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Escaping Low-Wage Jobs:

Wealth, Low Wages, and the Black-White Entrapment Gap

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Abstract

The aim of this paper is to analyze individuals' opportunities to escape low-wage jobs. More specifically, relying on an assets or wealth (as a distinct variable from income) theoretical framework, I provide an explanation of such a phenomenon. A good deal of evidence in support for the argument is provided. Assets are indeed shown to be associated with individuals' opportunities to escape low-wage jobs. In the context of the extended hazard rate framework estimated in the paper, evidence is provided which shows that starting a low-wage job spell with some accumulated wealth increases the likelihood of ending such a spell by making a transition to a high-wage job. In addition, an investigation of the unequal opportunities of blacks and whites for escaping low-wage jobs is carried out. Such an investigation, it is argued, constitutes an *experimentum crucis* for the argument. On the basis of the analyses in the paper, it can be concluded that such an inequality arises partly from the unequal pattern of wealth ownership of blacks and whites.

Keywords

Escaping Low-Wage Jobs:
Wealth, Low Wages, and the Black-White Entrapment Gap

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In recent decades, the proportion of low-wage jobs in the American employment structure has increased substantially. This fact is in sharp contrast with the experience of many other Western European economies. Part of the reason for this difference is to be found in the role of domestic labor market institutions as filters of economic changes. Certainly, Western economies have faced a period of structural change during recent decades. The distribution of employment between economic sectors has changed, declining in the industrial and growing in the service sector. The openness to international trade has increased the competition with third world countries in labor-intensive product markets. The incorporation of new technologies into the processes of production has required a more skilled workforce. These structural changes have affected the labor market by shifting the demand for labor. The demand for skilled labor has increased and that for non-skilled labor has decreased (Levy and Murnane 1992;

Freeman 1995; Nickell and Bell 1995; Leamer 1996; Wood 1994, 1995). Domestic institutions have determined how the changes in the supply and demand for labor associated with structural change have made labor market outcomes among Western countries divergent.

In the US, wages have fluctuated at the lower-end of the distribution. In this economy, unemployment has been very low – especially compared with some European countries. The flexible response of this labor market to the economic changes of the 1980s has led to a low level of unemployment, together with a high proportion of low-wage jobs. In addition, the distribution of earnings in the US has become more unequal. The distribution of earnings in the 1980s displayed rising inequality together with a stagnant median. It displayed a polarized shape. The sizes of both the bottom and the top[1] of the distribution have increased. And the proportion of low-wage jobs has increased substantially (*vid*. Levy and Murnane 1992; Katz and Murphy 1992; Freeman and Katz 1994; OECD 1996: chapter 3; Atkinson 2002). Therefore, the most salient risk in the US has not been unemployment, but low pay.

The salience of low-wage jobs in the American employment structure has been such that the debates in the US have focused on the social consequences of the increasingly unequal distribution of earnings. The discussions have stressed the "declining middle" (Harrison and Bluestone 1988), a coming future of "lousy jobs" (Burtless, ed. 1990) and the emergence of a new "underclass" (Freeman 1991; Jencks 1991). The basis of this debate has been the analysis of the evolution of earnings inequality in the United States. The distribution of earnings in the 1980s adopted a polarized shape. It displayed a rising inequality together with a stagnant median. The sizes of both the bottom and the top of the distribution increased (Levy and Murnane 1992; Freeman and Katz 1994). Middle class jobs vanished (Bluestone and Harrison 1982, 1988), and the number of low-wage jobs grew very fast, so much so as to contribute to the development of a large "underclass" (Freeman 1994: 14).

The former literature has suggested the existence of a relation between the increase in the proportion of low-wage jobs and the emergence of an underclass in the US. This literature is based mainly on the analysis of the cross-sectional distribution of earnings and the proportion of low-wage jobs in the American employment structure. However important such cross-sectional evidence might be, from a stratification point of view a much more relevant variable is how permanent or transitory the experience of low-wage employment is. We need to know whether people employed in low-wage jobs remain or escape those jobs. To use a metaphor from Schumpeter (1951), an inquiry to discover whether low-wage jobs are like hotel rooms is essential - always there but occupied by different guests, or like permanent residences for the people who hold them.

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[1] Piketty and Saez (2003) have shown that top wages in the US have increased so much since the 1970s that the working rich have replaced the *rentiers* at the top of the income distribution. *Vid*. also Wright and Dwyer (2003) in which they show evidence according to which the American jobs expansion in the 1990s has taken a polarized form, with an increase in the proportion of jobs both at the top and at the bottom of the employment structure, combined with a limited growth in the middle.

In this vein, the aim of this paper is to uncover the underpinnings of individuals' opportunities to escape low-wage jobs. More specifically, building on an emerging theoretical framework in social stratification, I shall investigate the role of assets (or wealth) ownership as a determinant of individuals' opportunities to escape low-wage jobs. The framework informing the empirical analyses in the paper is the one provided by the literature on the role of assets or wealth – as a distinct variable from income - as an *engine* of economic opportunities or life-chances (*vid.* Oliver and Shapiro 1995; Keister 2000, 2002; Spilerman 2000; Shapiro 2001; Edin 2001). This perspective has provided a new way of looking at both stratification processes and public policy issues – especially issues of poverty.

Relying on this literature, the aim of this paper is to investigate the role of assets or wealth as an opportunity-enhancing device that helps its owners to escape low-wage jobs. The logic behind this approach is as follows. If, as a general rule, wealth matters for improving individuals' living-standards and economic well-being, then it should enhance individuals' opportunities in a particular case: the likelihood of escaping low-wage jobs. In order to test the proposition derived from the "assets matter" framework, according to which wealth is a determinant of individuals' opportunities for escaping low-wage jobs, I shall analyze the labor market experiences of a sample of individuals. The analyses of the labor market experiences, more particularly the likelihood of ending a low-wage spell by means of a transition towards a non-low-wage job, will be based on the estimation of an extended hazard rate model. I shall investigate whether starting a low-wage spell with some accumulated wealth is associated with the probability of escaping such a state.

In addition to the former evidence, I shall set an *experimentum crucis* for the argument. I will analyze whether it supplies a satisfactory explanation of the black-white "Entrapment" Gap, namely the fact that blacks are more likely to be trapped in low-wage jobs than whites. In an extremely influential study, Oliver and Shapiro (1995) have shown that an extreme inequality characterizes the distribution of wealth between blacks and whites. Building both on the findings of Oliver and Shapiro (1995) and on the argument of this paper, I shall formulate the following proposition. If the argument is correct, the black/white "Entrapment" Gap should emerge partly from the wealth inequality between these two ethnic groups. Otherwise, the argument would not be correct.

The body of the paper is as follows. In the first section, I shall provide a brief review of the literature on the relationship between assets ownership and life-chances and I will further elaborate why wealth should be expected to be an important determinant of individuals' opportunities to escape low-wage jobs. In section 2, I describe the data and variables used in the analyses. In section 3, I shall present the statistical framework on which I rely. In section 4, I present the results of the estimation of the event-history models on the dynamic relationship between wealth ownership and the likelihood of escaping low-wage jobs. In section 5, I set the *experimentum crucis* for the argument, namely whether it supplies an explanation for the black-white Entrapment Gap. Finally, in the last section, I summarize the findings of the paper and highlight their relevance both for the explanation of the *engines* of individuals' economic

opportunities and living-standards as well as for an understanding of the origin of the inequality between blacks and whites in the US.

ASSETS OWNERSHIP AND LIFE-CHANCES IN IMPERFECT ECONOMIES

In recent years, a growing number of contributions in stratification and social policy research is establishing a new framework for the analysis of living-standards and economic well-being. The common theme of these contributions is the role of assets or wealth – as a distinct variable from income - as a determinant of economic opportunities or life-chances. This perspective has provided the rationale for a new way of looking at both stratification processes and public policy issues – especially issues of poverty.

As emphasized in a growing body of sociological literature (*vid*. Oliver and Shapiro 1995; Keister 2000, 2002; Spilerman 2000; Shapiro 2001; Edin 2001), wealth is a particularly relevant variable for understanding the origin of both stratification processes and the heterogeneity of people's life-chances. As Spilerman (2000: 518) has put it "a consideration of wealth becomes relevant once the agenda of the field is enlarged, from a focus narrowly on labor market success and its rewards to a concern with living standards and economic security". Most of the stratification research has been concerned with labor market rewards, mainly occupational attainment and status. As a result, *living-standards* have been relatively unattended to in stratification research (Spilerman 2000). A recent example of the crucial role that wealth should play in social stratification theory is Sorensen (2000). Sorensen (2000) proposes basing class concepts on personal wealth. His concept of *class as life conditions* is based on a person's total wealth. The rationale for such a concept is that "the total wealth controlled by actors […] by shaping welfare and well-being, as well as economic opportunities and the investments that maximize these opportunities, […] creates the behavioral dispositions that are accountable for the inoculation and socialization mechanisms associated with class as life-conditions" (Sorensen 2000: 1534).

Similarly, assets occupy a central place in current debates and proposals in public policy in the US as a way to improve people's opportunities to escape poverty. This literature has been developed to a large extent after Sherraden (1991)'s *Assets and the Poor*. Oliver (2001: xi) summarizes the bottom line of this perspective as follows:

> "antipoverty policy […] has tended to emphasize efforts to increase income to some predetermined minimum level as the "magic bullet" that will solve poverty problems. But that approach builds on the common misconception that poverty is simply a matter of low income or low levels of consumption. Several critiques of this approach to poverty alleviation have pointed out that its emphasis on income ignores key causes of inequity, overlooks the consequences of low asset accumulation, and fails to address long-term stability and security".

The conventional wisdom in poverty research and policy is that poverty is a question of low-income. In the words of Shapiro and Wolff (2001: 2) "the traditional assumption that governs our thinking [in poverty evaluation] is that income and labor markets constitute virtually the entire poverty story". However, assets provide a sounder

foundation than income of individuals' living standards. Assets provide people with a pool of resources that enhance their opportunities to protect their living standards, smooth their consumption streams, obtain income security, and invest in their economic future.

The literature on "assets matter", which has established a framework for casting the analysis of stratification and public policies – mainly those directed toward poverty alleviation, has triggered many analyses on the *causes* of wealth accumulation. A growing literature is emerging in the US that focuses both on theoretical issues regarding the determinants of the accumulation of assets by the poor (Beverly and Sherraden 1999; Edin 2001; Carney and Gale 2001), as well as the design of institutional mechanisms aiming at encouraging assets accumulation for the poor, e.g. the creation of Individual Development Accounts (IDAs) (Seidman 2001; Sherraden 2001; Stern 2001).

In addition, many *empirical* studies on the *causes* of wealth inequality have been produced (Blau and Graham 1990; Oliver and Shapiro 1995; Conley 1999: chapter 2; Keister 2000: chapter 7; Carney and Gale 2001; Wilhelm 2001). However, the empirical literature is imbalanced in the sense that most of the empirical investigations have been concerned with the *causes* of wealth inequality and accumulation, leaving the analysis of its *consequences* relatively unattended to[2]. As a result of the lack of empirical investigations on the *consequences* of wealth inequality, the literature still retains a heavy programmatic spirit (e.g. Shapiro and Wolff 2001). Part of the reason for that arises from the difficulties entailed in establishing a link between wealth and labor market processes (Shapiro and Wolff 2001: 2; Conley 2001), namely plausible mechanisms connecting wealth ownership with the opportunities to obtain labor market rewards (e.g. earnings).

This paper aims show that there are empirical grounds, not only theoretical, for expecting the "assets matter" framework to be taken as sound. In this vein, this paper's goal is to provide evidence on the role of wealth in enhancing individuals' opportunities. More specifically, I shall investigate the dynamic relation between wealth ownership and individuals' opportunities for escaping low-wage jobs.

The rationale for casting the analysis of economic opportunities on an assets-framework arises from three facts. The first one is that, in order to improve their economic opportunities, individuals need to be equipped with a safety net. Only when their living-standards are guaranteed independently of the working of market forces, may people start to think about improving their prospects. If agents are concerned with their mere day-to-day survival, they cannot undertake investments that will improve their prospects. If earnings are the only source of their income, they cannot move beyond the mere satisfaction of their basic needs. In order to achieve a minimum living standard, they need to participate in the labor market. It is in this sense that their living standards are *commodified*. And only when a minimum level of resources is guaranteed such as to provide enough welfare and security, may individuals be expected to

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[2] A notable exception is Conley (1999), in which he investigates the implications of parental wealth in a number of socioeconomic outcomes: educational attainment, welfare participation, wealth attainment, and wage attainment.

undertake investments that will result in an improvement of their opportunities. The second one, as noted by a number of researchers (e.g., Sherraden 1991: chapter 8; Keister 2000: 6-9; Wolff 2002: chapter 2), is the conceptual distinction between income and wealth. Although related, wealth, income and earnings are not synonymous. The difference between wealth and income (the same applies to earnings) is that the first one is a *stock* variable, while the second is a *flow* variable. Wealth is the total value of the economic resources that an individual or household has accumulated up to the time at which it is measured. Income, on the other hand, is a flow of economic resources over time. It is the total amount of resources that an individual obtains during a period of time. Therefore, given the stock nature of the wealth variable, it provides a pool of resources that can be used in periods of hardship. It can be used as a consumption-smoothing device in order to cope with periods of economic hardship associated with events such as the loss of a job or the occurrence of illness.

Finally, the third reason why "wealth matters" arises from the institutional underpinnings of market economies (Morillas, 2003). If our economies were perfect, the market mechanism would provide individuals with a safety net. If capital markets were perfect, individuals could borrow the funds that they would need in order to undertake investments to enhance their labor market opportunities. Similarly, if insurance markets were perfect, individuals could turn to them in order to find protection against unexpected contingencies affecting their incomes. However, credit markets are imperfect and most insurance markets are missing in the real world. The combination of the stock nature of assets and the imperfections of credit and insurance markets, gives rise to assets/wealth as a crucial tool for improving one's own prospects. Assets are obviously important. But they become all the more relevant because of the institutional underpinnings of market economies.

The welfare state provides some protection of individuals' living standards. However, it replaces individuals' income neither at a hundred percent nor over an indefinite period of time. In addition, in the US *residual* welfare state, income replacement is limited to those incapable of market participation. Therefore, it does not provide individuals with a safety net, which would in turn provide them with an incentive to undertake risky earning-enhancing investments.

This does not mean that individuals' welfare cannot be made independent from market forces, even in an ideal-type case of complete absence of state protection. As Esping-Andersen (1990: 37) writes "de-commodification is … a process with many roots". The sources of de-commodification may be multiple. However, there is a primary source that neither Polanyi (1944) nor Esping-Andersen (1990) has considered: the *self*. Individuals can rely on their own wealth in order to isolate their living standard from market participation. If they find neither market-protection nor state-decommodification, they can rely on their own resources. If this is the case in general, it is even more true in the case of the US. Individuals, in the absence of economic protection through the market mechanism, can find *self-decommodification* by relying on their own wealth. They can use their wealth to undertake investments that will secure them a good life. Certainly, assets enable people to invest in their future. In addition, they provide individuals and families with protection against eventual economic

contingencies: they can find protection, i.e. insurance, by running down their assets. All in all, wealth creates a safety net and stimulates risk-taking behavior (*vid*. Sinn 1995).

DATA

In order to test whether wealth ownership is associated with individuals' opportunities to escape low-wage jobs, I will analyze the labor market experiences of a sample of individuals. The analysis of the determinants of labor market experiences, more particularly the likelihood of ending a low-wage spell by means of a transition towards a high-wage job, will be based on the estimation of an extended hazard rate model. The data set from which the labor market histories have been obtained is the *National Longitudinal Survey of Youth*. Monthly time-series have been generated from the original dataset.

A sub-sample of individuals has been selected following these criteria:
- Males. The rationale behind this criterion is the avoidance of any interaction between mobility and fertility choices that may obscure the test of the theoretical argument.

- After they have left the period of regular school. I have defined the moment at which individuals have left school as the time after which individuals have spent more than 12 months out of any form of regular schooling. The motivation behind this selection is the avoidance of the inclusion in the sample of jobs that are not a substantial part of labor market careers.

- Individuals who have missed a maximum of three of the interviews in the period 1979 to 1998.

I have reorganized the original data in a form that is conductive to estimating hazard rate models. The raw data have the following format: for every interview year, the substantive variables (e.g. education, labor market status) are accompanied by a set of variables regarding i) whether, with respect to the previous interview year, the individual has experienced any change in his status (e.g. has completed college education), and ii) the starting and ending dates (month and year) of those changes. From these data, I have generated monthly time-series for the variables concerning the argument and propositions to be tested.

States

In order to analyze the determinants of individuals' opportunities to escape low-wage jobs, we need detailed information regarding the labor market position and personal characteristics that may influence the transition probabilities. In particular, we need information about the labor market status (employed, unemployed, out of the labor force) and the wage rate in order to construct the labor market experience.

From the information available in the NLSY, it is possible to identify the labor market status the individual occupies every month. In addition, from the information on the wage rate an employed individual is paid at his current job, it is possible to

distinguish whether he is employed in a low- or in a non-low-wage job. Every month, individuals occupy one, and only one, of the following states:

- o 0: Out-of-the labor force.
- o 1: Unemployed.
- o 2: Employed in a low-wage job.
- o 3: Employed in a non-low-wage job.

These positions represent an exhaustive and mutually exclusive set of labor market states. Every individual, at each month, occupies one and only one of the four states.

The differentiation between low- and high-wage jobs is based on the standard definition of low-wage jobs as those jobs paying a wage rate lower than two-thirds of the median of the wage distribution. Using data from various years of the *Current Population Survey* (1978-97), I have calculated the value of the median of the distribution of the hourly wage for full-time male workers, and from this I have calculated the low-wage threshold. The values of the threshold are reported in Table 1 below. The value of the wage rate of the job occupied by the individual in the current month has been compared with the low-wage threshold in the year including such month and, if lower, an individuals' labor market status has been defined as low-wage.

Table 1. **The low-wage threshold**.

Year	Low-wage threshold (USD current year)
1978	3,96
1979	4,42
1980	4,84
1981	5,19
1982	5,46
1983	5,61
1984	5,82
1985	6,07
1986	6,36
1987	6,53
1988	6,64
1989	6,73
1990	6,96
1991	7,19
1992	7,31
1993	7,43
1994	7,45
1995	7,75
1996	7,90
1997	8,13
1998	8,53

Source: *Current Population Survey*. Wage Data for Male Workers (several years).

Variables

The variables included in the analyses are described below:
- **Age**. A time-varying variable that measures the age in months since birth.
- **Race**. Time-invariant variable. The categories are: Hispanic, black, non-Hispanic and non-black (I refer to this last category as white).
- **Number of years of completed education**. A continuous variable the name of which is fully self-explanatory.
- **Armed Forces Qualifying Test (AFQT)** [3]. Measured at one interview (1980). This is a variable created from the raw scores of a battery of questions included in a more general test, the *Armed Services Vocational Aptitude Battery (ASVAB)*. More particularly, this is the AFQT80 generated by the staff of the Center for Human Resources at Ohio State University. It consists of percentile scores obtained from the combination of the following sections of the ASVAB: Section 2 (arithmetic reasoning), Section 3 (word knowledge), Section 4 (paragraph comprehension), and one half of the score from Section 5 (numerical operations).
- **Assets**. The variables measuring assets ownership have not been put in every interview. By far the most complete series is the one for the variable "Amount of Money Assets". This variable is a measure of the total value of the money assets owned by individual. This variable is measured from the 1985 interview onwards, with the exception of the year 1991. This is the only variable of assets that I have used in the analyses in the paper. There are two reasons for doing so. The first one has to do with data availability. The series are far more complete for this variable than for the rest variables on assets holding. And secondly, it is a measure of the amount of *liquid* assets that an individual owns. Since the argument of this paper is concerned with the protection that assets may provide against unexpected risks, liquid assets seem to be better at providing consumption smoothing than non-liquid assets because they can be immediately used and need not be cashed out – as is the case for non-liquid assets - before being used.
- **Gini coefficient of income distribution**. This variable is not an individual-level but an aggregate-level variable. It is the Gini coefficient of the distribution of household income in the US. I use this variable in order to include a control for the effect of aggregate macroeconomic factors affecting the level of inequality that in turn may have an influence on mobility opportunities. By so doing, we may confront rival explanations that emphasize the role of the labor market turbulences of the 1980s and 1990s as an impediment to labor market careers.

The time-series of the Gini coefficient are reported in Table 2.

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[3] This is the proxy for intelligence used in Herrnstein and Murray (1994). I will be using the same variable in this investigation, taken from the same survey, namely the NLSY. Even assuming that such a variable is actually measuring intelligence, I show that it does not rule the effect of asset ownership out in explaining individuals' economic opportunities. However, it is worth noting that the very same use of this variable as a measure of intelligence is problematic (Fisher *et al*. 1996: Chapter 2).

Table 2. Time-series of the Gini coefficient.

Year	*1978*	*1979*	*1980*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*
Gini	.402	.404	.403	.406	.412	.414	.415	.419	.425

Year	*1987*	*1988*	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*
Gini	.426	.427	.431	.428	.428	.434	.454	.456	.450	.455	.459

Source: US Census Bureau, *Current Population Survey, Annual Demographic Supplements*, (several years).

- **Experience**. This is the cumulative number of weeks that the individual has spent employed until the date of the interview at which this variable is measured.
- **Type of industry**. This is the type of industry in which the respondent worked. The original variable is coded according to the 3-digit classification of industries. Following the 1970 *Census of Population*, the industries have been grouped into the following categories:
  - Agriculture, Forestry and Fisheries.
  - Mining.
  - Construction.
  - Manufacturing.
  - Transportation, Communication and Other Public Utilities.
  - Wholesale and Retail Trade.
  - Finance, Insurance and Real Estate.
  - Business and Repair Services.
  - Personal Services.
  - Entertainment and Recreation Services.
  - Professional and Related Services.
  - Public Administration.

- **Labor market status**. Measured monthly. The NLSY provides data that allow us to track individual's labor market status every month: out-of the labor force, unemployed, and employed. Besides, from the information on the wage rate the individual is paid in his current job, each month, it is possible to determine whether the individual is employed in a low- or in a non-low-wage job. Low-wage jobs have been defined as those in which the wage rate is lower than two thirds of the median of the distribution of male earnings working full-time. To sum up, every month, individuals occupy one, and only one, of the following states:
  o Out-of-the labor force
  o Unemployed.
  o Employed in low-wage job.
Employed in a non-low-wage job.

STATISTICAL FRAMEWORK: A SEMI-MARVOV MODEL[4]

The monthly time-series described above provides us with detailed and extensive information on the labor market histories of individuals over twenty years of their lives. It supplies data on the labor market status that individuals occupy every month, as well as information on personal characteristics (economic, social and demographic attributes). It provides the basis for the analysis of the determinants of the opportunities to escape low-wage jobs. Since it includes data on wealth holding, cognitive ability, education, etc. it supplies the information required for testing the argument put forward in the paper.

1. *Mobility across states as a stochastic process.*

In order to find out the determinants of the transitions out of, as well as permanence in, low-wage jobs, I rely on a hazard rate model (i.e., an event-history model as is most commonly known in sociological applications). These models supply the statistical tool for analyzing the determinants of the movements or transitions across different labor market states. It provides a framework from which to find out the determinants of the length of spells in low-wage jobs, and the probability that a low-wage spell ends up in the individual obtaining a high-wage job.

The mobility process across states is characterized by the following three elements:
i-   Time, a continuous variable.
ii-   State space.
iii-   Timing of transitions between positions within the state space.

The mobility process, the transition or movement from state to state, generates a sequence of points across time. Since the movements across states are probabilistic, and the points in time at which transitions take place are random variables, the mobility of individuals may be represented as the realization of a stochastic process. This process is then defined by:

- i) T time, a random continuous variable,
- ii) $Y=\{1, 2, 3, …, k\}$ (k a finite number) a qualitative variable presenting the state space, and
- iii) A set of random variables measuring the points of time at which transitions take place: $t_1, t_2, t_3, ….$

2. *Functions describing the stochastic process.*

This process is fully characterized by three statistical functions: the hazard rate, the density, and the survival function. Since those functions are related in a unique way, any of the three describes fully the stochastic process.

The hazard function is defined as the instantaneous rate per unit of time at which the state that the individual currently occupies is left. The hazard rate is the ratio

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[4] In the description of the models I rely on Blossfeld, Hamerle and Mayer (1989: Chapter 3), Tuma and Hannan (1984), Lancaster (1990), and Greene (2000: 937-50).

between the probability that the individual leaves the state currently occupied in the short period of time Δt, and the length of time. The probability is given by:

$$P(t \leq T < t + \Delta t \,|\, T \geq t) \tag{1}$$

The hazard rate is the ratio between that probability and the length of time. As the period of time becomes infinitesimal, the hazard rate becomes the rate at which the individual leaves the current state per unit of infinitesimal time:

$$\lambda(t) = \lim_{\Delta t \to 0} \frac{P(t \leq T < t + \Delta t \,|\, T \geq t)}{\Delta t} = \frac{\partial}{\partial t} P(t \leq T < t + \Delta t \,|\, T \geq t) \tag{2}$$

Any of these three functions describes the process: the density, the probability, and the survival function.

- the random variable T has a distribution function f(t). The Cumulative Density, or Probability Function, is:

$$F(t) = \int_t f(t) = P(T \leq t) \tag{3}$$

- the survival function measures the probability that a spell lasts for at least a time t:

$$S(t) = P(T \geq t) = 1 - F(t) \tag{4}$$

These functions are related as follows:

$$\lambda(t) = \frac{f(t)}{S(t)} \tag{5}$$

$$\lambda(t) = -\frac{\partial}{\partial t} \ln S(t) \tag{6}$$

$$f(t) = S(t) \cdot \lambda(t) \tag{7}$$

The knowledge of the relation among these functions will become useful when estimating the hazard rate, and, more particularly, when writing down the Maximum Likelihood function.

3. *A first extension of the simple model: Multiple Destinations.*
In the analyses of this paper, the state space is composed of four states:

$$S=\{o,\ u,\ l,\ h\} \tag{8}$$

where o, u, l, and h represent the following states:

> o: out of the labor force
> u: unemployed
> l: employed in a low-wage job
> h: employed in a high-wage job

Therefore, in the analysis in the paper, a person employed in a low-wage job may end up in a low-wage spell by making a transition towards either a high-wage, unemployment, or out-of the labor force. When an individual leaves a low-wage job, he may get a high-wage job, but also may transit to unemployed or out-of the labor force. Where an individual moves to after leaving a low-wage job matters tremendously and therefore we cannot just collapse the three possible destinations into a single state.

> This introduces a further complication into the model. The state space does not consist simply of two alternating states, but of multiple ones. Therefore, multiple destinations are possible after the individual completes a spell in a given state. A spell in a low-wage job may be terminated by a transition to a high-wage job, to unemployment, or to out-of the labor force.

In order to formulate the model, I will rely on a *Competing Risk Model*. This model is based on the assumption that there are *D* independent random variables that measure the time at which a transition to destination-state (*d*) from origin-state (*o*) takes place. Then, the hazard function of exiting the origin state o toward the destination state d is given by an origin-destination specific hazard rate *(λ_{od})*.

Given the substantive interest of this paper, I am going to estimate the transition from low- to high-wage jobs. Equivalently, I will estimate the hazard rate of ending a low-wage spell by making a transition to a high-wage job:

$$\lambda_{lh}(t/\ x) \tag{9}$$

where the first subscript represents the origin and the second the destination state.

4. *A Second extension: multiple failures.*

Once a low-wage spell has been completed, an individual may return to such a state in the future. Imagine someone who escaped a low-wage and moved towards a high-wage, but after some time returned to the original state. Similarly, another individual could, after a low-wage spell, have become unemployed, later on left the labor force, and after sometime returned to a low-wage job.

In the analyses in this paper, I consider the multiple failures that take place during the labor histories of individuals, i.e., all the transitions occurring during the period under analysis. It is especially important to use of all the available information, and not only that provided by the time until the first failure. Since states are not

absorbing, they may be revisited. Ignoring the additional transitions that take place after the completion of the first spell is not sufficient. Such an approach does not take advantage of the additional information included in the subsequent transitions, which will possibly be especially relevant. For this reason, I estimate not the hazard rate for the first transition, but the one corresponding to multiple failures or transitions.

The inclusion of multiple transitions into the analyses provides a more accurate account of the mobility process and enhances the robustness of the analyses. However, it introduces one additional complication into the hazard rate framework presented above. The multiple spells are typically correlated across the unit of observation. Having escaped a particular state in the past may definitely be correlated with the probability of leaving such a state in the future. In order to tackle this statistical problem, I am going to rely on what in the literature is called "Variance Corrected Models" (*vid*. Lin and Wei 1989; Wei, Lin and Weissfeld 1989). This approach deals with the problem by adjusting the Variance-Covariance matrix in order to give an account of the additional correlation that the inclusion of multiple failures or transitions entails. From this correction, robust standard errors may be obtained that will provide the basis for calculating the t-statistics and significance levels of the estimated parameters.

5. *Parameterization and estimation of the hazard function*.

The hazard rate can be modeled directly using, for example, an exponential specification as follows:

$$\lambda(t) = \lambda \tag{10}$$

This is equivalent to the following survival function:

$$S(t) = e^{-\lambda t} \tag{11}$$

In the analyses reported in the paper, I have parameterized the hazard rate as an exponential function. I have selected such a parameterization after comparing the estimation of three hazard rates parameterized as: i) a Weibull function, ii) a Gompertz function, and iii) an Exponential function. The effect of the estimated parameters on the hazard ratio is very close in the three cases. In addition, the duration dependence is almost nonexistent[5]. Therefore, since nothing is really gained by fitting more complex models, I have relied on the exponential model, which is computationally less expensive.

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[5] The exponential model assumes that the time spent in a state is not related to the hazard of escaping such a state. To put it differently, there is no time dependence. The Weibull and Gompertz parameterizations allow for monotonic time dependence. The longer the time spent in a state, the higher (positive time dependence) or lower (negative time dependence) the hazard of escaping such a state. I have estimated Weibull and Gompertz hazard rate functions. The estimated parameters measuring time dependence are very small, showing that it is almost nonexistent. For that reason, I have relied on the exponential model.

The parameters of the hazard rate function can be estimated by Maximum Likelihood. Given the nature of duration data, some issues have to be considered when writing the Log-Likelihood function to be maximized. Censoring is a common feature of duration data. Since the process is ongoing at the time at which the variables are measured, some of the spells have not been completed at the time of measurement. Although a transition has not taken place by the time of measurement, it may do so later on. The spells that are still ongoing at that time cannot be considered as spells that have ended in no-transition, but they are censored spells. The Log-Likelihood function has to give an account of both the non-censored and the censored spells as in the following equation:

$$\ln L = \sum_u \ln f(t \mid \gamma) + \sum_c \ln S(t \mid \gamma) \qquad (12)$$

where *u* is the set of uncensored observations, *c* is the set of censored observations, and γ is the vector of parameters to be estimated.

WEALTH AND THE TRANSITION OUT OF LOW-WAGE JOBS

At this point, let me recapitulate the argument to be tested. At an abstract level, the argument goes as follows. Given the institutional underpinnings of market economies, owning wealth[6] *matters*. Among the many functions of wealth, it equips individuals with a safety net, provides funds to undertake investments, and offers economic security that in turn may stimulate risk-taking behavior. The argument, in short, establishes a connection between individuals' initial assets and their (future) economic opportunities. As a result of the imperfections of markets, "assets inequality matters" (Birdsall and Londoño 1997). Therefore, if wealth is an important determinant of economic opportunities, then it should be associated with individuals' opportunities for escaping low-wage jobs. Starting a low-wage job spell with some accumulated wealth, if the argument is correct, should be associated with the probability of ending such a spell by means of a transition to a high-wage job.

Do note that the argument in this paper provides an account of life-chances that is substantially different from other explanations in the sociological literature. In particular, it offers an explanation of opportunities that is distinctive from those that account for life-chances in terms of differences in intelligence. Explanations as such are by no means new in sociology (*vid.* for example Young (1958) and Bell (1973)), but, recently, they have been popularized by Herrnstein and Murray (1994) in *The Bell Curve*. According to these authors, intelligence determines the economic opportunities of individuals and, eventually, where they end up. By implication, inequality is natural and inevitable. The increase in socioeconomic inequality in the US in the last two

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[6] At this point, it is worth reiterating that wealth and income, by definition, are not equivalent. The former is a *stock* variable, while the second is a *flow* variable. Wealth is the total value of the economic resources that an individual or household has accumulated up to the time at which it is measured. Income, on the other hand, is a flow of economic resources over time. Wealth provides a more permanent source of economic resources and, therefore, it provides the basis for life-chances (*vid.* Keister 2000: Chapter 1; Sorensen 2000: 1528-1540).

decades simply reflects the working of nature, and the consequent compensation that intelligent individuals obtain.

In order to test the plausibility of the "wealth matters" proposition, I will estimate two models. In the first model, in addition to a number of controls (race, age, education, experience, type of industry and macro-economic factors), I include in the vector of covariates the AFQT score. The second model adds an additional variable to the vector of covariates: the accumulated wealth. The estimation and comparison of the parameters of these two models aims at confronting the argument in this paper with an account of life-chances (solely) in terms of intelligence. If economic constraints were not an important determinant of career mobility, and more particularly, if the opportunities to escape low-wage jobs were not related to individuals' assets, we should find that net of the effect of intelligence and ability, as measured by the AFQT score, the assets individuals' command have no relation with their opportunities to move out of low-wage jobs. Put in statistical terms, after controlling for the AFQT score, the accumulated wealth should not display any significant statistical association with the likelihood of ending a low-wage spell up by means of a transition towards a high-wage job.

In Table 3, I present the results of the estimation of those two models. I have estimated exponential models, considering multiple failures and adjusting the variance-covariance matrix from which robust standard errors have been calculated.

Table 3. **Wealth and the Transition out of low-wage jobs**.

Variables	Model 1 Hazard Ratio (Standard Error)	Model 2 Hazard Ratio (Standard Error)
Race (Reference: white)		
- Hispanic	0,977***	1,021+
	(0,006)	(0,009)
- Black	0,867***	0,989
	(0,005)	(0,008)
Gini coefficient	1,78e-62***	1,37e-41***
	(1,94e-61)	(3,35e-40)
Gini square	4,21e+67***	7,36e+44***
	(5,22e+68)	(2,04e+46)
Experience	1,003***	1,002***
	(0,0000426)	(0,0000553)
Experience square	0,9999985***	0,9999992***
	(3,06e-08)	(3,84e-08)
Industry (Reference: Manufacturing)		
Agriculture, Forestry and Fisheries	2,073***	1,605***
	(0,042)	(0,047)
Mining	1,774***	1,500***
	(0,024)	(0,027)

Construction	1,825***	1,568***
	(0,024)	(0,027)
Transportation, Communication and Other Public Utilities	1,860***	1,525***
	(0,026)	(0,028)
Wholesale and Retail Trade	1,372***	1,275***
	(0,018)	(0,022)
Finance, Insurance and Real Estate	1,718***	1,480***
	(0,026)	(0,029)
Business and Repair Services	1,478***	1,369***
	(0,021)	(0,025)
Personal Services	1,215***	1,123***
	(0,024)	(0,030)
Entertainment and Recreation Services	1,281***	1,168***
	(0,027)	(0,031)
Professional and Related Services	1,536***	1,409***
	(0,021)	(0,026)
Public Administration	2,046***	1,692***
	(0,029)	(0,031)
Age	1,011***	1,004***
	(0,0005767)	(0,0008131)
Age Square	0,9999831***	0,9999926***
	(7,74e-07)	(1,07e-06)
Cognitive Ability	1,045***	1,018***
	(0,001)	(0,001)
Number of years of completed education	1,003***	1,001***
	(0,0000932)	(0,0001181)
Lagged Assets (log)	-	1,051***
		(0,002)
Chi2	52138,38***	10552,94***
N	2935	2688

*** significant at $p < 0.001$; ** significant at $p < 0.005$; * significant at $p < 0.01$

+ significant at $p < 0.05$; ++ significant at $p < 0.10$

We can see that there is an association between individuals' accumulated wealth and their opportunities to escape low-wage jobs. There is a link between the (past) assets and the (future) hazard of ending up in a low-wage spell and transiting towards a high-wage job. From the estimated parameters, we can see that wealth is significantly associated with the hazard rate of escaping low-wage jobs. A 1% increase in wealth increases the hazard rate of escaping low-wage jobs by 5%. Even controlling for AFQT, wealth is an important determinant of the probability of ending up in a low-wage spell.

These results give support to the argument of the dissertation as applied to the explanation of the determinants of the transitions out-of low-wage jobs.

It is worth noting how the other covariates in the models are related with the opportunities to escape low-wage jobs. Experience in the labor market displays an association that goes in the expected direction. The longer the experience both unemployed and out of the labor force, the lower the probability of escaping low-wage jobs. On the contrary, other things being equal, the longer the employment experience, the higher such a probability is. Similarly, education and the hazard of ending a low wage spell display a positive association.

The sector of activity in which the individual is employed is related to his chances of escaping low-wage jobs. The most salient result in this regard has to with the lower opportunities associated with the service sector as compared with the (traditional) industry sector. This is especially the case of some areas within the service sector, particularly - and in order of magnitude - in the area of personal services, entertainment and recreation services, business and repair services, and professional and related services.

Finally, the aggregate level of income inequality displays a puzzling negative U-shaped relation with the opportunities to escape low wage jobs. The higher the inequality, the lower the hazard of making a transition to a high-wage job – although the negative coefficient of the Gini-squared suggests that such a negative relation takes place at a decreasing rate.

In the next section I shall explore the relation between one final set of covariates and the opportunities for earnings acquisition, namely race.

WEALTH, RACE, AND THE TRANSITION OUT OF LOW-WAGE JOBS

In the previous section, I have shown that assets do indeed matter. Individuals' accumulated wealth is related to their opportunities to escape low-wage jobs. In this section, I provide additional evidence in support of the argument. I set an *experimentum crucis* for the "assets matter" proposition. I investigate whether it supplies a satisfactory explanation of the black-white Entrapment Gap –namely, the fact that blacks, as compared to whites, are more likely to remain in low-wage jobs. The difference between blacks and whites in terms of their opportunities for earnings acquisition has constituted the battleground of different theories. In particular, Herrnstein and Murray (1994) have argued that the black/white gap is mainly or substantially the result of their heterogeneity with respect to intelligence: blacks are less intelligent than whites and this is why their earnings are lower. If the explanation of opportunities in terms of intelligence were correct, we should find the gap between these two to be eliminated when holding intelligence constant. However, I show that that is not the case. After controlling for intelligence, a substantial and significant gap remains between the two groups.

Recently, Oliver and Shapiro (1995) have shown in a very influential book that blacks and whites display an extremely unequal pattern of wealth holding. A

considerable part of this inequality is the result of what Oliver and Shapiro (1995: Chapter 2) call "the sedimentation of racial inequality". The history of black discrimination, economic segregation and low-wages is the factor underlying such a wealth inequality. Blacks, in the past, faced legal social and economic circumstances that worked against their ability to build up wealth. Former generations faced segregation and discrimination that brought about reduced opportunities to build up wealth. New generations have not inherited much wealth and, because of the strong intergenerational component underneath the buildup of wealth, are not able to accumulate much. This is why a focus on wealth provides the basis from which to "discover how blacks' socioeconomic status results from a socially layered accumulation of disadvantages passed on from generation to generation" (Oliver and Shapiro 1995: 6).

Therefore, if the argument in this paper is correct, it should explain at least partly the origin of the black/white "Entrapment" Gap. If assets inequality matters for improving individual's economic opportunities, and if wealth is unequally distributed between blacks and whites, we should predict different opportunities for them. Let us make explicit the underlying syllogism in order to clarify the argument.

1) Assets inequality matters. Given the imperfections of market economies, individuals' wealth becomes an important determinant of economic opportunities. In the earlier section of this paper, I have provided empirical evidence that supports such an argument.

2) Blacks and whites are unequal wealth-wise. As a consequence of what Oliver and Shapiro (1995) have called "the sedimentation of inequality", blacks have less wealth than whites. Net of the effect of education, income, propensity to save, and other determinants of wealth accumulation, blacks and whites are characterized by a very unequal pattern of asset holding.

3) The logical conclusion that we can draw from the former premises is that the black/white Entrapment Gap arises from their unequal initial wealth. If they had the same wealth, their opportunities for escaping low-wage jobs would be closer.

Consequently, an implication – or application - of the argument of this paper consists of providing a framework for the explanation of the black/white Entrapment Gap. This has an interest on its own, because of its substantive content. But, in addition, explaining the Entrapment Gap constitutes an *experimentum crucis* for the argument. If it is correct, given that blacks and whites are unequal wealth-wise, the Entrapment Gap between these two groups should be reduced once controlling for wealth. If we could make the distribution of assets between blacks and whites more equal, such a gap would be reduced. Put it differently, in a regression context, controlling for the accumulated wealth, the black/white gap should be reduced.

In this section, I will estimate two models (*vid*. Table 4 below). In the first model, I do not control for wealth. In Model 2 I consider the effect of wealth. The variables included in the models in Table 4 control for the main dimensions of black-white heterogeneity underlying the earnings gap (*vid*. Altonji and Blank 1999 for a

review). Let me justify the control variables used in the analyses by means of a brief review of the literature on the origins of the black-white Earnings Gap.

The explanations of the black-white gap can be broadly divided into two groups: demand- and supply-side explanations. The explanations in the first group emphasize the role of employers' decisions and hiring practices as the main underlying reason of the lower earnings of blacks. More particularly, the *gap* emerges from the application of discriminatory hiring practices by employers who decide not to hire, or to hire only in bad-jobs, black workers because of the color of their skin and not because of their job-related personal characteristics[7]. Such discrimination results in blacks becoming concentrated in, or being relegated to, economic sectors where wages are lower. That is, at least partly, the reason why they have lower wages than whites.

The explanations in the second group emphasize the role of the supply-side of the labor market. They offer an account of the earnings gap based on the individual characteristics of black workers that operate against their labor market advantage. These personal characteristics are of two types: pre-market differences, and market-factors. The bottom line of the explanation in terms of pre-market factors is the following one: blacks and whites do not attain the same level of education and acquire different skills *before* entering the labor market. As a result, they are less prepared to obtain higher-paying jobs (*vid*. O'Neill 1990; Maxwell 1994; Neal and Johnson 1996). The market-factors explanations, on the other hand, emphasize the role of market-related factors as the underlying cause of the racial gap: blacks accumulate less labor market experience and this results in obtaining lower wages (*vid*. Rosenfeld 1992 for a review)[8].

As I wrote above, in the vector of covariates in Models 1 and 2, I include variables that control for the several sources of the earnings gap. These variables are, firstly, the number of years of completed education and a measure of cognitive ability in order to control for the role of pre-market factors in the generation of the earnings gap. Secondly, the economic sector in which the individual is employed is intended to capture the role of segregation. Finally, the accumulated experience (measured in weeks) is intended to capture the role of market factors and the accumulation of labor market experience.

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[7] The literature on discrimination is quite broad. Although the common element is that blacks are relegated to low-paying jobs, the motivation behind employers has not responded to a single factor. In this branch of the literature two types of discrimination are distinguished: prejudice (*e.g.* Becker 1971) and statistical discrimination as a device to overcome imperfect information about the job-related personal characteristics of the discriminated group (*e.g.* Borjas and Bronars 1989; Black 1995).

[8] Two papers worthy of note are Tienda and Stier (1996) and Western (2002). Tienda and Stier (1996) show how racial disparities in the access to entry-level jobs and longer periods of unemployment give rise to earnings differentials for blacks and whites. Western (2002) shows that the impact of incarceration on wage mobility and inequality is channeled through the interruption of careers that imprisonment brings about.

Table 4. **Race, Wealth, and the Transition out of low-wage jobs**.

Variables	Model 1 Hazard Ratio (Standard Error)	Model 2 Hazard Ratio (Standard Error)
Race (Reference: white)		
- Hispanic	0,977***	1,021+
	(0,006)	(0,009)
- Black	0,867***	0,989
	(0,005)	(0,008)
Gini coefficient	1,78e-62***	1,37e-41***
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Gini square	4,21e+67***	7,36e+44***
	(5,22e+68)	(2,04e+46)
Experience	1,003***	1,002***
	(0,0000426)	(0,0000553)
Experience square	0,9999985***	0,9999992***
	(3,06e-08)	(3,84e-08)
Industry (Reference: Manufacturing)		
Agriculture, Forestry and Fisheries	2,073***	1,605***
	(0,042)	(0,047)
Mining	1,774***	1,500***
	(0,024)	(0,027)
Construction	1,825***	1,568***
	(0,024)	(0,027)
Transportation, Communication and Other Public Utilities	1,860***	1,525***
	(0,026)	(0,028)
Wholesale and Retail Trade	1,372***	1,275***
	(0,018)	(0,022)
Finance, Insurance and Real Estate	1,718***	1,480***
	(0,026)	(0,029)
Business and Repair Services	1,478***	1,369***
	(0,021)	(0,025)
Personal Services	1,215***	1,123***
	(0,024)	(0,030)
Entertainment and Recreation Services	1,281***	1,168***
	(0,027)	(0,031)
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	(0,021)	(0,026)
Public Administration	2,046***	1,692***
	(0,029)	(0,031)
Age	1,011***	1,004***
	(0,0005767)	(0,0008131)

Age Square	0,9999831***	0,9999926***
	(7,74e-07)	(1,07e-06)
Cognitive Ability	1,045***	1,018***
	(0,001)	(0,001)
Number of years of completed education	1,003***	1,001***
	(0,0000932)	(0,0001181)
Lagged Assets (log)	-	1,051***
		(0,002)
Chi2	52138,38***	10552,94***
N	2935	2688

*** significant at p< 0.001; ** significant at p< 0.005; * significant at p< 0.01

+ significant at p< 0.05; ++ significant at p< 0.10

From the estimated parameters of the models in Table 4, we can see that the gap in the probability of escaping low-wage jobs among blacks and whites disappears once we control for wealth. Certainly, when we do not control for wealth (as in Model 1), the hazard rate of escaping a low-wage job is 13% lower for blacks than for whites. When controlling for wealth, as in Model 2, the differences between blacks and whites becomes reduced to a mere 1% and turns out to be statistically non-significant. The coefficient of the dummy variable "black" is almost zero (or, equivalently, the hazard ratio is equal to one) and turns out to be statistically non-significant. This result implies that if blacks and whites had the same initial wealth at the time of starting a low-wage spell, they would enjoy the same opportunities to end such a spell and transit towards a high-wage job.

CONCLUSIONS

The argument of this paper establishes that the economic resources individuals are endowed with have implications for their economic opportunities. The link between the two arises from the institutional underpinnings of market economies. To put it succinctly, the argument goes as follows. As a byproduct of the organization of market economies, particularly the imperfect nature of credit markets and the absence of most insurance markets, wealth becomes an important determinant of economic opportunities. As a result, wealth-poor individuals face much more severe trade-offs than the wealthy if they decide to invest in mobility. The trade-off between present sacrifices and future benefits of mobility investments works to their disadvantage.

This argument has been applied to the explanation of individuals' opportunities to escape low-wage jobs. If wealth ownership is an opportunity-enhancing device, it should help individuals to escape the bottom of the labor market and, more specifically, to get away from low-wage jobs. A good deal of evidence in support of the argument

that assets do indeed matter has been provided. Assets are indeed shown to be associated with the probability of ending up in a low-wage-job spell. In the context of the hazard rate framework of this paper, evidence has been shown that starting a low-wage spell job with some accumulated wealth does indeed increase the chances of ending such a spell by making a transition towards a non-low-wage job.

Especially revealing of the explanatory power of the argument has been the analysis of the black/white "Entrapment" gap. The explanation of such a gap constitutes an *experimentum crucis* for the argument. If blacks and whites are unequal in terms of their pattern of wealth ownership (*vid*. Oliver and Shapiro, 1995), and if assets do indeed matter, we should expect blacks and whites to display different opportunities for escaping low-wage jobs. To put it differently, if the argument of the paper is correct, given that blacks and whites are unequal in terms of their initial endowment of wealth, blacks should realize less successful careers. Otherwise, the argument would not have explanatory power and therefore would not be correct.

Incidentally, this explanation of the black/white Entrapment Gap supplies an original contribution to the literature on the origins of the inequality between blacks and whites in the US. Following the path-breaking study of Oliver and Shapiro (1995), many empirical analyses have shed light on the racial differences of wealth ownership, particularly the unequal pattern of assets holding of blacks and whites. Wealth inequality among blacks and whites has been the *explanandum* of several empirical investigations, but no study has elaborated it as an *explanans* of the black/white earnings gap. There is a good deal of empirical evidence on the *causes* of black-white wealth inequality, but the actual as well as the potential *consequences* of such an inequality are yet to be explored. However, the analysis of the consequences of this unequal pattern of wealth holding has been explored just by Conley (1999) in a different context – the one provided by the relation between parents' wealth and their childrens' future opportunities in a number of realms.

In this spirit, a piece of evidence shows that the argument stands against this relevant piece of research. An analysis of the transition out of low-wage jobs allows concluding beyond reasonable doubt that the Entrapment Gap between blacks and whites is related to their initial assets inequality. Indeed, after controlling for wealth, the differential between the two groups disappears. This result reinforces our expectations about the relation between assets and life-chances in market economies.

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