crucially, Murakami's pivotal work in 2011 marked a significant turning point in this emerging discourse, offering an in-depth examination of the working poor in Japan. Among the salient findings of this study was the inverse correlation between educational attainment and the prevalence of working poverty. Education has long been regarded as a potential panacea for escaping the throes of poverty, yet it becomes apparent that even individuals with higher educational qualifications continue to grapple with very low incomes.

This article builds upon the foundation laid by Murakami (2011) and endeavors to reveal a previously unnoticed segment within the impoverished population: the educated working poor. Our objective is to unveil the distinctive characteristics of this group and formulate a profile that can guide future research endeavors. By identifying and characterizing the educated working poor in Japan, we challenge the conventional notion of education as a universal remedy for poverty, illuminating the plight of an overlooked demographic.

To achieve this, we leverage data derived from a Japanese survey to construct a comprehensive profile of the educated working poor. Our analysis discerns significant disparities between two

subgroups: those who are educated and employed (EW) and those who, despite their educational qualifications, are working and impoverished (EWP). This profile encompasses an array of variables, including the duration of poverty, age, gender, geographical location, and equivalized income. Furthermore, we explore responses related to satisfaction measures to identify substantial differences between these two groups, shedding light on the nuanced aspects of their experiences.

This paper is structured in the following manner: Section 2 delves into the methodology employed, Section 3 presents the principal findings, and Section 4 concludes the discussion.

METHODS AND DATA

We use data from the JHPS, a combination of the Japan Household Panel Survey and the Keio Household Panel Survey. The questionnaires were merged in 2014, and for this reason we observe the 2014-2017 period, which includes 18,124 observations. We define an individual to be educated and working if they have achieved a university level education and are currently in the labour force. We follow Murakami et al. (2011) by excluding students, and those who have been looking for work or working for less than three months of the year. An individual is defined as poor using the OECD-modified equivalence scale in Hagenaars et al. (1994), using a threshold level of 60% of the median post-transfer sample income for each year. For this purpose, children are defined as 13 years old or younger. Although we use the OECD definition of poverty, we label our observations as poor rather than poverty, to reflect the multidimensional aspect of poverty that is not captured by income. This measure gives 3,103 observations of educated working but not poor (EW), and 291 observations of educated working poor (EWP). Of these 291 observations, there are 191 unique individuals.

We first table the number of EWP observations, broken down by year, and then conversely table the number of years that each individual remains in poverty. To test if there is a significant difference in observations moving into and out of poor, we use a McNemar test and run this by year.

All subsequent tables pool together each year of the panel and divides the data into the two groups, then shows the proportion of each factor level within the column, rounded to two decimal places. To test for a significant difference between the EW and EWP columns, a Fisher test is used¹. To remove temporal dependence, these tests are performed on each year, on the unpooled data. When a Fisher test is unable to be used, we use the G-test as an alternative.² For testing self-reported levels of welfare, we group the responses by the middle response value, and conduct a Fisher exact test. The tests are run in three groups, corresponding to their questions. Group one is "Feelings of happiness" questions and "Present Satisfaction" questions. The scale is from 0-10, with 0 being the absence of happiness or satisfaction, and 10 being complete happiness or satisfaction. Group two is "Symptoms," which are scaled on 1-4, with 0 being "Never" and 4 being "Often". Group 3 asks respondents how applicable "I have something to live for" and "I have hopes in my life" are, on a scale from 1-5, with 1 being inapplicable and 5 being applicable. To generate the heat levels, we take the four-year average of the poor rate per region.

¹ In most cases, chi-squared tests cannot be used as the expected counts are too low.

² The G-test is a good approximation for the Fisher test when the sample size is large.

FINDINGS

Table 1 gives the total number of observations who are work ing poor, broken down by year. The mode number of years for an individual to stay poor is 1 year, and the average is approximately 1.5 years. Table 2 shows this by individual. Note that as this is censored data, these are only the years that they reported their income. In all except 2016-7, which is significant at the 5% level, none of the yearly transitions in or out of being poor are significant.

Table 1: Educated Working Poor by Year

Year	Number
2014	81
2015	69
2016	61
2017	80

Table 2: Duration of being Poor

Years Poor	Number
1	129
2	37
3	12
4	13

Of the 191 unique individuals, 140 are male, while 51 are female, which is almost exactly the same proportion as the EW. The density plot of age in Figure 1 is distinctly bimodal and shows peaks around the 40-45 and 60-65 age ranges. This is different to the plot of age for EW, which, while slightly bimodal, is much closer to a normal distribution with a mean centred around 50³. This could suggest that working poor tends to be formed of older people rather than the young. The density plot of equivalised income in Figure 2 is also bimodal, with peaks around 10,000-30,000 and 100,000-130,000 yen. This may further seek to highlight two distinct types of educated working poor.

Of the 291 EWP observations, 173 are married men, 40 are unmarried men, 32 are married female, and 46 are single females. While the proportion of married and single men does not appear to differ from EW, single women appear to be overrepresented in the EWP while married women appear to be underrepresented. This difference is statistically significant at the 10% level for 2015, and at the 5% for the remaining years.

In terms of children, 201 have no children in the household, while 90 have at least one child. Conversely, only 23 have no other adults in the household as opposed to 268 with at least one other adult. None of these are consistently statistically different from the EW at the 10% significance level however.

³ Not shown in this paper but available on request.

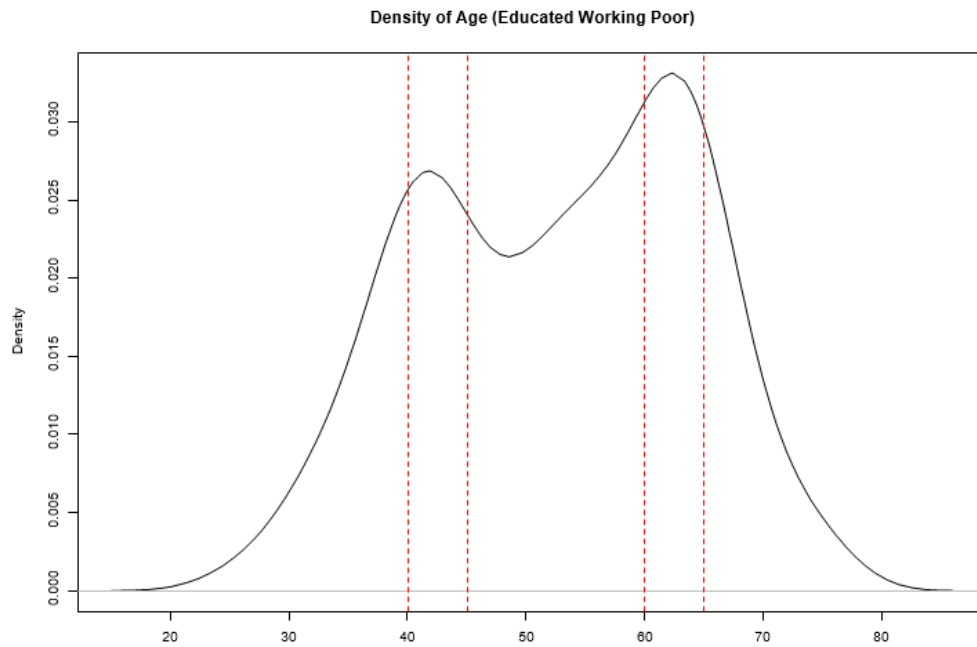


Figure 1: Density of the Age of the EWP (Pooled)

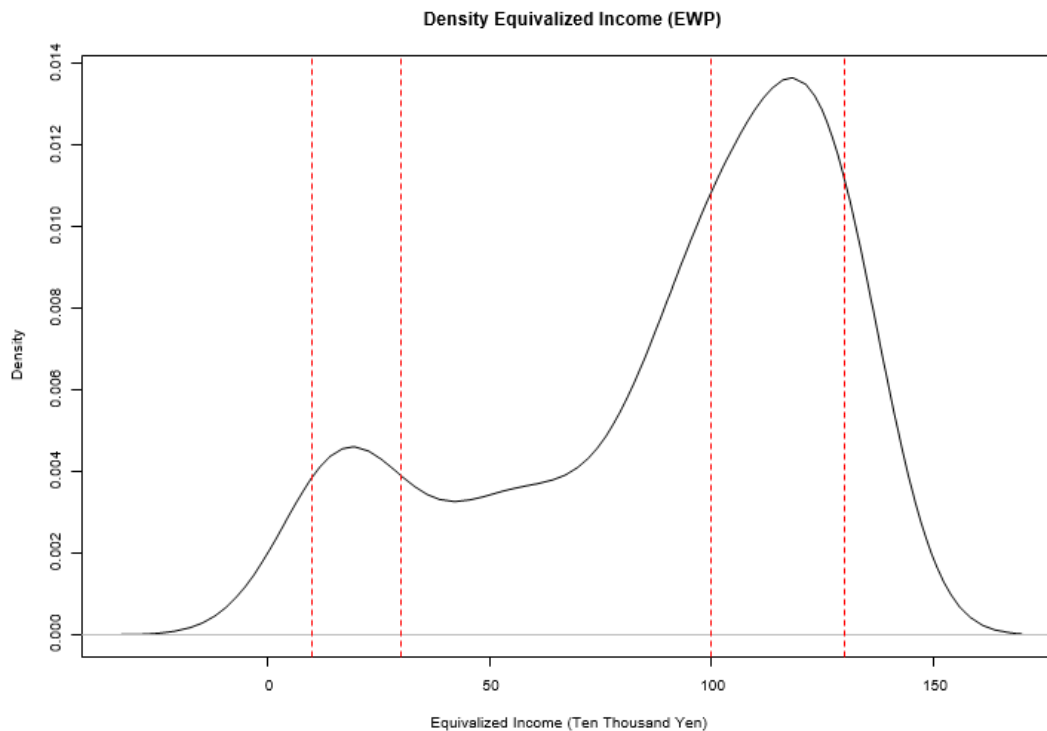


Figure 2: Density of the Equivalized Income of the EWP (pooled)

In terms of the type of worker, EWP are a much higher proportion of self-employed workers than EW, and lower proportions of wage workers. These differences are significant at the 1% significance level for every year. Table 3 shows the proportion of the pooled data.

Table 3: Employment Type Proportion (Pooled)

Employment Type	EW	EWP
Self-Employed	0.06	0.16
Professional	0.04	0.07
Worker at Family Business	0.02	0.01
Working at Home	0.01	0.00
Wage Worker	0.86	0.71
Consigned Work or Subcontractor	0.02	0.04

In addition to this, firm size appears to be highly significant. EWP tend to work for firms which are very small, with fewer than 30 employees, whereas EW tend to work for large firms with 100+ employees. This is significant at 1% level for all except 2014, where it is significant at the 5% level.

Occupation also appears to play a key role. Table 4 demonstrates that EWP work in higher proportions in sales, services, manufacturing, and agriculture. Conversely, EW have higher proportions in managerial, technology, and specialised/technical roles. These are significant at the 1% level for all except 2014 once again, where it is significant at the 5% level.

Table 4: Occupation Proportion (Pooled)

Occupation	EW	EWP
Agriculture	0.00	0.02
Mining	0.00	0.00
Sales	0.13	0.18
Service	0.07	0.11
Manager	0.13	0.04
Clerical	0.22	0.23
Transport/Communication	0.03	0.02
Manufacturing/Construction	0.08	0.17
Technology	0.06	0.03
Specialised/Technical	0.27	0.18
Public Safety	0.01	0.02
Other	0.00	0.00

The map in Figure 3 shows the average concentration of working poor as a percentage of our sample. The areas with the highest concentration of working poor appear to be the southern regions of Japan and Tohoku. Perhaps most interestingly is how this links into the data on work locations.

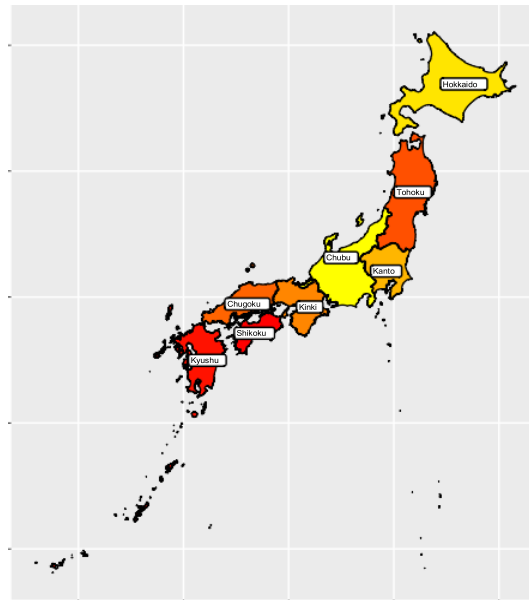


Figure 3: Map of the Poor Rate by Region (Averag)

It is evident from Table 5 that the proportion of individuals working in the same city is much higher for EWP than for EW, and conversely much lower for a different city but the same prefecture, as well as another prefecture. This difference is approximately constant across all years, and statistically significant at the 10% level for 2017, and at the 1% level for 2014 and 2015.

Table 5: Movement to Work Comparison (Pooled)

Job Location	EW	EWP
Same City	0.47	0.64
Same Prefecture	0.36	0.26
Other Prefecture	0.17	0.10

Another aspect to the educated working poor is the significant differences in self-reported income and life satisfaction. For two of the four years, “feeling of happiness your entire life” and “satisfaction with your health” were significantly lower with the educated working poor at the 5% level. For three years, “satisfaction with your life overall”, and “satisfaction with your employment”, and for all four years, “feeling of satisfaction with your household income” were significantly lower at the 5% level. Other tests are either not significant, or are significant for one year only.

SUMMARY

Based on our analytical scrutiny and consistent with recent media reports, it is patently discernible that Japan accommodates a distinct subset of individuals who are simultaneously well educated and gainfully employed, yet confronted with socioeconomic adversity. In contrast to the findings of Murakami et al. (2011), which underscore an inverse correlation between education and poverty, our present study elucidates a significant populace comprising educated individuals experiencing economic hardship as working poor. This underrepresented demographic warrants attention and examination, as it has hitherto escaped the focus of prior research efforts.

Analyzing the data from four waves of the JHPS dataset, we discern that the state of being “working poor” does not seem to persist as a longterm phenomenon among educated individuals in this category. Furthermore, the influx and exodus of people from this group do not exhibit consistent year-to-year fluctuations.

While a majority of the observations in the Educated Working Poor (EWP) category are represented by males, this gender discrepancy does not appear to be significantly different from the proportion in the broader Working Poor (EW) category. Instead, it is evident that single women are overrepresented, while married women are underrepresented in the EWP group.

The data also suggests that younger individuals are less likely to fall into the working poor category, and it tends to be older individuals, typically between the ages of 40 and 60, who constitute the EWP demographic. This group primarily consists of males who are married and tend to have more adults in their households rather than children. Nevertheless, these characteristics do not exhibit statistically significant differences from those in the broader EW category.

A noteworthy and substantial contrast emerges between the two groups, particularly in terms of self-employment. Moreover, geographic factors evidently exert a significant influence, as there is a higher concentration of the educated working poor (EWP) in the same city compared to individuals with higher education (EW). Notably, our sample reveals the southern regions of Japan as having the highest prevalence of EWP. Lastly, it is apparent that EWP experience lower levels of life satisfaction, job satisfaction, and health satisfaction, in addition to expressing less contentment with their household income when compared to their higher education counterparts (EW). The revelation of this previously hidden demographic and the startling disparities in self-reported well-being underscore the pressing need for further in-depth investigation. Subsequent research endeavors should aim to elucidate the underlying causal factors contributing to these discrepancies and endeavor to construct models that delineate the processes of individuals transitioning into and out of the educated working poor (EWP) group.

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