

Theoretical and empirical implications of the new definition of unemployment in Colombia

Juan C. Guataquí, Rodrigo Taborda*

Department of Economics, Universidad del Rosario, Colombia.

Received: May 2005 – Approved: August 2005

Abstract. In June 2000 Colombia adopted a new definition of unemployment following the standards of the International Labour Organisation (ILO). This change implied a reduction of the unemployment rate of about two (percentage) points. In this paper we contrast the Colombian case with other countries' experiences in terms of the methodological transformation and its empirical implications. Afterwards, we test the empirical support of the change of methodology. Our results suggest specific implications on structural unemployment and its relationship to unemployed people's educational profile; therefore, they challenge the practical application of the ILO's standard unemployment definition to the Colombian case.

Key words: unemployment, ILO classification, labour force states, measurement errors.

JEL classification: J64, J21.

Resumen. En junio de 2000 Colombia adoptó una nueva definición de desempleo siguiendo los estándares de la OIT. Este cambio implicó una reducción de la tasa de desempleo del orden de dos puntos porcentuales. En este documento contrastamos el caso Colombiano con las experiencias de otros países en términos de la transformación metodológica y sus implicaciones empíricas. Posteriormente, evaluamos el soporte empírico del cambio de metodología. Nuestros resultados sugieren implicaciones específicas sobre el desempleo estructural y su relación con el perfil educativo de los desempleados; por lo tanto, cuestionan la aplicación práctica de la definición estándar de desempleo de la OIT al caso colombiano.

Palabras clave: desempleo, clasificación ILO, estados de la fuerza de trabajo, errores de medición.

Clasificación JEL: J64, J21.

* Article presented at the VII International Conference on Economics / Middle East Technical University (METU) in Ankara, September 2003. We would like to thank Luis Eduardo Arango for his useful comments.

Address for correspondence: Calle 14 No. 4-69. Bogotá, Colombia.
E-mail: jguataqu@urosario.edu.co

1. Introduction

Within the methodological foundations of research in social sciences, a *conceptual instrument* has been defined as a category used in producing a report. Besides, the concept of *technical instrument* holds for the specific methods to collect the information regarding a conceptual instrument (Scott, 1990). According to this, and in relation to the definition of unemployment, the household surveys here presented include a set of questions addressed to identify the labour status of people. Once the condition of being unemployed is identified, the most standard –first hand– technical instrument related to unemployment is to count the amount of unemployed people belonging to this group and, from the resulting figure, calculate the unemployment rate.

International Conferences of Labour Statisticians (ICLS) are held with the purpose of providing stable criteria on information collection procedures and standardising concepts. Since its first meeting in 1923, the Conference has underlined the importance of maintaining regular definitions of conceptual instruments given the compromise of providing regular administrative records in order to maintain the quality and reliability of official statistics. On behalf of and even sometimes despite these recommendations, many countries have modified the definitions of the technical or conceptual instruments used as a base of public statistics.

This document inquires into the empirical support of the amendment of the definition of unemployment from the labour market point of view. It deals with the specific theoretical and empirical considerations regarding the modification of the definition of unemployment as a conceptual instrument, specially the one developed in the Colombian Household Survey from year 2000 onwards. We will contrast this case study with others applied on the cases of Italy, England and Spain. Specific regard will be placed on the quantitative consequences of the qualitative definitions involved and the theoretical considerations of these qualitative definitions.

The structure of the document goes as follows. In section 2 we review the process of standardisation of labour statistics developed by ILO with the advice of the International Conference of Labour Statisticians and present four country cases: England, Spain, Italy and Trinidad and Tobago. In section 3 we present the main features of the change of methodology in the Colombian Household Survey regarding the definition of unemployment and quantify the monthly impact of these modifications for the year 2000. Finally, from section 4 onwards, we present our quantitative exercise addressed to evaluate the empirical evidence supporting the change of the definition of unemployment in the Colombian labour market.

2. Changes of the definition of unemployment as a conceptual instrument: some international experiences

The International Labour Organisation (ILO) has promoted the adoption of international standards on labour statistics, in particular, by following many of the resolutions adopted by the International Conference of Labour Statisticians (ICLS) since its Eight Conference Resolution I in 1954.

Resolutions adopted by the ICLS, unlike the ones issued by the ILO, do not require ratification; consequently, they are not binding upon states and, in case of being accepted, they do not require supervision. According to Bolle (1999), abiding by the Conference's resolutions is unnecessary given the fact that the interaction between the ILO's statistical work, the participation of statisticians in the ICLS, and the national statistical services is an ongoing process. Despite this interaction, technical sovereignty of countries on these matters has led to very interesting situations.

2.1. Change of unemployment definition in the United Kingdom: claimant count

In 1983 the British government changed its definition of unemployment. An unemployed person became one who was 18 years old and over and was claiming unemployment-related benefits. For Vournas (1999) this is the consequence of a common practice developed by governments all through the 80's and 90's: to identify conceptual instruments with technical ones. Registration of the unemployed in a particular assistance program became the definition of unemployment and the instrument used to count jobless people.

Some consequences of this policy have been identified: first, time series based on the previous definition became discontinuous; second, the official unemployment rate, defined as the ratio between people aged 18 and over claiming unemployment-related benefits and the total workforce,¹ actually fell. Those excluded from the new definition and who in definitions of other sort would be considered unemployed became *invisible* (Vournas 1999: 2). The author estimates that the reduction was from 170 000 to 190 000 unemployed people, a political strategy from the British government recognised on a report from the Bank of England:

“although unemployment is falling because there are more jobs, it is also true that much of the decline in the claimant count which has occurred since mid-1986 has been due to a shift in the unemployment/employment relationship resulting from changes in the Government's range of Special Employment Measures –especially the introduction of more rigorous availability for work tests and the

¹Total number of people in employment, self employed people, unemployed on the relevant year according to the definition, army forces, and people undergoing training-for-work programs.

rapid growth of the Restart programme (quoted in SSAC 1991: 59).”

Taken from Vournas (1999).

This change of the definition of unemployment generated a very interesting wave of research reports, some of them with technical comments and estimations, and some others with ideological or political criticism. The work of Levitas (1996) combines all the previous considerations. Maintaining the reflections regarding the political role of unemployment statistics on the same tone as Vournas, Levitas goes further by criticising the ILO’s standard definition of unemployment. For him, some part of the reduction of unemployment under the ILO definition is explained by the explicit discouragement of unemployed people who stopped looking for jobs, specially those people in the oldest age group of the employment distribution: “unemployment carries a stigma of failure. And rather than to aspire to the seemingly impossible, people will redefine their own situation. A definition as *retired*... The line between ‘unemployment’ and ‘non-employment’ or ‘economic inactivity’ is imposed upon a reality that is far more complex and fluid.” (Levitas 1996: 60).²

2.2. *Istat and ILO: the case of Italy*

As we have seen above, countries have technical sovereignty whether they endorse the resolutions of the ICLS or not. This allows them to combine the technical issues suggested by the ICLS and to adapt them to the specific features of national labour markets. Adaptations of such a kind are usually related to the length of time elapsed since the unemployed person did his/hers last job search activity.

In 1992, as a consequence of Eurostat’s activities of coordination, the Italian National Institute of Statistics (Istat) adopted the ILO’s standard definitions of employment status. From this adaptation process, the modification raising the level of testing studies has been the same that reduced the acknowledged time for job searching activities. For a person to be classified as unemployed, the Istat’s criterion required active steps to seek work to have been taken, regardless of how far in the past. This differs greatly from the ILO-ICLS’ criteria which fix the time horizon for active job search within the last month. Calculations based on the new regulation dramatically reduced the Italian unemployment rate: around 30 percent of Italian job seekers are no longer classified as unemployed and they are usually called *potential labour force*.

Rettore and Trivellato (1993) can be inscribed among the first studies that challenged the accurateness of this new classification. This study tested the way through which labour supply’s profile changed according to the new and the old definitions, finding that the estimation of a labour supply model shows notorious sensitiveness to the way the labour force state (i.e. employment

²For specific tests of “employability” on several groups of unemployed people classified according to different criteria of age and socio-economic conditions, see Garrido (1998) for the case of Spain, and Posada and Arango (2002) for Colombia.

status) is defined. A subsequent study by Battistin et al. (2000) tested the accuracy of the new definition through the application of Bayesian statistical methods to compare the similarities and differences between various population groups classified according to the ILO-ICLS' criteria. They did not find any significant difference between unemployed people who did their last job search over a year before, unemployed people who did their last search between 2 and 12 months before, and those who searched for a job during the last month. Finally, Viviano (2002) applied the methodology provided by Jones and Ridell (op. cit. 1999) which is based on the estimation of the transition probabilities among individuals classified on different states of the labour market (employed, unemployed, etc.). The conclusion, in words of the author, was that "the standardised ILO definition of unemployment is too rigid for a relevant part of the Italian labour market". His quantitative conclusions were reinforced by Cipollone et al. (2003) who extended the estimation of transition probabilities to other European countries.

2.3. *Unemployment and job search methods: Spain and the European Commission*

It may be argued that the empirical challenges on accurate counts of inactive, employed, and unemployed populations are highly related to the hazy zones of transition between these categories. Among them, the distinction between employment and unemployment is the one that has received more attention on recent methodological regulations and policy agendas. In September 2000, a new regulation regarding more strict definitions of active/passive job search methods was passed by the European Commission. Spain adopted it in 2002.

The new regulation emphasises the difference between passive and active job-search methods, this difference being highly related to the features of European welfare state systems regarding unemployment benefits and contacts with public employment offices. Garrido and Toharia (2004) aimed to test the "sense" that this new regulation makes on labour market behaviour by comparing the characteristics of the new unemployed with other labour market groups considered to be theoretically relevant. They concluded that passive jobseekers are a behaviourally independent group which neither behaves like active jobseekers nor like people who, although willing and available for work, are not doing any job search activity.

2.4. *Relaxing the job search criteria: Trinidad and Tobago*

Acknowledging the specificities of job searching activities and the particularities of the information flows related to the availability of vacancies in developing countries, the Thirteenth International Conference of Labour Statisticians allowed the partial or full loosening of the active job search requirements in situations "where the conventional means of seeking work are of limited scope,

where labour absorption is, at the time, inadequate, or where the labour force is largely self-employed” (ILO, 1983). This relaxation of the job search criteria has been applied, either fully or partially, by 22 developing countries in the world.

The official definition of unemployment in Trinidad and Tobago does not require any active job search being done during the period of reference. Thereby, the unemployment count includes non-active job seekers who looked for work during the 3-month period that preceded the interview. Byrne and Strobl (2000) analyzed the main features of what they call the “marginally attached” workers, i.e. the unemployed-passive job seeking workers, who accounted for 3 to 5 percent points of Trinidad and Tobago’s unemployment rate in 1998. They follow the methodology of Flinn and Heckman (1983), later extended by Jones and Ridell (1999), which applies a Markov transition model between four labour states: employed, unemployed, marginally attached and out of the labour force, in order to determine the empirical evidence available to support the idea of considering the marginally attached as unemployed or as out of the labour force. They found evidence supporting the idea that males that are not active job seekers but are willing to work are not behaviourally different from unemployed workers who are currently searching for a job.

3. Change of conceptual and technical instruments for unemployment in Colombia: empirical considerations

In 2000 the Colombian Bureau of Statistics (DANE) finished a process that had been under development since 1996. This process was addressed to improve the quality, precision and opportunity of official labour statistics and comprised the following initiatives:

- Revision and updating of methodological frameworks and sample criterion.
- Revision of the operative processing routines.
- Implementation of digitalised cartography to be used in field procedures.

The final steps of this process were the adoption of a Continual Collection System and the acceptance of the recommendations of the Sixteenth International Conference of Labour Statisticians (ICLS) held in Geneva in September 1998. The whole new set of modifications was applied on what is now called the Continual Household Survey (ECH). Acceptation of the ICLS’ suggestions implied two main groups of changes on employment categories: employment and unemployment.

3.1. *Changes on employment status*

3.1.1. *From unemployed to employed*

Non-Remunerated Familiar Workers (NRF's) who worked between 1 and 15 hours a week and were previously classified as unemployed are now considered employed. The previous classification was considered a discrimination against women and young workers who are the most frequent part-time workers.

3.1.2. *From unemployed to inactive*

Under the new classification, individuals who were unemployed but explicitly considered themselves as not immediately available to start to work are considered inactive (out of the labour force). Additionally, those unemployed workers whose reasons to quit an active job search are not considered valid ones under the ICLS criterion (see Table 5, Appendix) are now considered inactive as well. The main consequences of this change of concepts in the methodological framework are presented in Table 1.

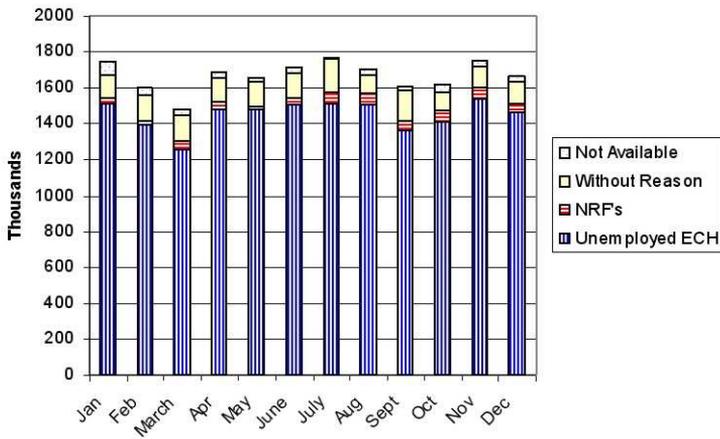
Table 1. Old and new definitions of employment for Colombia (year 2000).
 OLF: Out of the Labour Force
 NRF: Non-Remunerated Familiar Worker.

Old Methodology ENH	Unemployed	Criteria	New Methodology ECH	
			Employed	OLF
		1. Not immediately available to start to work		
		2. Without a valid reason to quit the job search		
		3. NRF's who worked between 1 and 15 hours the last week of reference.		

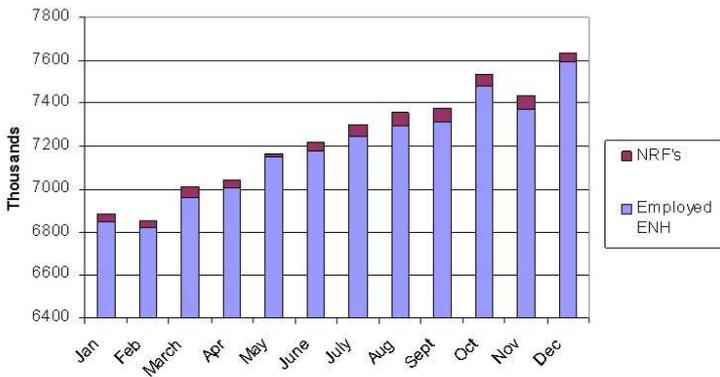
For purposes of comparison, DANE ran both the Quarterly (NHS) and the Continual Household Methodologies throughout 2000. Afterwards, only the Continual Household Survey (ECH) has been being applied but, given the structure of the questionnaire, it is possible to simulate the employment structure of the ECH using data from the ENH as well as the employment structure of the ENH using data from the ECH. Compatibility of time series for the main labour indicators has been estimated by Suarez and Buriticá (2002) and Lasso (2002).

Figures 1, 3, and 4 show the progressive reclassification of unemployed from NHS to ECH. In Figure 1 we can see the different classifications of unemployed

people before they were reclassified through ECH definitions. The percentage composition of unemployment divided by its components is rather stable. However, there seems to be a very interesting pattern between two components: unemployed people who do not have a valid reason to quit an active job search and unemployed people who are not available to start to work immediately, who seem to be flowing between these two states. Figure 2 displays the distribution of three of the most interesting components before they were reclassified. The dotted lines show some kind of correlation (a significant correlation index of 0.538) that leads us to wonder if there is some kind of overlapping relationship between the two categories they represent.



A. Components of unemployment by criteria (year 2000).



B. Components of employment by criteria (year 2000).

Figure 1. Source: DANE. Seven main Colombian cities.

Following our classification, the first criterion of transformation (from unemployment to employment) was applied to NRF's who worked between 1 and 15 hours the week of reference and were previously considered unemployed, reclassifying them as employed. Figure 3 shows the magnitude of the transformation which is not outstanding. These newly-employed workers accounted for around 2 percent of the total employment, being 1.6 percent the lowest participation and 2.3 percent the highest one.

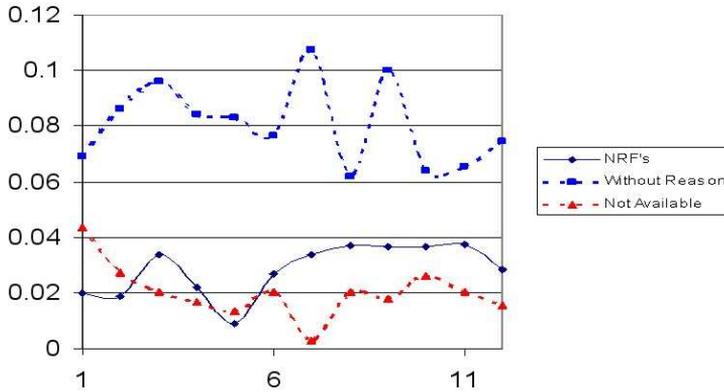


Figure 2. Evolution of percentage composition of unemployment for three specific criteria of classification. Source: DANE. Author's calculations. Seven main Colombian cities.

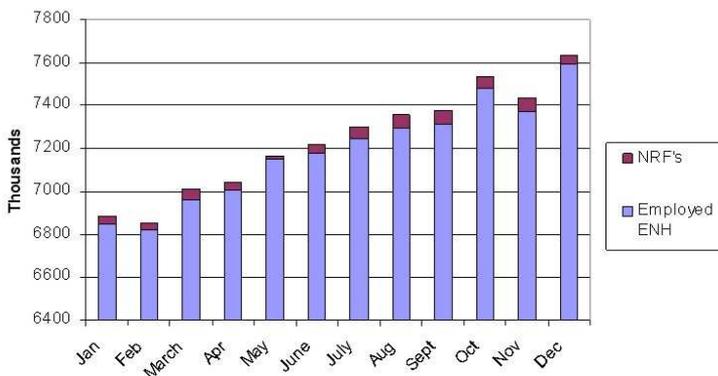


Figure 3. Employed workers after new classification (year 2000). Source: DANE. Seven main Colombian cities. NRF: Non-Remunerated Familiar Worker.

The second criterion for transformation involved unemployed workers whose reason to quit an active job search was no longer considered valid and unemployed workers who were not immediately available to start to work. According to the advocacy of ICLS, these workers should be reclassified as inactive (out of the labour force). Figure 4 shows the new composition of the labour force.

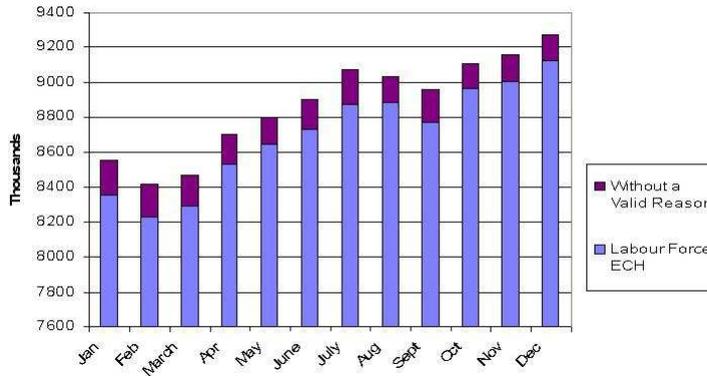


Figure 4. New composition of labour force (year 2000).

Source: DANE.

Summing up, the main consequences of the change of definitions are:

- *Reduced unemployment.* On average, in each of the twelve months of year 2000, 216 000 people (12.9 percent of the total unemployed) ceased to be classified as unemployed.
- *Increased employment.* On average, through year 2000, 47 250 NRF's who were previously considered unemployed increased the employment count. As a result of this, employment rose 0.65 percent.
- *Reduced labour participation.* On average, 168 250 unemployed workers without a valid reason to quit an active job search were reclassified as out of the labour force.
- *The effect on the unemployment rate cannot be detected straightforwardly.* It depends on the behaviour of the reclassification towards employment or inactivity states. Unemployment was reduced in a lower proportion than the labour force: for the whole 2000, around 2 percent points.

4. Our main problem: does this classification have a theoretical support?

Once we analyse the specific features of the people involved, our quantitative exercises will be addressed to test whether this new qualification follows some

kind of theoretical sense. In order to do that, we will apply the methodological approach provided by Battistin et al. (2000) trying to adapt it to the specific Colombian case.

At this point we can summarise most of the technical instruments that we have been dealing with and try to structure them under the conceptual instruments that they are supposed to resemble. Table 2 shows the different categorical indexes that we will proceed to reclassify according to the conceptual instruments of four different methodological surveys: the old strict ILO criterion (1983), the Istat criterion (prior to 1992), the old Colombian ENH criterion (prior to year 2000), and the new Colombian ECH criterion.

Table 2. Categorical definitions for conceptual instruments.

Categorical Index	Features
<i>OCC</i>	At least one hour of work in the week of reference (or some kind of attachment to a job with temporary absence)
<i>S1</i>	No hours of work in the week of reference Looking for a job Last step for seeking work undertaken during the last month Immediately available for work
<i>S2</i>	No hours of work in the week of reference Looking for a job Last step for seeking work (> one month, ≤ six months) Immediately available for work
<i>S3</i>	No hours of work in the week of reference Looking for a job Last step for seeking work (> six months, ≤ one year) Immediately available for work
<i>S4</i>	No hours of work in the week of reference No job-search step taken yet Immediately available for work
<i>NS1</i>	No hours of work in the week of reference Has not searched for a job but has a valid reason to quit job-searching (See Table 5, Appendix) Immediately available for work
<i>NS2</i>	No hours of work in the week of reference Has not searched for a job and does not have a valid reason to quit job-searching Immediately available for work
<i>NS3</i>	No hours of work in the week of reference Is not immediately available for work
<i>I</i>	No hours of work in the week of reference Has not searched for a job Is not immediately available for work

Our problem will be focused on the transition from unemployment to OLF according to three kinds of criteria: active job-search, desire to work, and availability for work. Since the ECH methodology is more focused on the length of the period spent searching for a job than in the job-search method, it allows us to bypass the criticisms on “passive” or “active” methods of search (Flinn and Heckman, 1983; Jones and Ridell, 1999) and their classification as unemployed activities of people who are out of the labour force.

In Table 3, taking the procedure of Battistin et al. (2000) as a departure point, we plot the procedure used to adjust the three “true” conceptual instruments ($T = E$, employed; U , unemployed; and OLF , out of the labour force) to the technical instruments defined by four different kinds of criteria, the “strict” ILO definition (1983-1998), the “mild” Istat definition (prior to 1992), the ENH Colombian definition (prior to 2000) and the ECH Colombian definition (from 2000 onwards).

Table 3. Conceptual instruments and technical instruments in four different criteria.

State	T	ILO (83)	ISTAT (92)	ENH (76-00)	ECH (00)
Employed	E	OCC	OCC	OCC	OCC
Unemployed	U	$S1$	$S1, S2, S3, S4$	$S1, S2, S3, NS1, NS2, NS3$	$S1, S2, S3, NS1$
Inactive	OLF	$S2, S3, S4, NS1, NS2, NS3, I$	$NS1, NS2, NS3, I$	I	$NS2, NS3, I$

If we define x as the vector of observable characteristics in each person in the reference population and $f(x)$ as its distribution, we would straightforwardly expect the following equations to hold:

$$f(x|OCC) \neq f(x|S1) \neq f(x|I) \quad (1)$$

Now, that given:

- We expect OCC , $S1$, and I to be the accurate technical instruments of our conceptual instruments E , U , and OLF .

- We expect the set of observable characteristics x to affect the probability of membership to each labour state, so each distribution would reflect that.

In our specific case, if the ECH unemployment definition holds, we would expect

$$f(x|R) = f(x|S1) \quad \text{with} \quad R = S2, NS1$$

and

$$f(x|R) = f(x|I) \quad \text{with} \quad R = S3, NS2, NS3.$$

We can test an alternative situation where if $S2$, $S3$, $NS1$, $NS2$, and $NS3$ are a combination of features of unemployed and inactive people (i.e. OLS); we must have a convex combination of $f(x|S1)$ and $f(x|I)$ to be applied to $S2$, $S3$, $NS1$, $NS2$, and $NS3$. For example, for the case of $S2$ we should have:

$$f(X|S2) = f(X|S1)p(S1|S2) + f(X|I)p(I|S2),$$

where $p(S1|S2) + p(I|S2) = 1$ and $p(S1|S2)$ is a weight of the units exhibiting $S2$ which, given their X characteristics, would look like $S1$ individuals.

The logic of our exercise is to take OCC , $S2$, and I as our reference groups and to seek for a weighted mean of $f(x|OCC)$, $f(x|S1)$, and $f(x|NS2)$ able to provide a reasonable approximation for $f(x|R)$, $R = S2, S3, NS1, NS2$, and $NS3$.

5. Specification of the model

The logic underlying the quantitative estimation is to compare our “blurred” categories with those clearly defined and identified, in order to check whether they hold similar or rather different features. From the statistical point of view, we take $\mathfrak{F}_A = \left\{ f(x|A), A \in \widehat{A} \right\}$ as the group of conditional distribution functions of the n -dimensional observable variable x indexed by point A in the discrete set \widehat{A} . In terms of weighted means, we pretend to represent each member of \mathfrak{F}_R as a weighted mean of \mathfrak{F}_T , our “true” states. For the sake of comparability, our specific control group will be focused on our groups $S1$, $S2$, and $S3$.

The rationale underlying our exercise is to check if our “hazy” groups $S2$ and $S3$ resemble $S1$ (our true unemployed state) or I (our true inactive state). In terms of the estimation with the EM algorithm, we will calculate the maximum likelihood of the weighted means of our distributions. The mechanics of the estimation start with trial values $p(T|R)^{(0)}$ and procure subsequent values

$p(T|R)^{(1)}$ from the recursive process

$$p(T|R, x)^{(1)} = \frac{f(x|T)p(T|R)^{(0)}}{\sum_t f(x|T)p(T|R)^{(0)}},$$

$$p(T|R)^{(1)} = \sum_x f(x|R)p(T|R, x)^{(1)}.$$

As Everitt and Hand (1981) explain, the set of equations (1) restrict our $f(x|R)$, $R = S2, S3$, to be convex linear combinations of \mathfrak{F}_T . The test is to compare the estimations of the model with the estimation of our true distributions. Finally, by using the likelihood ratio obtained from the differences between the observed and the expected frequencies we calculate a goodness-of-fit statistic.

6. Results

The data used come from the March 2000 and the September 2000 issues of the National Household Survey (ENH). From the basic sample of the surveys we selected unemployed males between 25 and 35 years old, taking into account the following basic socio-economic variables: number of weeks of active job-search, former occupational position, occupational position looked for, age, and approved years of education. The gender and age criteria were applied in order to avoid problems of labour participation and discouragement.

Our estimation sample allows us to compare $S2$ and $S3$ with $S1$ and I . That is, to see if unemployed people who have been searching for a job for more than one month and less than six ($S2$) or for more than six months and less than one year ($S3$) look like our “true” unemployed people (the old ENH criteria holds) or if they look like our “inactive” people (the ECH criteria holds). We will do that using an heuristic index that provides tests for correlation. We take $\hat{f}(x|R)_1$ and $\hat{f}(x|R)_0$ as the estimates under the alternative and null hypothesis, respectively. We can estimate

$$\cos \theta = \frac{\hat{f}(x|R)_1' \hat{f}(x|R)_0}{\|\hat{f}(x|R)_1\|_2 \|\hat{f}(x|R)_0\|_2},$$

the cosine of the angle between the vectors. A value close to zero would imply that the mixture model provides good fit to $\hat{f}(x|R)_1$. The rationale underlying the concept of correlation for cosine implies that this coefficient takes values between -1 and 1 : the lower value (-1) showing a completely opposite behaviour and 1 meaning similar behaviour, between the two estimates $\hat{f}(x|R)_1$ and $\hat{f}(x|R)_0$.

Table 4 shows the main results of our estimation. We come to some interesting theoretical findings and some statistical regularities. For the main purpose of our exercise, to check whether the ENH-ECH unemployment criteria hold compared to the strict ILO criteria, we find, as Battistin et al. (2000) and Cipollone et al. (2003) do for the case of Italy and as Byrne and Strobl (2000)

do for the case of Trinidad and Tobago, that people exhibiting $S2$ and $S3$ do not look like people who are out of the labour force (OLS): basically, they look like the unemployed ($S1$). This means that the time spent on active job-search does not seem to be a function of the main socio-economic features of unemployed people taken into account, even though we acknowledge our sample's lack of detailed information. Nonetheless, having included years of education as one of the features, we suggest that what accounts for long periods of unemployment is not the *amount* of years of education but qualitative features of the human capital endowments (specific working experience, for example).

Table 4. Estimation results for the March 2000 sample.

True state	Indefinite state	
	$S2$	$S3$
March 2000		
Unemployment ($S1$)	0.8654	0.7258
Out of the labour force (I)	0.0000	0.1432
Sample size	352	250
p -values	0.0008	0.1650
cosine	0.8907	0.8361
September 2000		
Unemployment ($S1$)	0.9251	0.8821
Out of the labour force (I)	0.0038	0.1057
Sample size	420	262
p -values	0.0583	0.0572
cosine	0.9023	0.8645

7. Some cautious remarks

We have reviewed the quantitative consequences of the adoption of some of the main features of the ILO-ICLS criteria for the Colombian case. We have applied the methodological approach of Battistin et al. (2000) to our qualitative analysis of the new unemployment definition in Colombia. Following a Bayesian approach we have found that there does not seem to be a significant difference between unemployed individuals who have gone through different-length periods of active job-search which would suggest there is more empirical support for the previous ENH unemployment definition than for the new, more strict, ECH-ILO-ICLS one.

Considering the whole issue, we would like to provide some remarks about the current situation of the ECH methodology in relation to the international standards. The adoption of the ILO-ICLS for the Colombian case, *via* the new classification of some features of unemployed people implied a reduction of the

unemployment rate of about two percent points. However, the ECH seems to be in a mid-point between the Istat definition and the ILO-ICLS definition, as the first one seems a rather generous definition of unemployment and the last one, according to our analysis, does not seem to have empirical support. All the same, taxonomic classifications are never perfect as it is hard to account for heterogeneity, a significant feature of labour markets. As Cipollone et al. (2003) do, we do not claim for the ILO standards to be discarded nor revised. Nonetheless, the trade-off of standardisation seems to be an over-extension of the concept of non-participation which excludes a share of unemployed workers from the unemployment pool, and we support their suggestion of an integration of the standard set of ILO statistics with a set of internationally standardised statistics for the potential labour force, which seems to be a very important segment of Colombian labour force, specially when related to overall economic performance.

References

- Battistin, E., Rettore, E., Trivellato, U. (2000). "Measuring participation at work in the presence of fallible indicators of labour force state". *XL Scientific Meeting SIS*.
- Byrne, D., Strobl, E. (2000). "Defining unemployment in developing countries: evidence from Trinidad and Tobago". *Journal of Development Economics* 73, 465-76.
- Cipollone, P., Brandolini, A., Viviano, E. (2003). *Does the ILO definition capture all unemployment?* Bank of Italy: Milan.
- Everitt, B., Hand, D. (1981). *Finite Mixture Distributions*. Chapman and Hall: London - New York.
- Flinn, C., Heckman, J. (1983). "Are unemployment and out of the labor force behaviorally distinct labor force states?" *Journal of Labor Economics* 1(3), 28-42.
- Garrido, L., Toharia, L. (2004). "What does it take to be (counted as) unemployed? The case of Spain". *Labour Economics* 11, 507-23.
- ILO (1983). "Thirteenth International Conference of Labour Statisticians. Resolution concerning statistics of the economically active population, employment and underemployment". *Bulletin of Labour Statistics* 3.
- Jones, S. and Ridell, W. (1999). "The measurement of unemployment: an empirical approach". *Econometrica* 67, 147-62.
- Lasso, F. (2002). *Nueva metodología de encuesta de hogares: más o menos desempleados?* Mimeo: Bogotá.
- Levitas, R. (1996). Fiddling while Britain burns? The "Measurement" of unemployment. In Guy, W., Levitas, R. (Eds.), *Interpreting Official Statistics*. Routledge: London; 45-65.

- Rettore, E., Trivellato, U. (1993). "A double hurdle labour supply model with fallible indicators of labour force state". *Statistica* 5, 341-67.
- Scott, J. (1990). *A Matter of Record: Documentary Sources in Social Research*. Polity Press: Cambridge (UK).
- Suárez, A., Buriticá, A. (2002). *Empalme de las series de tasa de desempleo, ocupación y participación entre la encuesta transversal y la continua*. Mimeo: Bogotá.
- Vournas, Y. (1999). "Official statistics and the manipulation of conceptual and technical instruments: implications for research on social security". *The Radical Statistics Journal* 72.

Appendix

Table 5. Classification of reasons for job-search discouragement.

Valid reasons	Invalid reasons
There is no job available in the city	I consider myself too young or too old
I am waiting to be called	Right now, I do not want to get a job
I do not know how to search for a job	Familiar responsibilities
I'm tired of looking for a job	Health Problems
I cannot find a job suitable for my profile	I am studying
I am waiting for the high season	Other reason
I do not have the experience required	
I do not have resources to start an enterprise	
The employers consider me too young or too old	

Table 6. Criteria of availability for work and working status
Source: ILO 1998.

Working Status	Wants to work and is available immediately to start to work	Does not want to work or is not available immediately to start to work
Works	Underemployed Worker	Employed Worker
Does not work	Unemployed Worker	Inactive Worker (OLF)