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### **The Labour Market Behavior of Public Assistance Recipients in Cyprus**

**Panos Pashardes**  
*Department of Economics and  
Economics Research Centre*

**Alexandros Polycarpou**  
*Economics Research Centre*

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# **The Labour Market Behavior of Public Assistance Recipients in Cyprus \***

Panos Pashardes and Alexandros Polycarpou

## ***Executive Summary***

This paper investigates the labour market behaviour of public assistance recipients in Cyprus. The main objective of the study is to reach practical policy conclusions for a more efficient economic and social support of public assistance recipients, encourage their participation in the labour market and eliminate their dependence on state support.

Based on the descriptive analysis of the data, public assistance recipients in Cyprus have lower level of education than the general population. They also have lower labour market experience measured as years worked. Recipients have, on average, worst health condition than the general population with multiple health problems which are the main reasons reported by recipients for not participating in the labour market. On the other hand, unwillingness to work is not reported as a major factor in the decision of public assistance recipients not to participate in the labour market. The main factors stated by the recipients as encouraging them to work are higher wages and more flexible hours. In addition, psychological support, care services for dependants and improvement of their work qualifications are also stated as reasons for starting work. Almost all recipients report that they are not willing to take up an unpaid job for work experience and/or charity. This suggests that the recipients do not think that experience gained from unpaid work in the labour market or in the voluntary sector can be useful in finding gainful employment in the future.

The econometric analysis confirms the effect of well-known obstacles to the labour market integration of public assistance recipients: bad health, old age, low education and limited work experience. The analysis also shows the negative effect of non-labour income, like public assistance benefit, on employment participation and

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\* We would like to thank the Social Welfare Services of the Ministry of Labour and Social Insurance for allowing us to use results contained in the report "A Study on the Identification and Registration of Persons Helped by Social Welfare Services who Face a High Risk of Poverty and Social Exclusion" (in Greek), June 2009, ISBN: 978-9963-32-206-0. We would also like to thankfully acknowledge the use of data drawn from the EU Statistics on Income and Living Conditions (EU-SILC) and stress that Eurostat has no responsibility for the results and conclusions of this paper.

working hours; and the positive effect of work experience. The size of hourly wage also affects positively the number of hours spend in the labour market. In addition, public assistance recipients are found to have non-realistic perceptions about the going wage rate and other labour market conditions that drive them away from the labour market.

A number of policy conclusions emerge from our analysis, including the need for more training courses, child care facilities and physiological support; and better informed public assistance recipients about the true conditions in the labour market. In addition public assistance benefit entitlement policy should give more incentives for work and for actively looking for a job while receiving the benefit. There should also be penalties for public assistance recipients abandoning their job without a convincing reason. It is also important for the employment incentives to reflect differences in the labour supply elasticity among various categories of public assistance recipients. Strong collaboration between competent authorities is important for jointly designed and implemented measures to integrate public assistance recipients in both the labour market and the society.

The expansion of public assistance entitlement in 2006 made the benefit less targeted; while the subsequent rise in the benefit level increased income inequalities and created disincentives for employment among public assistance recipients. More effective procedures are needed for targeting and for rationalising and substantiating the eligibility criteria for the benefit.

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# Η Συμπεριφορά των Ληπτών Δημοσίου Βοηθήματος στην Αγορά Εργασίας

Πάνος Πασιαρδής και Αλέξανδρος Πολυκάρπου

## ΠΕΡΙΛΗΨΗ

Σε αυτή τη μελέτη αναλύεται η συμπεριφορά των ληπτών δημοσίου βοηθήματος (ΛΔΒ) στην αγορά εργασίας. Απώτερος στόχος είναι η εξαγωγή συμπερασμάτων πολιτικής για μια πιο αποτελεσματική οικονομική και κοινωνική στήριξη των ΛΔΒ και απεξάρτησή τους από το δημόσιο βοήθημα με ένταξη στην αγορά εργασίας.

Με βάση την περιγραφική ανάλυση των στοιχείων, οι λήπτες δημοσίου βοηθήματος στην Κύπρο έχουν χαμηλότερο επίπεδο μόρφωσης σε σχέση με το γενικότερο πληθυσμό. Επίσης έχουν λιγότερη επαγγελματική εμπειρία μετρούμενη με χρόνια στην αγορά εργασίας. Οι λήπτες έχουν, επίσης, χειρότερη κατάσταση - με πολλαπλά προβλήματα - υγείας από το γενικότερο πληθυσμό, που αποτελούν και τους λόγους που δηλώνονται με μεγαλύτερη συχνότητα μη συμμετοχής στην αγορά εργασίας. Αντίθετα η απροθυμία για εργασία δεν αποτελεί σημαντικό παράγοντα μη συμμετοχής των στην αγορά εργασίας. Παράγοντες που δηλώνονται με τη μεγαλύτερη συχνότητα από τους λήπτες δημοσίου βοηθήματος ότι θα τους ωθούσαν στην αγορά εργασίας είναι υψηλότερος μισθός και πιο ευέλικτο ωράριο. Ακολουθούν η ψυχολογική στήριξη, οι υπηρεσίες φροντίδας για εξαρτώμενα άτομα και η βελτίωση των επαγγελματικών προσόντων. Σχεδόν όλοι οι λήπτες δημοσίου βοηθήματος δηλώνουν ότι δεν θα εργάζονταν χωρίς αμοιβή, κάτι που δείχνει ότι δεν θεωρούν ότι η εθελοντική εργασία θα τους πρόσφερε χρήσιμες γνώσεις και εμπειρίες.

Η οικονομετρική ανάλυση βεβαιώνει τα βασικά εμπόδια στην απασχόληση που δηλώνονται από τους λήπτες δημοσίου βοηθήματος, όπως είναι η κακή κατάσταση της υγείας, η μεγάλη ηλικία, η χαμηλή μόρφωση και η περιορισμένη επαγγελματική εμπειρία. Επιπλέον, αναδεικνύει την αρνητική επίδραση των εισοδημάτων από πηγές εκτός εργασίας (όπως είναι το δημόσιο βοήθημα) στην πιθανότητα απασχόλησης και ωρών εργασίας, και τη θετική επίδραση της επαγγελματικής εμπειρίας. Το ύψος του μισθού έχει επίσης θετική επίδραση στις ώρες εργασίας των ληπτών. Επιπρόσθετα, προκύπτει ότι ένας σημαντικός λόγος μη συμμετοχής των ληπτών δημοσίου βοηθήματος στην αγορά εργασίας είναι οι μη ρεαλιστικές προσδοκίες τους, ιδιαίτερα η υπεραισιοδοξία τους για το ύψος του μισθού που θα τους προσφερόταν αν αποφάσιζαν να εργαστούν.

Από τη μελέτη προκύπτουν πολλά συμπεράσματα πολιτικής για ένταξη των ληπτών δημοσίου βοηθήματος στην αγορά εργασίας, για παράδειγμα περισσότερη κατάρτιση, ενημέρωση, φροντίδα για εξαρτώμενα πρόσωπα και ψυχολογική στήριξη. Επίσης, περισσότερα οφέλη όταν εργάζονται ή ζητούν ενεργά απασχόληση και αυστηρότερες ποινές όταν εγκαταλείπουν την εργασία τους χωρίς σοβαρό λόγο. Είναι, επίσης, σημαντικό τα κίνητρα απασχόλησης να λαμβάνουν υπόψη τα ιδιαίτερα χαρακτηριστικά των διαφόρων ομάδων για να είναι αποτελεσματικά. Παράλληλα, προτρέπεται συνεργασία των αρμόδιων υπηρεσιών, ώστε μαζί με την απασχόληση να επιδιώκεται και η ένταξη στην κοινωνία.

Τα αποτελέσματα της μελέτης συνηγορούν υπέρ της εισαγωγής πιο αποτελεσματικών διαδικασιών στόχευσης και εξακρίβωσης του δικαιώματος στο δημόσιο βοήθημα. Η επέκταση των κριτηρίων που ορίζουν τους δικαιούχους με την αλλαγή του νόμου το 2006 μείωσε τη δυνατότητα στόχευσης. Αυτό, σε συνδυασμό με τη μετέπειτα αύξηση του ύψους του δημοσίου βοηθήματος, έχει δημιουργήσει μεγάλες εισοδηματικές ανισότητες και αντικίνητρα για εργασία ανάμεσα στους λήπτες δημοσίου βοηθήματος.





## 1. INTRODUCTION

Public assistance benefits are designed to satisfy the fundamental right of every human to have sufficient funds to live a decent life, enjoy the fruits of social progress and be assisted, whenever needed, in order to avoid social alienation and exclusion. Studies show that although the amount of public assistance benefit is sufficient to offer a decent life to the recipients, it also creates disincentives for employment, and many recipients and their families are driven into a state of perpetual poverty (e.g. Moffitt, 1992, 2002; Blank, 1985; Sandefur and Cook, 1997).

A number of researchers analyse the effect of public assistance benefit on labour market participation and the barriers they face for working. The most important factors which avert the public assistance recipients to enter the labour market are the physical or psychological health problems (Taylor and Barusch, 2004; Lee and Vinokur, 2007; Burtless, 1997). Among the public assistance recipients able to work, i.e. without serious disability/health problems, the labour market participation is lower among those with low education and labour market experience (Perkins, 2007; Ayala and Rodriguez, 2007; Lorentzen and Dahl, 2005; Baider and Frank, 2006). The probability of exit from the benefit and enter the labour market declines with age (Walker and Shaw, 1998; Gustafsson and Voges, 1998), years of benefit receipt (Sanderfur and Cook, 1997; Dahl and Lorentzen, 2003), single parenthood and unavailability of child care services (Lee and Vinokur, 2007; Sheldrick et al., 2004; Burtless, 1997; Keane and Moffitt, 1998). Other obstacles to the labour market of public assistance recipients include: the inability to find a job or low quality jobs offers (Lee and Vinokur, 2007; Sheldrick et al., 2004), alcohol or drug addiction (Taylor and Barusch, 2004; Ayala and Rodriguez, 2007; Perkins, 2007; Baider and Frank, 2006) and lack of transportation (Lee and Vinokur, 2007; Burtless, 1997). In the literature it is commonly accepted that some recipients, like the ones with serious physical or psychological problems, cannot become completely independent from the public assistance benefit since they cannot be financially self-reliant. For these individuals the most effective labour policies are argued to be the ones targeting part-time employment and/or social work.

Different active labour market policies for public assistance recipients have been applied in different countries (Peters, 2007). The main characteristics of these policies are:

- more strict criteria for public assistance benefit entitlement and less generous benefit amount to make employment more attractive,

- conditioning public assistance entitlement on participation in active labour market policies and search for work, and
- closer cooperation between the services in charge for public assistance benefit and employment.

The objective of the active labour market policies applied in different countries is to increase either the labour market participation of recipients or their social inclusion through employment. In general, the short-term results of these policies are quite satisfactory. The long run results of these policies, however, have not been fully studied yet, although the most promising policies appear to be the ones which combine participation increase and social inclusion through cooperation of the appropriate government services.

In Cyprus, the network of social protection is very wide and covers a variety of needs, in a degree that compares favourably to that of many other countries at international level. The Law regarding Public Assistance and Services ensures the right to a decent standard of living for every person who legally resides in Cyprus and does not have the necessary funds for covering his/her basic/special needs. Legislation on Public Assistance incorporates employment incentives to encourage social inclusion so as to eventually end dependence on public assistance. Particularly vulnerable categories (e.g. persons with disabilities, single parent families<sup>2</sup>, families with four or more children and families in high risk of dissolution) are entitled to public assistance even if they are employed full-time. Additionally, the Social Welfare Services (SWS) in cooperation with the European Union run projects through which public assistance recipients receive training and, upon completion, are placed in the labour market in subsidised work positions<sup>3</sup>.

This paper investigates the labour market behaviour of public assistance recipients in Cyprus using quantitative (descriptive statistics and econometric) techniques.

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<sup>2</sup> After the 2012 reform of the Public Assistance Benefit single parents are not entitled to the benefit.

<sup>3</sup> Alternative active labour market policies has been applied for helping or increasing the participation of population groups like women, new graduates, unemployed or individual with physical disabilities by the Ministry of Labour and Social Insurance and from the Human Resource Development Authority of Cyprus. For public assistance recipients in particular a program is offered for the increase of their labour market participation. The program is under the responsibility of the Social Welfare Services and offer general training to public assistance recipients and then, under the plan for subsidizing employment of public assistance recipients in the private sector, places them in jobs in the private sector. Based on the 2005-2008 program, the results was satisfactory since 310 recipients participate in the program (the target was 400 recipients).

The empirical analysis is carried out using data collected exclusively for public assistance recipients<sup>4</sup> and data drawn from the EU Statistics on Income and Living Conditions (EU-SILC)<sup>5</sup>. Based on the results of the study, conclusions are drawn about the labour behaviour of public assistance recipients. The policy implications of the results can be used to design measures for increasing the labour market participation of public assistance recipients and making the public assistance benefit more efficient towards promoting labour market activation and reducing dependence on state benefits.

The format of the paper is as follows: in section 2 we use descriptive analysis to examine particular characteristics of public assistance recipients in Cyprus which, based on the literature, affect labour market behaviour; section 3 shows the empirical results obtained from the study of the labour market behaviour of the recipients using econometric analysis; section 4 presents policy recommendations that arise from the analysis in the paper and concludes.

## **2. CHARACTERISTICS OF PUBLIC ASSISTANCE RECIPIENTS**

The capability of an individual to join the labour market and become independent from state welfare benefits is generally accepted to be the best way to escape poverty and social exclusion. However, based on the international literature, some conditions are required for achieving permanent integration of public assistance recipients into the labour market, such as the acquisition of knowledge and skills; and the safeguarding of favourable remuneration and suitable working conditions. Individuals who are re-joining the labour force also need support for (a) coping with the adjustment difficulties in the workplace, (b) meeting the obligations to their dependents, and (c) achieving greater social inclusion, together with the integration into the labour market.

The most difficult cases of individuals who are re-joining the labour force involve public assistance recipients who are, as is customary to say, very 'away' from the labour market; and, thus, special preparation and mechanisms are required to facilitate their gradual transition from inactivity to employment. These mechanisms operate by offering these persons employment in different sectors of society, social economy or volunteering. A question that concerns the international literature is

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<sup>4</sup> More details are given in the Appendix.

<sup>5</sup> European Commission, Eurostat; Cross-section EU SILC UDB 2006 - version 1, March 2008.

how willing the recipients of public assistance are to participate into this kind of employment; and whether their willingness or reluctance to do so is due to insufficient information about the benefits that could accrue from such policies. Below we will try to shed some light to this question by analysing the following characteristics of public assistance recipients:

- education, professional training and experience,
- health condition,
- health problems of dependents,
- problems at the working place, and
- aptitude to work.

## **2.1 Education, professional training and experience**

Education and professional training are the two most important human capital characteristics which affect the ability of public assistance recipients to seek for gainful employment (i.e. to identify potential employers, to be able to describe his/hers qualifications, to cope successfully in job interviews) and the quality of work he/she can provide. Poor work quality leads not only to adverse working conditions but also to low wages, which prevents the recipients of public assistance to ensure a decent standard of living.

Table 1 presents the qualifications of public assistance recipients in our sample, divided into three categories: (a) education, (b) professional training and (c) professional experience. In addition, the last column of the table shows these qualifications for the general population as an indicator of how public assistance recipients are compared with the general population.

In general, the level of education of public assistance recipients is lower than the one of the general population. Among the recipients of public assistance, particularly high is the percentage among those who did not finish primary school (16,3% vs. 3,1% of general population) and those who finished only primary school (24,9% vs. 16,2% in the general population). In contrast, among the recipients of public assistance, the percentage who finished high school or technical school is 28%, compared with 40,2% of the population; while the percentage with tertiary education is only 8,8%, compared with 27% in the population.

**Table 1: Comparison of the human capital characteristics between the public assistance recipients with the population at large**

	Public assistance recipients	Population <sup>6</sup>
<u>(a) Educational Level</u>		
No primary school	16,3%	3,1%
Primary school	24,9%	16,2%
Gymnasium	19,9%	13,4%
Lyceum/Technical school	28,0%	40,2%
Tertiary	8,8%	27,0%
Special education <sup>7</sup>	2,1%	-
<u>(b) Participation in professional training programs</u>		
Program for the promotion of employment of recipients	4,3%	
Other training programs	5,9%	
Total <sup>8</sup>	7,8%	
<u>(c) Work experience<sup>9</sup></u>		
Employed Individuals	12,4	18,9
Former employed individuals	10,9	18,1
Total	6,9	18,7

Public assistance recipients were asked whether they took part in the program offered by the SWS for the promotion of their employment by offering them general (but, also, specific) professional training. Only 4,3% responded positively. Considering that only 18% said they knew about the program one could argue that a main reason for non-participation was insufficient information. However, the fact that among those aware of the program the majority (74,7%) did not take part shows that the low rate of participation in the program was also due to other reasons. Low participation rates among public assistance recipients are also observed in training programs offered by other Governmental Organisations in Cyprus, where the participation rate is only 5,9%.

<sup>6</sup> Data for the population are drawn from the EU-SILC UDB 2006, version 1st of March 2008.

<sup>7</sup> Special education reported by the public assistance recipients includes schools outside the traditional educational system e.g. Blind School, Christos Steliou Ioannou Foundation.

<sup>8</sup> About 2,5% of individuals participated in the SWS program for the promotion of employment among public assistance recipients who also participated in other training programs.

<sup>9</sup> The numbers reported here are the average number of years of work experience.

As reasons for not participating in these programs most public assistance recipients declare: ignorance, health problems, lack of time and taking care of their dependents. The fact that ignorance is an important factor for non-participation of recipients of public assistance in programs designed to help them find employment is surprising given the efforts of SWS to (a) find ways to stop the dependence of recipients from public assistance and (b) inform recipients about the provisions and substantial benefits of participating in professional training programs.

Regarding the professional experience the last part of Table 1 shows that the average experience among public assistance recipients in work is 12,4 years - compared to 18,9 years in the population; while the average experience among those who have worked sometimes in the past is 10,9 years - compared to 18,1 years in the population.

## 2.2 Health Condition

Public assistance recipients appear to be a group of people with many health problems: 51,7% of them reported as reason for receiving public assistance benefit health problems, such as physical/mental illnesses, alcoholism/drug addiction, mental impairment, learning disabilities and a history of domestic violence.

Table 2 shows how the public assistance recipients evaluate their health condition by gender, together with the corresponding percentages in the population. Those who believe that their health condition is very good is only 13,4% - compared to 54,8% in the population; while the percentage evaluating their health condition as very bad is 8,1% - compared with 0,9% in the population. The differences between the two sexes are not statistically significant.

**Table 2: Health condition<sup>10</sup>**

	Men		Women		Total	
	Recipient	Popul.	Recipient	Popul.	Recipient	Popul.
Very good	14,4%	56,7%	12,7%	53,0%	13,4%	54,8%
Good	22,7%	28,7%	25,4%	28,6%	24,3%	28,7%
Average	32,1%	9,5%	32,0%	13,0%	32,0%	11,3%
Low	21,8%	4,2%	22,5%	4,5%	22,2%	4,3%
Very low	9,0%	1,0%	7,4%	0,9%	8,1%	0,9%

<sup>10</sup> Data for the population are drawn from the EU-SILC UDB 2006, version 1st of March 2008.

Table 3 shows the extent to which public assistance recipients believe that their health problems prevent them from working. Therefore, the total (last column in Table 3) shows the number of public assistance recipients who reported the particular health problem as a preventing factor for working. A significant percentage (43,8%) said that they face problems of depression or anxiety. It is also important that 60% of those who reported problems with depression or anxiety declare that this problem prevents them 'much' or 'very much' to work.

**Table 3: The extent to which public assistance recipients believe their health problems prevent them from working<sup>11</sup>**

	Not at all	Little	Average	Much	Very much	Total
Deafness and Blindness	9,1%	24,0%	26,7%	19,7%	20,4%	25,3%
Other physical disability	3,6%	8,5%	18,5%	30,6%	38,8%	43,1%
Depression/Anxiety	2,3%	10,8%	26,8%	31,6%	28,5%	43,8%
Alcoholism/Drugs	27,5%	8,3%	13,3%	21,7%	29,2%	4,1%
Other psychological problems	5,2%	4,6%	17,2%	27,4%	45,6%	23,6%
Learning disabilities	6,8%	13,8%	18,7%	27,9%	32,7%	17,4%
Mental impairment	8,6%	11,0%	17,1%	25,7%	37,6%	15,4%
Victim of domestic or phy. abuse	12,5%	6,6%	19,5%	18,7%	42,8%	8,7%
Other health problems <sup>12</sup>	1,3%	5,5%	21,7%	30,1%	41,4%	10,5%
No health problem	0,0%	0,0%	0,0%	0,0%	0,0%	11,9%

The second most important health problem raised by public assistance recipients as barrier to employment is physical disabilities. About 25% indicate deafness or blindness as a barrier for employment, and 43,1% other physical disabilities; although, sight or hearing problems do not seem to affect very negatively their employment. On the other hand, other physical disabilities seem to be an important barrier to work since 69,4% said that they prevent them much or very much from working.

The 'other psychological problems' (i.e. except depression, anxiety, drug abuse and alcoholism) are also reported as a major barrier to employment among public

<sup>11</sup> It should be noted here that the percentages do not add up to 100 because one person could indicate more than one problem.

<sup>12</sup> A percentage of 10,5% of the recipients reported other health problems which are essentially pathological illnesses.



assistance recipients: a percentage of 23.6% said that they face such problems, and among those about 73% reported these problems as a large or very large barrier to working. Other major obstacles to work are learning disabilities, mental impairment and/or mental/physical health problems.

Recipients with drug and alcohol abuse are only a small portion (4,1%) of the public assistance recipients; and among those who have these particular problems about 27,5% did not consider them to be an obstacle to work. On the other hand, more than 50% consider drug and alcohol abuse problems as a large or very large barrier to work. Comparably diverse are also the answers given by public assistance recipients who have been victims of domestic or physical abuse; but here over 60% of the recipients considers this problem as a large or very large obstacle to work.

### **2.3 Health problems of dependants**

The existence of dependents, with or without health problems, is a problem facing not only recipients of public assistance but the entire population, especially single parent families. However, the negative effect on the labor supply is more pronounced among recipients of public assistance due to their difficult financial situation not allowing them to purchase quality care for their dependent persons; while, at the same time, the anticipated low wages discourage them people from seeking employment. This problem becomes even more serious when the dependants, children or adults, face health problems since they need costly special care.

Table 4 shows that about 78,1% of the dependents of public assistance recipients do not face any health problem. The most common health problem for the spouses is physical disability (except deafness and blindness), and problems of depression and anxiety. The most common problems faced by other dependents of public assistance recipients, including children and elderly people (e.g. elderly parents who may not live in the same household of the recipient but depend on them for care) are: depression or anxiety (4,8%), learning disabilities (4,7%), deafness/blindness (4,3%), other psychological problems (3,8%) and other physical disabilities (3,3%). Alcoholism and drug abuse are reported less frequently. The same is true for mental problems (1,8%) and family violence (1,6%).

**Table 4: Health problems of dependants<sup>13</sup>**

	Spouse	Other Dependent	Total
Deafness and Blindness	5,4%	4,3%	4,5%
Other physical disability	11,2%	3,3%	4,6%
Depression/Anxiety	10,5%	4,8%	5,8%
Alcoholism/Drugs	1,4%	0,7%	0,8%
Other psychological problems	4,5%	3,8%	3,9%
Learning disabilities	2,9%	4,7%	4,4%
Mental impairment	1,3%	1,8%	1,7%
Victim of domestic or phy. abuse	0,2%	1,6%	1,3%
Other health problems	10,3%	3,6%	4,7%
No health problem	66,8%	80,3%	78,1%

## 2.4 Problems in the working place

One problem that concerns researchers is to reach conclusions that can help practitioners design policies that encourage recipients of public assistance not only to find a job but, also, to stay on it permanently; or, at least, remain in search of employment.

Table 5 shows, among the public assistance recipients who were not working at the time of interview but worked in the past, the reasons for leaving their last job. Mainly health problems are reported. In particular, among the recipients of public assistance who were not working at the time of the interview, but used to work in the past, 55,6% said that they left their last job for health reasons, 12,4% because they were fired; while 3% stated as a reason (or one of the reasons) for leaving their job the inability to adapt to the work environmental because of problems with colleagues/supervisors. About 6,6% stated as reason for leaving their job the inability to adjust because of own-problems. Also, common reasons for quitting work are low wages, the need to look after dependents and non-flexible working hours.

The percentage of public assistance recipients who reported that they left their last job for reasons related to distance from work or cost of transportation to and from the work place is relatively small. Also, very small is the percentage who reported as reason for leaving their last job the loss of the public assistance benefit.

<sup>13</sup> Percentages do not add up to 100 since more than one problem could be reported.

**Table 5: Reasons for leaving their last work**

Fired	12,4%
Inability to adapt because of own-problems	6,6%
Inability to adapt because of colleagues / supervisors	3,0%
Distance between work place and home	0,8%
Transportation cost from and to work	0,2%
Loss of public assistance benefit	0,3%
Health problems	55,6%
Low wage	3,4%
Care of dependents	7,7%
Non-flexible working hours	1,1%
Other reasons <sup>14</sup>	21,4%

In contrast to Table 5, where the question is what prompted public assistance recipients who worked in the past to leave the last job, Table 6 shows what the working public assistance recipients reported as the reasons for possible withdrawal from their current work.

**Table 6: Reason for possible withdrawal from current work**

Distance from work	6,0%
Transportation cost to and from work	4,2%
Inability to adapt because of own-problems	9,1%
Inability to adapt because of colleagues / supervisors	7,4%
Low wage	33,3%
Non-flexible working hours	10,3%
Loss of public assistance benefit	1,1%
Do not know	24,9%
No reason	3,2%

The low wage was reported by the highest proportion (33,3%) of public assistance recipients as a possible reason for leaving their job. Also, a significant proportion (24,9%) said that they were not able to identify a reason for leaving their job,

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<sup>14</sup> Other reasons include closure of the company who worked in, the 1974 war, pregnancy and childbirth, temporary jobs, military service, jail, separation from spouse, termination of contract of employment and termination of employment due to redundancy.

thought they did not report that they will not leave their job for any reason. Only 3,2% said that there is no reason for leaving their job. Smaller percentages stated as reason for leaving their current job the non-flexible working hours (10,3%), inability to adapt because of own-problems (9,1%) or because of colleagues/supervisors (7,4%), the distance of the workplace from home (6%) and transportation costs to and from work (4,2%). A very small percentage (1,1%) stated as a reason for not leaving their current job the loss of public assistance benefit.

### **2.3 Aptitude for work**

The probability for public assistance recipients, who can work, to join the labor market and stay in it for their subsequent working live, is also influenced by preferences. Below we examine the propensity of public assistance recipients to work, their willingness to work without pay and the reasons that could encourage them to join the labor market.

Table 7 shows the percentages relating to the employment status of recipients of public assistance at the time of interview, by age group, and the corresponding rates in the general population. As expected, the percentage of public assistance recipients who are employed full-time is small (12%) compared to the corresponding employment rate for the population (61%). On the other hand, the percentage of public assistance recipients who work part-time is higher (7,5%) than the corresponding proportion in the population (4,9%). In contrast, unemployment rates and chronic illness/disability are much higher among recipients of public assistance (30,7% and 35,9%) compared with the corresponding proportions in the population (3,3% and 1,1%).

Regarding the distribution of employment by age group, among public assistance recipients, the highest percentage of full-time employment occurs among those aged between 30-45 years (20,9%); the same is also true for the general population, but at a much higher percentage (79,4%). Employment, unemployment and other economic activity characteristics of public assistance recipients do not show significant age differences, with the exception of chronic illness/disability that occur with the highest frequency among those in the 45-65 age group.

**Table 7: Employment status by age for public assistance recipients and the population<sup>15</sup>**

	15-30		30-45		45-65		Total	
	Recip.	Popul.	Recip.	Popul.	Recip.	Popul.	Recip.	Popul.
Employed full-time	8,5%	44,9%	20,9%	79,4%	6,6%	60,4%	12,0%	61,0%
Employed part-time	7,1%	4,0%	9,4%	5,7%	6,0%	5,2%	7,5%	4,9%
Unemployed	27,5%	3,7%	30,8%	3,4%	32,7%	2,8%	30,7%	3,3%
Housekeeper	3,1%	3,5%	8,3%	10,3%	9,7%	18,9%	7,4%	11,0%
Chronic illness / disability	30,9%	0,9%	30,6%	0,8%	44,2%	1,5%	35,9%	1,1%
Pensioner	0,0%	0,0%	0,0%	0,1%	0,8%	11,3%	0,3%	4,0%
Student/Soldier	22,8%	43,1%	0,0%	0,1%	0,0%	0,0%	6,2%	14,6%

Table 8 shows information about the willingness of public assistance recipients to work.

The first part of the table presents the reasons given for not participating in the labour market. The most important reason is health problems (72,7%). Other common reason for not participating in the labour market are: the inability to work (44,2%), which also relates to health problems<sup>16</sup>; the care of dependents (7,5%); studies (6,8%); and the inability to find a job. It is also worth mentioning that only 3,7% of the public assistance recipients declare that they do not wish to work. This means that unwillingness to work is not an important reason for public assistance recipients not participating in the labour market.<sup>17</sup>

The second part of Table 8 shows the percentage of public assistance recipients who are willing to take up unpaid job for work experience or/and for making a social contribution (e.g. work in charity). Only 5,3% of the public assistance recipients are willing to work without pay. A possible reason for this is insufficient information and/or lack of conviction about the importance of non-pecuniary benefits they could gain from charity work, such as knowledge and experiences, for gainful employment in the future.

<sup>15</sup> Data for the population are drawn from the EU-SILC UDB 2006, version 1st of March 2008.

<sup>16</sup> From the recipients who declare inability to work, 19% are intellectual impair, 16% have a physical disability, 24% have a physical disease and 31% have a psychological disability/illness.

<sup>17</sup> Drug or alcohol abuse are not important reasons for not participating in the labour market. After all only a small percentage of public assistance recipients declare that are drug or alcohol users.

**Table 8: Willingness to participate in the labour market<sup>18</sup>**

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<u>Reasons for not participating in the labour market</u>	
Unwillingness (do not want to work)	3,7%
Inability to find a job	5,4%
Health problems	72,7%
Care of dependants	7,5%
Studying	6,8%
Low offered wage	0,5%
Working hours	0,7%
Lost of public assistance benefit	0,3%
Alcoholism /drug abuse	0,7%
Inability to work	44,2%
<u>Reasons for taking an unpaid job</u>	
Work experience	2,4%
Social contribution	2,9%
No reason	94,7%
<u>Reasons for starting working</u>	
More flexible hours of work	44,2%
Higher wage	47,0%
Care services for dependants	22,4%
Improvement of work qualifications	13,9%
Improvement of public transportation	7,0%
Psychological support	32,2%
No reason	26,4%

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The third part of Table 8 presents the factors reported by public assistance recipients that would help them participate in the labour market. A percentage of 26,4% of the recipients report that there is no reason that would make them work. This percentage can be considered as the public assistance recipients who are “far” from the labour market and tend to be persons facing serious personal and health barriers like chronic disease, physical disability, mentally problems; or feel it is not possible for them to work for other reasons, for example, not having the minimum skills which will guarantee gainful employment; or have never worked in the past. A large percentage of public assistance recipients (47%) report that they

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<sup>18</sup> The interviewees could report more than one reason in questions shown in part one and three of Table 8 and thus the percentages do not add up to 100.

are willing to start working if they can find a job with a higher wage than that offered to them up to now. Also, 44,2% of the public assistance recipients report that are willing to start work under more flexible working hours, 32,2% under psychological support, and 22,4% if care services for their dependents is made available to them.

It is interesting that 13,9% of the public assistance recipients consider that an improvement of their work qualifications would make their entrance to the labour market easier. Finally a small percentage (7%) believes that an improvement of the public transportation would make them participate in the labour market.

### **3. LABOUR MARKET BEHAVIOR**

The descriptive analysis above provides useful information about the demographic and other characteristics of the public assistance recipients, and their labour market behavior. From this analysis, however, one cannot get information about the individual effect of competing factors that influence the decision of the recipients to participate in the labour market. The analysis that follows focuses on finding these factors and estimate the size and statistical significance (reliability) of their effect on (a) the labour market participation decision and (b) the number of work hours offered. We also analyse the labour market perceptions of public assistance recipients who are away furthest from employment. Using the results of this analysis we can evaluate the effectiveness of policies targeting and strengthening the propensity of public assistance recipients to participate in the labour market.

#### **3.1 Probability of participating in the labour market**

Table 9 presents the effect of personal characteristics on the employment probability of individuals. The personal characteristics used in the analysis include age, education/experience, marital status, health condition, characteristics of their dependents, employment status of the spouse, level of non-labour income, self-esteem level and providence/territory of residency.

The estimation of the effect of characteristics on the employment probability is done using Probit analysis for

- (i) the whole population using data from the 2006 EU-SILC database for Cyprus, and
- (ii) the public assistance recipients using data collected through questionnaire from this particular population group.

Two estimations were carried out with the data mentioned above:

- (i) one using only common characteristics in the two data sources (EU SILC and collected data) for comparison between the employment probability of public assistance recipients and the population at large - column (1) of Table 9, and
- (ii) one using all the available characteristics in the data for public assistance recipients for obtaining a more comprehensive picture about their labour market participation probability - column (2) of Table 9.

Comparing the estimation results for the population and for the public assistance recipients we find many similarities but, also, interesting differences about the effect of different characteristics on the employment probability:

- Individuals below the age of 55 have greater probability of working than individuals above this age among both public assistance recipients and the general population; although the difference in the probability is greater among public assistance recipients than the general population. For example, public assistance recipients in the 55-65 age group have 32 percentage points lower probability to participate in the labour market than those aged between 15-24 years. The corresponding difference in the population is 23,5 percentage points.
- The level of education has a smaller effect on the labour market participation of public assistance recipients than of the population. In particular, the public assistance recipients with upper secondary or tertiary education have respectively by only 8 and 6 percentage points, higher probability of employment than the recipients with lower than elementary education. In the population, the respective probabilities are 17,4 percentage points for the higher secondary graduates and 21 percentage points for the tertiary graduates.
- In contrast to education, years of experience in the labour market increase the employment probability in public assistance recipients more than in the general population. One additional year of experience increase the probability of labour market participation by 1,1 percentage points in public assistance recipients and by 0,9 percentage points in the general population.
- Marital status (single, married, divorced etc) does not have a statistically significant effect on the labour market participation of public assistance recipients. The same, also, applies to the general population.



**Table 9: The effect of characteristics on labour market participation**

Characteristics		Population	Public assistance	
			(1)	(2)
Gender	(Female)			
	Male	4,3	-2,3	-1,0
Age	(Between 55 and 65 years)			
	Between 15 και 24 years	23,5***	32,0***	25,7***
	Between 25 και 34 years	30,3***	32,8***	27,0***
	Between 35 και 44 years	26,3***	31,5***	26,5***
	Between 45 και 54 years	14,7***	17,8***	15,7***
Education/ Experience	(Lower than elementary)			
	Elementary	7,2*	-3,1	-2,0
	Lower secondary	9,5**	2,3	2,5
	Higher secondary	17,4***	8,0***	7,9***
	Tertiary	21,0***	6,0*	6,4*
	Training programs			1,2
	Years in the labour market	0,9***	1,1***	1,0***
Marital status	(Widow(er))			
	Single	1,5	-3,7	-1,1
	Married	-2,1	5,3	5,1
	Divorced/Separated	0,1	6,5	6,4*
Health condition	(Good)			
	Fair	-2,4	-7,6***	-7,3***
	Bad	-22,2***	-13,0***	-10,2***
Dependants	(No dependants)			
	Number of dependants	-0,3	8,5***	9,3***
	Youngest dependent: 0-5	-3,4	-5,9**	-5,2*
	Youngest dependent: 6-12	2,3	-4,1	-3,0
	Youngest dependent: 13-18	4,9	-1,4	1,5
	Number of dependants with health problems			2,6***
Spouse working	(No spouse/spouse not working)			
	Spouse working	7,3***	-1,4	-3,0
Non labour income (in €1000)		-0,1**	-2,1***	-2,3***
Self esteem	(High)			
	Low			-3,9*
	Very low			-7,6***
Number of health problems				-2,2***
Use care services				4,2**
Providence/territory	(Nicosia-urban)			
	Rural			0,6
	Larnaca			-5,9***
	Paphos			-4,5
	Limassol			2,6
	Famagusta			6,2
Number of observations		2625	2888	2888

- Fair and bad health condition decrease the employment probability of public assistance recipients by 7,6 and 13 percentage points, respectively, relative to those in good health. The corresponding figures in the population are 2,4 and 22,2. This is more due to public assistance recipients in good health having low participation in the labour market rather than the small effect of bad health. Thus, bad health cannot cause a sizable decrease in the labour market participation of public assistance recipients, as in the case of the general population where the individuals in good health usually work.
- The number of dependants increase the employment probability of public assistance recipients by 8,5 percentage points for each additional dependant; while in the case of the general population the number of dependants do not have a statistically significant effect on employment probability.
- Non-labour income has a larger negative effect on the employment probability of public assistance recipients than on the corresponding probability of the general population. Specifically, for every 1000 euro of annual non labour income the employment probability decreases by 2,1 percentage points among public assistance recipients, but only by 0,1 percentage point in the general population.<sup>19</sup> Here we have to mention that the effect of non-labour income on the employment probability of public assistance recipients is larger than the corresponding effect in the general population because most recipients do not work. The above result suggests that as the public assistance benefit increases the employment probability of its recipients decrease.<sup>20</sup>
- Finally, the participation of public assistance recipients is lower when their spouse is working, while the opposite is true for the general population.

The last column in Table 9 shows the effects of all available characteristics on the probability of labour market participation of public assistance recipients. Low self-esteem and health problems decrease while the use of care services increases this probability. In particular, low and very low self-esteem decrease the employment probability of recipients by 3,9 and 7,6 percentage point, respectively, relative to recipients with high self-esteem. Recipients who use care services for their

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<sup>19</sup> The percentage for the population is so small because most of the individuals are working.

<sup>20</sup> This result is also supported by another study we have accomplished using data from the Cyprus Household Budget Survey and from the EU-SILC, where we find that as the disposable income from sources other than labour (investment income, state benefits etc) increase the participation in the labour market decrease, especially among the young (16-24 years old) and individuals close to pension age (Pashardes and Polycarpou, 2009).

dependents have higher labour market participation probability by 4,2 percentage points.

### **3.2 Hours offered in the labour market**

In the previous section we studied the participation of public assistance recipients in the labour market and the factors that affect it. In this section we will study the number of hours offered by the recipients in the labour market. In the descriptive analysis of Section 2, the percentage of public assistance recipients who work full time appears much lower than the corresponding percentage of the population. On the other hand the percentage of public assistance recipients who work part time is higher than the corresponding percentage of the population. Using empirical analysis we will try to determine the factors that explain the difference in this labour market behaviour between public assistance recipients and the population at large.

Table 10 presents the effect of personal characteristics on the working hours of individuals. The personal characteristics used in the analysis are the same as the ones used in the analysis for the participation in the labour market<sup>21</sup> plus the hourly wage of individuals. For non-working individuals the unobserved potential hourly wage from employment is imputed from the parameter estimates of a wage equation using the two step method proposed by Heckman (1979).

The estimation of the effect of characteristics on the working hours is performed using a Tobit model for

- (i) the general population with 2006 EU-SILC data for Cyprus, and
- (ii) the public assistance recipients with data collected specifically for this particular group of people.

As in labour market participation, the estimated effects of different characteristics on working hours show similarities but, also, interesting differences between the population and public assistance recipients that can be summarised as follows.

- In the population, males work on average 4 hours more than females with the same characteristics. Notably, among recipients of public assistance women work by almost 9 hours more than men.

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<sup>21</sup> Variables for age, education/experience, marital status, health condition, characteristics of dependents, employment status of spouse, non-labour income, self-esteem and providence/territory of residency are used.

**Table 10: The effect of characteristics on working hours**

Characteristics	Population	Public assistance recipients	
		(1)	(2)
Gender	(Female)		
	Male	4,0***	-8,8***
Age	(Between 55 and 65 years)		
	Between 15 και 24 years	22,7***	-7,9
	Between 25 και 34 years	21,4***	4,3
	Between 35 και 44 years	13,4***	9,0*
	Between 45 και 54 years	7,1***	6,3
Education/ Experience	(Lower than elementary)		
	Elementary	2,2	-6,0
	Lower secondary	5,1	-0,9
	Higher secondary	7,2*	0,2
	Tertiary	4,6	-5,8
	Training programs		-2,1
	Years in the labour market	0,3**	0,7***
Marital status	(Widow(er))		
	Single	0,4	-11,3**
	Married	-3,1	-4,8
	Divorced/Separated	-0,3	0,3
Health condition	(Good)		
	Fair	1,6	-8,1***
	Bad	-8,3***	-7,3**
Dependants	(No dependants)		
	Number of dependants	-0,1	8,0***
	Youngest dependent: 0-5 years	-1,1	0,7
	Youngest dependent: 6-12 years	3,0	-5,7
	Youngest dependent: 13-18 years	2,2	-2,2
	Number of dependants with health problems		4,2***
Spouse working	(No spouse/spouse not working)		
	Spouse working	3,7***	9,2
Non labour income (in €1000)		-0,0	-2,8***
Self esteem	(High)		
	Low		-2,5
	Very low		-7,5
Number of health problems			-2,2***
Use care services			4,2***
Providence/territory	(Nicosia-urban)		
	Rural		0,7
	Larnaca		-1,7
	Paphos		-4,1
	Limassol		13,1***
	Famagusta		20,0***
Hourly wage (log)		9,7***	26,4***
Constant		-18,4***	49,7***
Number of observations <sup>22</sup>		2502	2727

<sup>22</sup>In the sample 86 employed individuals did not report the number of hours work and 37 their wage rate. In the sample of public assistance recipients, 6 employed individuals did not report the number of hours work and 155 their wage rate. These observations were excluded from the estimation.

- Age has an inverse effect on working hours in the population. Individuals in the 15-24 age bracket, on average, work by about 23 hours more than those in the 55-65 age bracket. Individuals in the age brackets 25-34, 35-44, and 45-54 work, on average by 21,4, 13,4 and 7,1 hours more than the individuals aged between 55 and 65, respectively. In the public assistance recipients age does not have a significant effect on the hours worked except in the case those aged between 35 and 44 who, on average, work 9 hours more than the recipients in other age groups.
- The level of education has a minor effect on the working hours both in the population and public assistance recipients. In the population only individuals with higher secondary education seem to work by about 7 hours more than individuals with lower or higher educational level and all the other characteristics the same; whereas in the case of public assistance recipients the education level does not have significant effect on working hours at all.
- Experience measured as years in the labour market has a significant effect on working hours both for the general population and for public assistance recipients. An additional year of experience increases the working hours in the population by 0,3 hours and among public assistance recipients by 0,7 hours.
- Marital status (single, married, divorced etc) does not have a statistically significant effect on the working hours of the general population. In the case of public assistance recipients single persons work by about 11 hours less than married, divorced/separated or widowed.
- Fair and bad health decrease the working hours of public assistance recipients by 8,1 and 7,3 hours, respectively, relative to those in good health. In the population bad health decreases the working hours by 8,3 hours.
- The working hours of public assistance recipients increase by 8 hours for each additional dependant; while in the case of the general population the number of dependants do not have a statistically significant effect on working hours.
- The spouse's participation in the labour market has a positive effect on the working hours of the household head in the general population, but does not appear to matter among public assistance.
- Non-labour income has a larger negative effect on the working hours of public assistance recipients, but has no significant effect on the working hours in the general population. Specifically, for every 1000 euro of annual non-labour income, the working hours of public assistance recipients decreases by 2,8

hours. This suggests that the working hours decrease as the public assistance benefit itself increases.

- Finally, the hourly wage has a significant effect on the working hours in the general population and the public assistance recipients: one percent increase in the hourly wage increase the working hours by 9,7 hours in the general population and by 26,4 hours in public assistance recipients. This shows that the public assistance recipients are more responsive to an increase of their wage rate and thus a good policy for increasing their work hours is subsidising their wage rate.

The last column in Table 10 shows the effects of all available characteristics on the working hours of public assistance recipients: low self-esteem and health problems do not affect working hours; while each additional health problem decreases the working hours of the recipient by 2,2 hours.

### **3.3 Perceptions about conditions in the labour market**

The participation of individuals in the labour market is affected by their perceptions about the wage offered, the wage they would accept in order to work and other individual and labour market characteristics. In this section we study how the subjective perceptions of public assistance recipients for the conditions in the labour market affect their employment probability; and how they relate to other individual characteristics.

To study how “far” (or “close”) the subjective perceptions for the labour market of public assistance recipients are from reality, we compare for each his/hers “objective” probability of employment (computed from the estimates reported in Table 9 ) with the “subjective” probability. The latter is estimated as follows:

- In the collected data for public assistance recipients we have information about the expected and minimum acceptable wage rate for the recipients who are not working. For this non-working individuals the expected wage rate, i.e. the wage rate that the recipient expects to get (be offered) if he/she decides to work, is lower than his/hers minimum acceptable wage rate, i.e. the minimum wage rate he/she is willing to work for – since, otherwise, the individual would be working.
- It is reasonable to assume that the greater the difference between the expected and the minimum acceptable wage rate, the smaller is the employment probability for the individual. Based on this assumption we (i) express the difference between the expected and minimum acceptable wage

rate as a standardised normal distribution and (ii) evaluate the employment probability for each non-working public assistance recipient. We call this probability “subjective probability” for participating in the labour market since it shows how probable is for a public assistance recipient to work, based on his perception about the wage in the labour market.

Based on our estimates, on average, the actual probability of participation in the labour for public assistance recipients is 19,5%, while the subjective one is 53,3%. The difference of -33,8 percentage points, shows how much the public assistance recipients over-estimate their employment probability; and reflects on the over-estimation of the wage rate they believe they will be offered if working.<sup>23</sup>

To estimate how various characteristics of public assistance recipients are associated with optimistic perceptions about their employment probability and the wage they would be offered if working we estimate a regression equation where the dependant variable is the difference between the actual and subjective employment probability and the independent variables are demographic and other characteristics of public assistance recipients. The estimation results are shown in Table 11.

- The characteristics contributing positively to the over-optimistic expectations of public assistance recipients about their employment probability are the ones shown with a negative sign in Table 11: fair or bad health condition, multiple health problems, and high non-labour income.
- On the other hand, there exist characteristics which correct the over-optimistic perceptions of public assistance recipients about conditions in the labour market, such as age up to 54 years, participation in training programs, years of experience and the number of dependants.

As one would normally expect, more misinformed about the conditions in the labour market are public assistance recipients more “away” from the labour market e.g. older persons, recipients with low level of education, in bad health etc. The opposite is true for those “close” to the labour market, e.g. those less than 45 years

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<sup>23</sup>Based on our estimates the expected wage rate for the non-working recipients is 1124,5 euro and their average minimum accepted wage rate is 1226,9 euro. The two wage rates are not very different and thus the subjective employment probability is high.

**Table 11: The effect of characteristics on the over-optimistic perceptions of public assistance recipients about conditions in the labour market**

Characteristics	Differences in probabilities
Gender	(Female)
	Male
	2,2
Age	(Between 55 and 65 years)
	Between 15 and 24 years
	7,4
	Between 25 and 34 years
	17,0***
	Between 35 and 44 years
	17,9***
	Between 45 and 54 years
	9,0***
Education/Experience	(Lower than elementary)
	Elementary
	-3,4
	Lower secondary
	-1,8
	Higher secondary
	1,9
	Tertiary
	-1,2
	Training programs
	12,7***
	Years in the labour market
	1,1***
Marital status	(Widow(er))
	Single
	-1,7
	Married
	5,1
	Divorced/Separated
	4,3
Health condition	(Good)
	Fair
	-10,1***
	Bad
	-18,9***
	Number of health problems
	-1,3***
Self esteem	(High)
	Low
	0,7
	Very low
	-4,7
Dependants	(No dependants)
	Number of dependants
	10,7***
	Youngest dependent: 0-5 years
	-5,0
	Youngest dependent: 6-12 years
	-3,0
	Youngest dependent: 13-18 years
	8,5
	Dependants with health problems
	-0,6
Spouse working	(No spouse/spouse not working)
	Spouse working
	-2,8
Use care services	
	3,2
Non labour income (in €1000)	
	-2,2***
Number of observations	
	483

old and/or with more labour experience either from training programs or from years in the labour market.



#### **4. CONCLUSIONS AND POLICY IMPLICATIONS**

This paper examines the labour market behaviour of public assistance recipients in Cyprus. In particular, how individual, family and labour market characteristics affect labour market participation and hours supply. We also analyse the factors that affect labour market perceptions and assess how these relate to the probability of labour market participation and the working hours of public assistance recipients. Furthermore, we compare and contrast results estimated for public assistance recipients with those estimated for the Cyprus population at large. The main objective is to reach useful and practical conclusions for (i) increasing the efficiency of the current social assistance system by better targeting and (ii) lessen the dependence of individuals on state benefits by removing obstacles to their labour market participation and the number of working hours.

Factors shown in the literature to have a negative effect on the probability of labour market integration of public assistance recipients include old age, lack of professional experience, low level of education and bad health. Participation in professional training programs does not necessarily lead to integration in the labour market and long-term employment. The international literature stresses that the low paid employment public assistance recipients can find, does not enable them to have a satisfactory standard of living, so they soon return to public assistance.

The internationally prevailing obstacles to the labour market integration of public assistance recipients also appear to hold for Cyprus, with health problems being particularly high on the agenda. Econometric investigation pursued in the context of our study shows that old age, low education level, limited or absent professional experience, bad health, dependent children and low self-esteem have a negative effect on the labour market participation probability and working hours of public assistance recipients. Furthermore, among those finding a job not many remain on it for a long time. Health related problems are the most often presented reason for giving up employment, followed by low remuneration, inflexible working hours, difficulties in adapting to the working environment (due to own problems), distance from home and transportation costs.

A large number of policy conclusions emerge from the analysis in the paper, including the following.

- Public assistance recipients should be given more incentives to participate in professional training programs organised by the SWS, where they should be also instructed to assess correctly the conditions in the labour market

(probability of employment and wage level) so as to be better prepared to exploit potential job opportunities.

- Programs promoting labour market participation among public assistance recipients should place more emphasis on the provision of in-work benefits, the improvement of self-esteem and the creation of a suitable (materially and otherwise) working environment.
- Ways should be sought to strengthen the collaboration between competent authorities so that measures for the integration of public assistance recipients in the labour market are jointly designed and implemented with measures for their integration in the society at large.
- Further investigation is required in order to determine how incapacity to work is established using objective criteria, so that the public assistance recipients can be classified according to whether and how much they are (physically and mentally) able to work; and what type of employment is suitable for them. The benefits should further be differentiated in favour of those who are in - or are actively looking for - employment.
- The period over which the public assistance benefit is gradually withdrawn upon employment should be extended to two or more years, with parallel introduction of penalties (e.g. reduced benefit for a period of time) when a recipient abandons her/his job without convincing reason.
- The incentives for participation in the labour market should vary according to the elasticity of labour supply associated with different categories of public assistance recipients. For example, single parents should be given more incentives than other individuals because they incur higher child care costs from labour market participation.
- More effective procedures should be implemented for the documentation of the qualifications substantiating eligibility for public assistance; and more strict penalties should be imposed on those claiming/receiving public assistance by providing misleading/deceptive information.
- A study to investigate the extent to which public assistance is (a) taken up by persons that are not eligible and (b) not taken up by persons that are eligible is overdue. Ways to obtain an objective assessment of the economic situation of public assistance recipients should also be studied.

- Public assistance should reduce differences between the (equivalent) income of recipients. However, income inequality should be pursued separately among working and not working recipients so as to avoid erosion of the incentives to participate in the labour market.
- In view of the limited public transport network in Cyprus, it is important to consider alternative ways to provide public assistance recipients access to cost-effective transportation so as to help them improve their living standards and, more importantly, facilitate their participation in the labour market.

Efforts to improve the public assistance scheme in Cyprus have so far focused mainly on the expansion of coverage, increase in benefits and administrative competence. The 'side effects' of the scheme, in particular, the resulting (i) waste of human capital (non-participation in the labour market) and (ii) social injustice, arising when the beneficiaries are able to work but instead choose to live on state handouts, have not been investigated. Such side-effects may have been caused by the expansion of public assistance entitlement in 2006, followed by large increases in public assistance benefit, as these changes have not been balanced with appropriate incentives to discourage individuals from becoming dependent on this benefit.

Also in Cyprus, it appears that no attention is paid to the fact that an increase in the public assistance benefit causes public expenditure to increase not only from the increase in the benefit itself but also from: (a) the reduction in the effectiveness of measures promoting labour market participation; and (b) the increase in the number of public assistance recipients because the higher benefit can lure low paid workers out of the labour market.

Reaching evidence-based conclusions about ways to maximise participation in the labour market and minimise dependence on state provision are beyond the scope of the present study. For such conclusions one needs to pursue a different line of investigation that: (i) focuses on well-defined and targeted incentives and disincentives that need to be incorporated in the existing – or a new – public assistance scheme; and (ii) examines other economic and social factors affecting behaviour (demand and supply) in the labour market - such as the minimum wage, the automatic price indexation of salaries and wages, the system of personal taxation and benefit entitlement, wage and employment discrimination etc. These can be topics for future research.

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## APPENDIX

### Data description

The data used in the analysis are collected via questionnaire from 3000 public assistance recipients aged between 15-64 years in Cyprus. This sample corresponds to about 22% of the general population of public assistance recipients in the particular age group in Cyprus and was selected randomly from the this population using stratification based on the district and area of living. Below we present the main characteristics of the recipients in the sample.

**Table A1: Person who answer the questionnaire by gender**

	Male	Female	Total
Recipient of public assistance	1171	1717	2888
Spouse	80	32	112
<b>Total</b>	<b>1251</b>	<b>1749</b>	<b>3000</b>

Table A1 shows that in most case the questionnaire was answered by the recipient and in only some cases it was answered by the spouse of the recipient.

**Table A2: Public assistance recipients by age and gender**

	Male	Female	Total
Between 15 and 24	267	193	460
Between 25 and 34	272	324	596
Between 35 and 44	252	454	706
Between 45 and 54	256	453	709
Between 55 and 65	204	325	529
<b>Total</b>	<b>1251</b>	<b>1749</b>	<b>3000</b>

Table A2 gives the distribution of the sample by age group and gender. Most of the recipients are aged between 35-54 years old, and are women. Male recipients of the benefits are distributed to all age groups in contrast to women recipients who are concentrated in the 34-44 and 45-45 age groups.

**Table A3: Public assistance recipients by marital status and gender**

	Male	Female	Total
Married	410	157	567
Divorced/separated	127	917	1044
Non-married	675	572	1247
Widowed	25	91	116
<b>Total</b>	<b>1237</b>	<b>1737</b>	<b>2974</b>

Table A3 shows the distribution of the sample by marital status and gender. Most male recipients are non-married while most female recipients are divorced or separated.

**Table A4: Reason for receiving public assistance benefit by gender**

	Male	Female	Total
Unemployment	22	26	48
Physical or psychological disability/illness	963	991	1954
Care of dependent individuals	37	182	219
Alcohol and other drug addiction	38	7	45
Divorce/separation/single parent/widow/no spouse	33	470	503
Other	135	57	192
<b>Total</b>	<b>1228</b>	<b>1733</b>	<b>2961</b>

Table A4 shows the distribution of recipients by province and territory type of residence. The majority of recipients are livings in urban areas mostly in Limassol, Nicosia and Larnaca.

**Table A5: Reason for receiving public assistance benefit by gender**

	Male	Female	Total
Unemployment	22	26	48
Physical or psychological disability/illness	963	991	1954
Care of dependent individuals	37	182	219
Alcohol and other drug addiction	38	7	45
Divorce/separation/single parent/widow/absence of spouse	33	470	503
Other	135	57	192
Total	1228	1733	2961

Table A5 presents the number of recipients by gender and reason for receiving public assistance benefit. The majority of both males and females receive the benefit because of physical or psychological disability/illness. In case of females, other importance reasons for receiving the benefit are divorce/separation/only parent/widow/absence of spouse as well as care of dependent individuals.

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