

Criminalidade e Discriminação no Mercado e Trabalho: Uma Abordagem Empírica

Adolfo Sachsida

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Criminality and Discrimination in the Brazilian Labor Market: an Empirical Approach

Mário Jorge Cardoso de Mendonça

Institute of Applied Economic Research

Adolfo Sachsida

Catholic University of Brasília

Alexandre Ywata Carvalho

Institute of Applied Economic Research

Summary: The objective of this paper is to verify the existence of wage discrimination for prisoners serving time outside prison. By application of the Oaxaca-Ranson decomposition procedure it was possible to verify the existence of statistical discrimination against prisoners in the labor market. It was also observed that for prisoners, full engagement in the labor market seems to be hindered in that the results corroborate the Nagin and Waldfogel hypothesis (1993), which show that access of ex-prisoners to the labor market is restricted to the so-called spot or temporary work market, where training, experience and incentive have little relevance.

Key Words: Crime rate, Discrimination, Oaxaca-Ranson decomposition, Nagin and Waldfogel hypothesis, and Spot Market.

Classification JEL: K4, C25, Z13.

Address for correspondence: Prof. Dr. Adolfo Sachsida, Mestrado em Economia de Empresas, Universidade Católica de Brasília, SGAN 916 – Módulo B - Brasília – DF, Brazil, CEP: 70.790–160 – Phone: +55(61) 340-5550 (ext. 137) – Fax: +55(61) 347-4797

E-mail: sachsida@pos.ucb.br

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1. Introduction.

Since the publication of Becker's seminal work (1968), the literature on illegal behavior has been growing, incorporating themes that go beyond that originally analyzed by Becker. Among the new themes, one may note the effect of crime detention (deterrence effect), the employment of public policies to combat crime, and the effect of social interaction and family inheritance on the crime rate [Glaeser et al., 1999].

The discrimination that the former convict suffers in the labor market due to his/her detention deserves a prominent place on the research calendar. If there is an asymmetric barrier to the entrance of the ex-convict in the labor market, it excessively increases the probability that the individual will return to a criminal lifestyle. Some authors postulate the existence of a stigma effect (Imai and Krishna, 2001). It so happens that the stigma, as it very commonly appears, is exactly what the discrimination literature defines as statistical discrimination. According to Cain (1986) and Phelps (1972) statistical discrimination occurs due to an informational problem. As the employer does not know all the characteristics of the worker, the latter is attributed the average characteristics of the group to which he belongs. Thus, group characteristics will be attributed to the worker even though he does not necessarily possess them.

In the specialized literature at the international level, a vast body of empirical research exists concerning the monetary cost of discrimination. The main results of these studies mark the occurrence of salary reduction after the condemnation and imprisonment of the convict (Waldfogel, 1994, Lott, 1990 and 1992). In some countries such as Sweden, studies are already being carried out to change the law, restricting access to information about the prisoner. Nagin and Waldfogel (1993) revealed a type of perverse discrimination against those who had served time. The authors showed that there is a barrier hindering the ex-convicts' entrance into the long-term labor market, which would offer greater remuneration and stability for the individual. According to

Nagin and Waldfogel (1993), due to the fact that former convicts are stigmatized, they only have access to the "spot market".

The objective of this work is to verify whether wage discrimination exists in the labor market for prisoners. The work is based on an available sample formed of individuals that serve time outside prison¹. We also try to test the hypothesis of Nagin and Waldfogel (1993) concerning the nature of this discrimination. Thus, in Section 2 starting from the procedure of decomposition of Oaxaca-Ranson (1994, 1999), we verify whether statistical discrimination in the labor market for former convicts exists, and we compare this group to the one from a sample selected from the National Research of Home Samples (PNAD). In this way, the results for the two groups can be confronted. The objective of Section 3 is to deepen the analysis related to the phenomenon of discrimination, checking to see whether the hypothesis of Nagin and Waldfogel (1993) is verified. The hypothesis says that prisoners can only find occupations in spot labor market. Finally, Section 4 presents the main conclusions of this study.

2. Verifying the existence of salary discrimination for former convicts.

2.1. Oaxaca–Ranson’s Decomposition Method

To investigate the existence of salary discrimination for convicts, this study uses the methodology that appears in Oaxaca (1994), described below. In formal terms, the gross wage differential among non-discriminated groups (G_{ND}), and discriminated ones (convicts), is defined by

$$G_{ND} = W_N / W_D \quad (1)$$

where W_N represents the wage of the non-discriminated and W_D the convicts' wages. In the absence of discrimination, the differential between the groups should reflect only the difference in productivity (Q_{ND}), which can be expressed as

¹ These are prisoners who acquired the right to live outside prison walls, but who must present themselves monthly to a justice committee to inform it of their activities.

$$Q_{ND} = W_N^0 / W_D^0 \quad (2)$$

where 0 denotes the absence of discrimination. Starting from (1) and (2), a discrimination coefficient can be defined (D_{ND}) being proportional to the ratio between G_{ND} and, Q_{ND} or, equivalently,

$$D_{ND} = G_{ND} / Q_{ND} \quad (3)$$

Applying a logarithm transformation to this ratio, we have that

$$\ln D_{ND} = \ln G_{ND} - \ln Q_{ND} = \ln \frac{W_N}{W_N^0} - \ln \frac{W_D^0}{W_D} = \ln \delta_{N0} - \ln \delta_{0D} \quad (4)$$

where δ_{N0} is the differential between the average wage and the wage in the absence of discrimination for the non-discriminated, while δ_{0D} is the differential for convicts between the wage that would be earned in the absence of discrimination and the average wage. Combining the previous expressions we have that

$$\ln G_{ND} = \ln \delta_{N0} + \ln \delta_{0D} + \ln Q_{ND} \quad (5)$$

We will now assume that the logarithm of the medium wages for both groups is determined by a wage equation estimated by OLS. Thus, we have that $\ln \bar{W}_N = \bar{X}_N' \hat{\beta}_N$ and $\ln \bar{W}_D = \bar{X}_D' \hat{\beta}_D$ where \bar{X} is the vector of the medium values of the regressors and, $\hat{\beta}$ is the vector of coefficients estimated by OLS. From there, it is easy to show that

$$\ln G_{ND} = \ln \bar{W}_N / \bar{W}_D = \bar{X}_N' \hat{\beta}_N - \bar{X}_D' \hat{\beta}_D \quad (6)$$

or, equivalently,

$$\ln G_{ND} = \bar{X}_N' (\hat{\beta}_N - \beta^*) + \bar{X}_D' (\hat{\beta} - \hat{\beta}_D) + (\bar{X}_N - \bar{X}_D)' \beta^* \quad (6')$$

where β^* is the relative coefficient for a non-discriminatory structure. Starting from equation (5) it can be seen that the first term of equation (6') is an estimator for the wage advantage of those previously discriminated, $\ln \delta_{N0}$, in a discrimination context, and the second term of (6') is an estimator of the convicts' wage disadvantage, $\ln \delta_{0D}$, in the same discriminatory context. Finally, the last term of equation (6') is an estimator of the productivity differential $\ln Q_{ND}$. As one can see, it is necessary to specify some hypothesis concerning the wage structure for the case where discrimination does not occur. A way to determine β^* can be expressed as

$$\beta^* = \Omega \hat{\beta}_N + (I - \Omega) \hat{\beta}_D \quad (7)$$

where Ω is a weight matrix.

Taking into account that which was mentioned above, in order to obtain the decomposition of the discrimination in its components, it is necessary to first obtain the estimates for β_N , β_D , and Ω . According to what was mentioned above, and to that which commonly appears in literature, the estimates for β_N and, β_D in general, are obtained by means of the mincerian equation for the determination of the wage, and defined as

$$w_i = \ln W_i = \alpha + \beta S_i + \delta X_i + u_i \quad (8)$$

where W is a measurement of income or wage, S is a measurement of schooling, in number of years of study or completed grades, X is a group of variables that can also have effect on the income, and u is the random disturbance including all the forces which are not directly explicit in the model, but influence the individual's earnings.

The reason that the wage is taken in logarithm is due to the fact that equation (1) is a result of the solution of an optimum choice problem of the agent concerning the impact of the level of education over his future discounted income. The equation is

usually called the mincerian wage equation² (Griliches, 1977). We emphasize that the model only works for people inserted in the labor market, which is not a problem since we are concerned here about wage discrimination and not job discrimination³.

For the choice of the matrix Ω , to calculate the vector β^* , there does not exist, in a categorical way, a choice concerning the most efficient matrix. Some authors make use of a weight matrix with the form $\Omega_c = l_N I$, where l_N is the non-discriminated individuals' fraction, and I the identity matrix, so that $\beta^* = l_N I \beta_N + (1 - l_N) I \beta_D$ (Cotton, 1988). However, other definitions for Ω can also be used, as will be seen shortly.

2.2. Dataset, selection and descriptive statistics of the variables

Similarly to what happens in Willis & Rosen (1979), in this study the group of explanatory variables is small when compared to other works. Our explanatory variables consist of education (S), age, experience⁴ (EXP), squared experience (EXP2), the mother's education (SMAE), besides the dummy variables to illustrate the fact that the worker belongs to the union (UNION), is in the formal sector of the labor market (FORMAL) and is white (WHITE). A dummy variable was also created for prisoners (prisoner) that assumes value equal to 1 (one) if the individual belongs to the prisoners' sample and 0 (zero) otherwise.

Our dataset was composed using information for 417 prisoners serving time outside prison. The data had been previously obtained through direct interviews with the prisoners. The interviews had been conducted collected when the prisoners, serving time outside prison, presented themselves to the Center of Coordination of the Enforcement of Alternative Measures (CEPEMA). The questions in the original study were based on studies concerning returns to education. The prisoners answered the same questions commonly asked in works attempting to measure returns to schooling.

² The mincerian equation is widely used in studies concerning wage discrimination (Oaxaca, 1973 and Oaxaca and Ranson, 1994).

³ For more details about job discrimination, see Abowd and Farmer (1982), Heywood and Mohanty (1995), and Moranty (2002).

⁴ Experience = age – years of education – 6.

The sample used for the control group was obtained from data supplied by the National Research of Home Samples of 1996 (PNAD 1996)⁵, which is a national survey done by the Brazilian Institute of Geography and Statistics (IBGE). PNAD is a national annual sample research which interviews people in their homes. Among the questions asked in the PNAD questionnaire are questions that facilitate the estimation of a mincerian equation. The good quality of PNAD data transforms this into the main dataset for labor economists interested in subjects referring to Brazil.

Using other studies on returns to education as a base, we decided to select a subset of the individuals from the PNAD. Therefore, some filters were employed. In the first place, our sample is only composed of men between 24 and 56 years of age, because the decisions concerning their level of education are less complicated due to considerations about fertility (Cameron and Heckman, 2001)⁶. The second filter implies that only people who are not studying will be included⁷. The third filter acts in the following way: when an observation does not have one or more pieces of information concerning the independent variables, the observation is removed from the sample. This procedure appears in Heckman et al (2000)⁸. The fourth filter tries to avoid including people in the sample who: i) possess extremely high wages that could bias the results; and ii) who are not working. Thus, the filter permits the sample to be composed only of individuals who receive an hourly wage between R\$ 1.00 (approximately US\$ 0.30) and R\$ 500.00 (approximately US\$ 160)⁹. This procedure is commonly used to eliminate the effect of outliers, which can distort the results obtained via equation (8)¹⁰.

Due to the dynamics governing public administration and the agricultural sector of the Brazilian economy, the people occupied in these sectors were also excluded from the sample [Soares and Gonzaga, 1997]. Finally, we should highlight that our sample

⁵ The year 1996 was chosen because that is when information concerning the education of the individual's mother became available.

⁶ Bratsberg and Terrell (2002), Heckman et al (2000), Soares and Gonzaga (1997) and Garen (1984), also restricted their sample to men only.

⁷ Bratsberg and Terrell (2002), Heckman; Tobias and Vytlačil (2000) and Garen (1984) also used this procedure.

⁸ Garen (1984) estimates two regressions: the first, using incomplete observations and the second, using a sample that only considers the observations with all the information available.

⁹ Heckman; Tobias and Vytlačil (2000) restrict their sample to people who receive an hourly wage between US\$ 1.00 and US\$ 100.00.

¹⁰ This procedure is used to exclude, for example, individuals with low education level and very high salaries, or vice-versa.

was restricted to the inhabitants of the Distrito Federal. After these filters, the common people's sample was reduced to a set of 1402 observations. The prisoners' sample was reduced to a total of 395 observations.

In Table 1, we present some descriptive statistics for the variables that appear in this study. The first column refers to the prisoners, while in the second we present statistics, based on the sample from the PNAD, for the control group. In the third column, the descriptive statistics correspond to the pooled sample PNAD plus prisoners.

Table 1. Descriptive statistics of the variables

| Variables | Prisoners (1) | PNAD (2) | Unrestricted (3) |
|-----------------|---------------------------------|---------------------------------|---------------------------------|
| | Average (Standard Deviation) | Average (Standard Deviation) | Average (Standard Deviation) |
| WAGE* | 615.19 (650.05) | 1483.03 (1962.61) | 1268.13 (1772..65) |
| EDUCATION** | 7.25 (2.81) | 8.23 (4.65) | 7.971 (4..275) |
| AGE | 29.41 (9.45) | 36.23 (8.62) | 34.446 (9.125) |
| EXPERIENCE | 16.02 (9.06) | 22.00 (9.96) | 20.466 (10.082) |
| UNION*** | 0.179 (0.384) | 0.299 (0.458) | 0.268 (0.443) |
| FORMAL*** | 0.214 (0.410) | 0.388 (0.487) | 0.343 (0.475) |
| SCHOOL MOTHER** | 3.93 (3.504) | 3.521 (3.106) | 3.649 (3.238) |
| WHITE*** | 0.236 (0.425) | 0.462 (0.498) | 0.404 (0.490) |

* Monthly wage. ** Number of complete years of study. *** Dummy variables measured here represent the proportion of the individuals' sample with such characteristics.

Some preliminary comments can be made based on the inspection of Table 1. Initially, it can be observed that the selection of the sample from PNAD was elaborated

in an appropriate way. Comparing the average values and the variance between the two groups, one can observe that there is not much difference between the measurements for each of the variables, except for the wage. Therefore, we have a preliminary indication that a great amount of the wage differential is not only explained by the endowment difference among the groups, which throws light upon the existence of discrimination.

2.3. Main Results for the Oaxaca–Ranson Decomposition.

To present the results of the decomposition of Oaxaca-Ranson for the wage differential, it is first necessary to estimate the wage or the mincerian equation for each one of the two groups - prisoners and common people (PNAD). The results are presented in Table 1, whose estimates were obtained by OLS. As Griliches (1977) points out, using OLS estimation for the mincerian equation can generate biased estimates due to several problems (see, for example, Griliches, 1977, Garen, 1984). The main issues in this case refer to the endogeneity of the variable education. This endogeneity may affect the estimation of the parameter β corresponding to returns to schooling. To overcome these problems, one may employ a bias correction method such instrumental variable estimation. However, as the objective here is to proceed with the decomposition of Oaxaca, this problem will be put aside in this paper.

At this point we make a small interlude to justify the appeal of the explanatory variables of the equation (8). As was mentioned before, the variables that appear in Table 1 form the basic nucleus of explanatory variables for the equation of wages, and the employment of each one of them is common in related literature. Variables S and EXP are associated to the individual's productivity. The expected result is that a positive sign be found for both. In the equation of wages the appearance of the variable EXP2 is common. Its objective is to verify the hypothesis of decreasing returns for experience. In other words the impact of one more year of experience has a positive effect on the wage, but decreases every year. The WHITE dummy, as in another works, seeks to verify if race has some effect on the wage. It is common to find a positive sign for it. The dummies UNION and FORMAL check to see if being unionized and belonging to the formal section have

some effect on wages. Finally, although it may not seem intuitive at first sight, SMAE appears in the literature¹¹.

According to the results of Table 1, in most cases the variables are significant, and the signs found are in conformity with those that appear in other studies that estimate the wage equation. The negative sign for EXP2 also conforms to that which is seen in literature and simply shows that an individual's experience obeys the law of decreasing marginal revenues. The exception is due only to the sign found for the FORMAL variable which is negative here, unlike in other studies. This is, however, a unique characteristic of the labor market in the area of the Distrito Federal.

Table 2. Estimation results for the logarithm of the monthly wage equation, using OLS*.

| Independent Variables | PRISONERS | PNAD |
|------------------------------|-------------------|-------------------|
| S | 0.123 (0.000) | 0.142 (0.000) |
| Exp | 0.025 (0.000) | 0.057 (0.000) |
| Exp2 | -0.001 (0.000) | -0.001 (0.000) |
| Formal | -0.116 (0.056) | -0.210 (0.001) |
| Union | 0.418 (0.000) | 0.276 (0.000) |
| White | 0.038 (0.020) | 0.232 (0.000) |
| SMAE | 0.014 (0.049) | 0.013 (0.232) |
| Constant | 4.598 (0.000) | 4.215 (0.000) |
| R ² adjusted | 0.400 | 0.523 |
| Observations | 395 | 1402 |

* The values in parentheses are the p-values.

Once having obtained the wage equations for the different groups, the next task regards the application of the methodology presented in Section 2.1 for analysis of the

¹¹ The results seem to be robust to the exclusion of this variable. For more details about the estimation results, please contact the authors.

differential of wages, which is shown in Table 3. Before we talk about the analysis of the results, it is necessary to formulate some comments in relation to some contents that appear in Table 3.

Substituting the expression (7) to (6'), it is possible to define, in a simplified way, $\ln G_{ND}$ in the following manner,

$$\ln G_{ND} = E + C + CE \quad (8)$$

where E represents the portion of the salary difference explained by the endowments, C , the portion of the differential attributed to discrimination, while CE is linked to the interaction between attributes and coefficients. The problem is how to best distribute CE between C and E . In general, the partition is made by means of the weight matrix Ω . Naturally, the terms of (8) keep a direct relationship with equation (6'). In Table 3 the decomposition of Oaxaca-Ranson is calculated by several values of Ω , including the one for grouped (pooled) data when β^* is estimated joining the data of both groups.

In Table 3 we can see that a great part of the wage differential among the groups is due to discrimination. For the different values assumed for the weight matrix Ω no great disparity is observed. Here, with the exception of the calculation made for grouped (pooled) data, the wage differential between common citizens and former convicts attributed to discrimination occurs in an interval between 48% and 55%. This reveals the consistency of the Oaxaca-Ranson procedure in the current case.

As in the example of other authors (Waldfogel, 1994, and Lott, 1990, 1992), it can be confirmed here that discrimination does in fact exist in the labor market for the former convict and that this is manifested in a substantial reduction of the individual's wage.

Table 3. Oaxaca-Ranson decomposition - PNAD sample versus former convicts.

| Specifications | $\Omega = 0$ | $\Omega = I$ | $\Omega = 0.5* I$ | Cotton | Pooled |
|----------------|--------------|--------------|-------------------|--------|--------|
|----------------|--------------|--------------|-------------------|--------|--------|

Lw: Average Predicted PNAD = 6.926

Lw: Average Predicted PRISONERS = 6.130

| | | | | | |
|---|-------|-------|-------|-------|-------|
| Gross Differential (R) = 0.796 | | | | | |
| Attributed to Discrimination (U) = C + (1- Ω)*CE | 0.386 | 0.437 | 0.411 | 0.422 | 0.311 |
| Attributed to Endowments (V) = E + Ω *CE | 0.409 | 0.359 | 0.384 | 0.374 | 0.485 |
| Attributed to Discrimination (U/R) | 48.6 | 54.9 | 51.7 | 53.0 | 39.1 |
| Attributed to Endowments (V/R) | 51.4 | 45.1 | 48.3 | 47.0 | 60.9 |

3. Implications of Salary Discrimination for the Life Cycle of the Agents.

In the previous section it was possible to verify the existence of salary discrimination for former convicts in the labor market. From the starting point of the application of the Oaxaca-Ranson methodology it can be verified that the data corroborates the existence of statistical discrimination for former convicts. The objective, then, of this section is to say something regarding the nature of this discrimination. As it was said in the introduction, according to Nagin and Waldfogel (1993) one of the consequences of imprisonment is the instability of employment. That is, for the individual who has served time in prison it is more difficult to find stable employment. Here we define stable employment as one in which the individual can develop a career or work for a long period. If the individual does not participate in this segment of the labor market, it is said that he is linked to the short-term labor market or "spot market".

If we consider wage dynamics and the trajectory of the agents' income over time, to belong to one or another kind of market has important implications. Among the most apparent characteristics of both markets is the fact that the wage level for initial training in the stable type of segment is less than in the spot market.

However, this situation changes over medium and long periods of time. Wages in the stable market become quite superior to those paid in the spot market. The explanation for this series of events in these two markets is due basically to the

conjugation of three factors: training, experience and incentive for permanence in the employment.

In relation to training, very little or no specific training is given to the individual entering the spot market. In long term occupations, however, companies invest in training and usually do not demand any specific knowledge, except academic completion or that the agent have at least some kind of base. For this reason it makes sense that once the firm has invested in the education of their human capital, it also makes an effort to maintain the employee in the company. This can be done in a variety of ways, the most common being to offer a program of incentives to the employee: a gradual wage increase, etc. Short-term employment is different. Due to the nature of the activities of this market almost nothing is done in terms of training, and the programs of incentives are more related to reaching productivity goals and not specifically the worker's permanence. Both of these facts occur because of the easiness of labor substitution in the spot market.

Regarding the demand or the experience in the two markets, this is an important point, and is supported by the data, which can be seen in the sample. A norm of the long-term labor market is that for initial stages little or no experience is demanded from the individual. Some companies prefer people that don't possess any experience at all because the latter have not yet become stigmatized. It goes without saying that we are referring to young people that are entering in the labor market. Thus the experience has very little relevance to the insertion of the young individual into the long term labor market. Contrarily, for the individual who is older experience is a fundamental requirement for entering or staying in this market.

As for the spot market, it is verified that its relationship to experience is exactly the opposite. For young individuals, experience has a certain value in that he/she understands "maturity" or "responsibility" as being derived from experience and not acquired knowledge, whereas for older adults, experience has little relevance. As Nagin and Waldfogel (1993) show, there is evidence that the income of a person who has a prison record suffers negative impact during his/her life cycle due to stigmatization. Therefore, the individual becomes ostracized from the long-term labor market. To find

out if there is evidence that our data confirms this hypothesis, we will adopt the following procedure.

For both samples - former convicts and individuals from PNAD - we will work with two sub-samples: individuals aged under and over 25 years old. The idea here is to observe how the coefficient of the variable experience reacts. If the hypothesis that former convicts are confined to the spot market is shown to be correct, then it would be expected that for the sample of individuals over 25 the coefficient of this variable would have little or no significance. The opposite would be true for those individuals under 25.

Taking the data of Table 4 and the information above into account, it is possible to observe that the results seem to corroborate the discrimination hypothesis for former convicts regarding the employment category. The coefficient of variable EXP portrays exactly the desired pattern, according to what was delineated. It corroborates the fact that the prisoners are confined to a specific segment of the labor market. For the sample of ex-convicts containing people over 25, the coefficient of EXP shows no significance. This contrasts radically with the results of the selected PNAD sample in the same wage bracket. One can also observe that for the sub-sample of former convicts under 25, EXP is significant at the level of 5%, different from that which was verified for this variable in relation to the PNAD sample of individuals of the same age.

Table 4. Estimation results for the logarithm of the monthly wage equation (before and after 25 years old)*.

| Independent Variables | Ex-Convicts | | PNAD Sample | |
|-----------------------|-------------------|-------------------|-------------------|-------------------|
| | Age <= 25 | Age > 25 | Age <= 25 | Age > 25 |
| S | 0.111 (0.000) | 0.121 (0.000) | 0.117 (0.000) | 0.143 (0.000) |
| Exp | 0.127 (0.050) | 0.007 (0.691) | 0.084 (0.120) | 0.053 (0.000) |
| Exp2 | -0.004 (0.004) | -0.001 (0.202) | -0.003 (0.200) | -0.001 (0.001) |
| Union | 0.288 (0.024) | 0.431 (0.000) | 0.154 (0.078) | 0.225 (0.000) |
| Formal | -0.091 (0.336) | -0.128 (0.232) | -0.324 (0.000) | -0.188 (0.000) |

| | | | | |
|-------------------------|------------------|------------------|------------------|------------------|
| White | 0.010 (0.003) | 0.057 (0.040) | 0.257 (0.000) | 0.240 (0.000) |
| SMAE | 0.015 (0.101) | 0.015 (0.210) | 0.013 (0.257) | 0.010 (0.151) |
| Constant | 4.168 (0.000) | 5.041 (0.000) | 6.026 (0.000) | 4.789 (0.000) |
| R ² adjusted | 0.201 | 0.201 | 0.430 | 0.524 |
| Observations | 181 | 214 | 267 | 1135 |

* Values in parentheses are the p-values.

5. Final comments.

The aim of this work was to verify the existence of wage discrimination for former convicts. Using a comparative study between the data gathered from the central office of Coordination of the Enforcement of Sentences and Alternative Measures (CEPEMA) for people that serve time outside prison in the city of Brasilia (DF) and a selected sample of PNAD it was possible to verify by means of the application of the procedure of decomposition of Oaxaca-Ranson that statistical discrimination does exist against former convicts in the labor market.

It was also observed that full absorption of former convicts into the labor market seems to be even more compromised in that the results corroborate the hypothesis of Nagin and Waldfogel (1993) which show that the access of the ex-convict to the labor market is restricted to the spot, or temporary labor market where training, experience and incentive have little relevance. One of the perverse effects resulting from this is a decrease in the present value of the individual's discounted income taking into account that long term jobs are those that offer better salary expectations.

Among the suggestions for public policies that one can obtain from this research is that once a prisoner is confined, it would be appropriate to place him/her in some kind of program to stay in touch with the labor market with the objective of insertion into the trajectory of long-term employment. This would help to decrease the stigma of being an ex-convict. If nothing is done, he/she will know that only unattractive employment is available, which will not ensure stability throughout the life cycle. This would be one more factor that could provoke the former prisoner to return to a life of crime.

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