

# UFZ-Discussion Papers

Department of  
Economics, Sociology and Law (OEKUS)

3/2003

## Quality of Life in Argentina: The Heritage of the Nineties

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April 2003

*Zeitschriftenlesesaal  
Reportammlung*

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# **Quality of Life in Argentina. The Heritage of the Nineties**

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## Foreword

This discussion paper is based on a presentation held by Dr. Guillermo Angel Velázquez from the university of Tandil during his research stay at the UFZ in Leipzig, in July 2002. He presented selected results of his work on the quality of life in Argentina during the 1980s and 1990s.

The research of Dr. Velázquez is closely associated to the German-Argentine project on "Quality of life in different urban quarters - objective features and subjective reflections, investigated in selected Argentine and German cities". The guidance of the project is in the hands of Dr. Sigrun Kabisch (UFZ Centre for Environmental Research) and Dr. Maria Cristina Trifiró, (Universidad Nacional de Cuyo, Mendoza). The project is financed by the German Federal Ministry of Science and Education and the Argentine governmental office SECyT. Its duration comprises three years, from the beginning of 2001 to the end of 2003.

In this text, Dr. Velázquez describes the indicators which are relevant for the calculation of a quality of life index for Argentina. This index could be worked out for the various Argentine regions and urban categories and shows significant differences of the quality of life within the country.

In the further research work within the project, the national census data from 2001 shall be used to get more detailed knowledge on the deep changes in the urban quality of life, caused by the economic and social crises in Argentina, which has tremendous influences on the social, economic and urbanistic structures of Argentine cities. There will be a close link between general analysis regarding the whole country, and empirical surveys in selected residential areas, e.g. in closed neighbourhoods, to explain risks and to analyse the chances and challenges for a more sustainable urban development.

Sigrun Kabisch

## 1. Introduction: The Concept of Quality of Life

At the present time there have to be marked several phenomena of social fragmentation for Tandil and Mendoza, e.g. the *increasing social differentiation* in the urban quality of life. Because these phenomena are in relationship with recent Argentinean dynamics at all, it can be argued that it is important to study the conditions of life since the beginning of the nineties generally for Argentina.

The standard of the quality of life in Argentina is to a large extent the result of an accommodation to leading local groups. Through the different stages of the economic and social history, they have been able to impose main parts of their own interests in the way of development models to the rest of the society, models that were generally lent from foreign countries.

The quality of life ever has been a *process*, but at the same time it has been a *new processes generator*. Nowadays even more than 40% of the Argentinean population can't reach the minimum conditions of life. Moreover, if we take into account only the interval of the young age-groups, this ratio increases to more than 60% respectively. This is due to differences in fertility among the different social groups.

Distinguishing between poverty and quality of life is essential for studying the latter one. Quite often there seems to exist interdependency between the concept of quality of life and concepts of poverty. Even although both have similarities by referring to related phenomena, main distinctions between them have to be marked.

*Poverty* at the one hand, is an objective measure that describes the disability of persons to reach general established and social accepted minimum thresholds of financial conditions. These thresholds can reflect either conjuncture conditions (Line of Poverty-LP) or structural conditions (index of Population with Basic Necessities Unsatisfied-NBI).

*Quality of Life* on the other hand is an achievement measure, regarding an established level as the optimal one, and keeping in mind social, economic and environmental dimensions that depend of the prevalent scale of values in the society. It has to be stressed that these vary in function of the expectations in historical progress. Hence it is rather a subjective measure.



## 2. Methods: Sources and methodology studying the quality of life in Argentina

Sources for the measure of the differences in quality of life in Argentina are not numerous.

Mainly these are:

- National Census.
- Vital Statistics of the National Ministry of Health and Social Action.

Both cover entirely the national territory, although with an availability of information inverse to the analysis scale. A kind of a "paradox of geographical information" is the fact, that *the most interesting information is available only for not very interesting scales*. By an increasing level of space for analysis, the readiness of information is decreasing. Thus it is necessary to reconcile analysis scale, readiness of information and available resources. The intersection of these elements has leaded us to choose the scale of departments.

The formulation of an index that describes quality of life, is a question that is not yet resolved. It depends on various factors like historical processes, scale of values of the society, expectations, individual and collective experiences, private (revenues, instruction level) as well as public dimensions (accessibility, environmental questions), further the type of analysis scale and their adjustment according to the available information or geo-referentiation.

For our analyses we have taken into account both socio-economic dimensions (education, health and housing) and physical-environmental ones (flood risk, earthquakes, volcano, frequency of tornado and land erosion). These dimensions have to be approximated, starting from the selection of variables with different weights in the proposed index, in function of their explanatory value and their trust level.

We should point out that the different variables have got different weights according to the social groups that we consider. Therefore we cannot reflect it in a global index as departments (political-administrative spatial units). Probably between the low revenues strata there are pondered rather the "basic" necessities, whereas in those of high revenues the weight of "superfluous" factors is increased.

The adjusted definition of an "objective" index of quality of life is not a simple, neither universally, valid task. Based on our own experiences and in previous works of investigation broadly discussed – mainly in the mark of the Latin American Net of Quality of Urban Life –, we have used, on the one hand, the social and economic dimensions of education, health, housing and, on the other one, the environmental conditions and attraction of the landscape to determine levels of quality of life in Argentina. Following we will present the single indicators, that each dimension is generated.

*Educational Dimension:*

1. Percentage of the population with educational degree smaller to primary complete (elaborated starting from the table p13-d of the 1991 census).
2. Percentage of the population with educational degree university complete (elaborated starting from the table p13-d of the 1991 census).

*Health Dimension:*

1. Infantile Death Rate according to place of the mother's residence for the years 1994, 1995 and 1996 (Ministry of Health. Department of Statistics). These are the nearest available years for describing the nineties based on the departmental level.
2. Percentage of population without Public Health (elaborated starting from the table 7d of the 1991 census).

*Housing Dimension:*

1. Percentage of the population that resides in housings with lack of exclusive use of toilets (elaborated starting from the table v6-d of the 1991 census).
2. Percentage of crowded homes, considering those that overcome 2 people for each room. (elaborated starting from the square v8-d of the 1991 census).

*Environmental problems:*

1. Population residing in areas with flood risk problems.
2. Population residing in earthquake areas.
3. Population residing in areas affected by tornado.



#### 4. Population residing in areas with land deterioration.

##### *Attraction of the landscape:*

Due to the difficulty of recreating a methodology for the analysis of landscape (receiving attributes of tourism and residence place) we have considered only one indicator:

- Existence of weekend housings and vacation housings (elaborated starting from the tables v13-d of the 1991 Census, for provinces and departments).

All these indicators were incorporated into a Geographical Information System (GIS) to elaborate the corresponding thematic maps. Below we will explain the way we have used this information to create an index that embraces the aspects we have considered separately.

The first step for the elaboration of the index of quality of life is the transformation of the rates into a partial index-number, the one that was carried out according to the following procedure, and to the variable type:

- a) Variables whose increment implies *worse relative situation* (environmental problems, population with educational degree smaller to primary, population residing in crowded homes, population without public health, population without toilet of exclusive use, faulty housings and infantile death rate).

$$I = \frac{\text{Máx} - a}{\text{Máx} - \text{mín}}$$

For example, to get the index-measure for the percentage of crowded homes of Confluencia, in Neuquén in 1991 (32,43%) we got:

$$I = \frac{96,41 - 32,43}{96,41 - 4,77} = 0,66$$

96,41: maximum value for crowded homes in Argentina.

32,43: value for crowded homes in the department of Confluencia.

4,77: minimum value for crowded homes in Argentina

- b) Variables whose increment implies *better relative situation* (population with educational degree university completed and Houses for vacation or weekend).

$$I = 1 - \frac{\text{Máx} - b}{\text{Máx} - \text{mín}}$$

For example, to transform the percentage of population with university degree of *Tafí Viejo*, in Tucumán in 1991 (1,69) we got this:

$$I = 1 - \frac{13,09 - 1,69}{13,09 - 0} = 0,13$$

After having transformed the variables, it is possible to elaborate the Quality of Life Index (QL-index). Therefore we have established different weights for each partial index, according to their relative importance.

The health dimension is the most important component in the index, following by housing, environmental and educational variables. The relative weight of each component in the proposed index is:

Dimension	Variables	Partial Weight (%)	Total Weight (%)
Health.	Infantile Death Rate	20	35
	Pop.	15	
Housing.	Pop. without exclusive toilet	20	30
	Crowded Homes	10	
Environment.	Environmental Problems	15	20
	Houses for Vacation	5	
Education.	Pop. without Primary degree	10	15
	Pop. with University degree	5	
<b>Total</b>			<b>100</b>

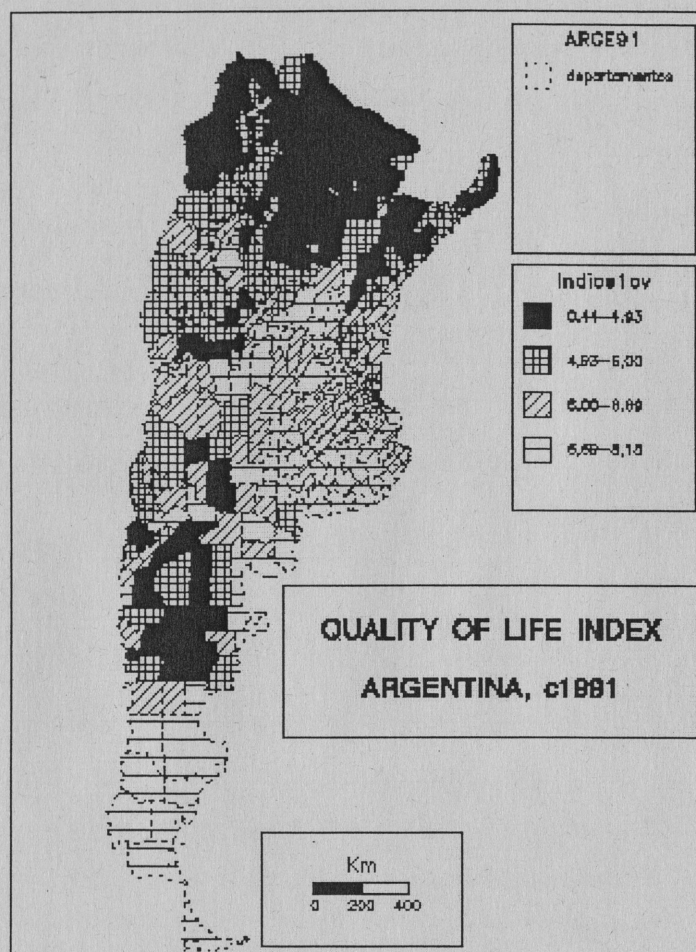
Pondering the relative weight of each variable we have determined an QL-index whose theoretical value can reach between 0 and 10 to reflect the worst and best situation respectively, as well as reflecting the continuum between the extremes.



### 3. Results:

#### The quality of life in Argentina. Differentiating factors in the nineties

The *map 1* shows the distribution of our QL-index, referring to the different departments of Argentina in the 1990's.



Map 1: Quality of Life Index. Argentina, c.1991.

It is obvious that there are large differences between, by one hand, the NEA (north-east) and NOA (north-west) regions, historically the domestic more deprived areas, and, by the other hand, the Pampean Region and Buenos Aires City, historically the most development area. The Cuyo and Patagonic regions are located at an intermediate development level. In all these cases, however, strong internal differences have to be noticed.

Whereas the mean value of Quality of Life for all the departments was 5,79/10 in 1991, this average varies further, according to factors like migratory dynamics, Gross Internal Product and urban categories, as shown below.

### *Migratory dynamics*

The *table 1* shows, that the QL-index is asymmetric among the different categories of migratory dynamics, since the variation coefficient ascends to 9,53%. Two groups clearly can be distinguished: on the one hand the zones with strong debit and with very low QL-index, and on the other hand the three remaining zones, with higher indexes.

The main factors that affect the quality of life of the worst migratory growth group (that loses -12 to -5/1000) are: housing (toilet lack) and educational degree (high proportion of population without primary degree).

Referring to the three remaining groups, we observe a better situation. It is important to highlight that the group with -4.9 to 0 migratory growth shows however a satisfactory behaviour, because of the weight of Buenos Aires City and Mendoza province. Just we had expected, the two receiving groups also show good relative conditions.

<b>Migratory Growth (1/1000)</b>	<b>Pop. (Thousands)</b>	<b>QL-index</b>	<b>Environ. Index</b>	<b>Education &lt;1ria</b>	<b>TMI Infantile Death Rate</b>	<b>Toilet Lack</b>
10 to 61	609.4	6.99	0.82	0.66	0.84	0.80
0.1 to 9.9	20874.8	6.62	0.57	0.65	0.79	0.85
-4.9 to 0	7302.0	6.82	0.58	0.69	0.80	0.80
-12 to -5	3823.8	5.42	0.66	0.46	0.71	0.56

*Table 1:* Relationship between migratory dynamics (1980-1991) and Quality of Life.  
(Discriminative level (Std. Des./Mean) = 0,615/6,460= 9,53%)



### *Gross Internal Product*

Regarding to another discriminating factor we will consider the relationship between Gross Internal Product and Quality of Life. Like *table 2* shows, the QL-index differs in a great degree within the different categories of GIP, since the variation coefficient ascends to 11,44%.

There have to be distinguished three groups clearly: the zones with high GIP that exhibit a high QL-index, a second group in an intermediate situation (medium and under-medium GIP) and, finally, the group with low GIP that shows a very low QL-index.

The main factors that affect the quality of life of these groups can be seen in the last four columns. In the case of group 1, with better quality of life and bigger GIP, the best relative situation refers to socio-economic factors, especially the educational dimension that is the one that establishes particularly bigger distance with the remaining groups.

GIP per capita index (1989)	Pop. (Thousands)	QL-index	Environ. Index	Education <1ria	TMI Infantile Death Rate	Toilet Lack
131 to 137	4213,3	7,52	0,55	0,81	0,84	0,90
85 to 130,9	17839,8	6,63	0,53	0,66	0,79	0,87
69 to 84,9	5866,9	6,41	0,69	0,57	0,77	0,75
37 to 68,9	4690,0	5,43	0,70	0,47	0,72	0,53

*Table 2:* Relationship between GIP (Gross Internal Product) per capita (1989) and Quality of Life. (Discriminative level (Std. Des./Mean)= 0,740/6,490= 11,44%)

### *Urban categories*

Another factor of differentiation of Quality of Life is the urban hierarchy. There are signals of the existence of certain relationships between Urban Scale and Quality of Life. Therefore it should exist, in principle, a higher standard of quality of life in Middle Size Cities (MSC). To prove this assumption we have established a typology of the departments, according to the urban hierarchy of their more important city, or of the urban agglomerate which it is a part of. For this classification we took several census information (series G, number 2, annex 1 of 1991 census). The established categories were proposed by *Vapřarsky* and *Gorojovsky* (1990):

Category	Size (inhabitants)	Departments
1 Big Cities	>1,000,000	28
2 Big MSC	400,000-999,999	13
3 Medium MSC	50,000-399,999	56
4 Small MSC	20,000-49,999	68
5 Big Towns	2,000-19,999	246
6 Small Towns and Rural Population	1-1,999	91

Our previous hypothesis has stressed that Quality of Life varies in association with the urban hierarchy in a proportional way according to the population's size. This is valid in a way in which there can be spoken of an "in-economy of mass". In other words: there is a kind of optimal urban scale, beyond which the population's increment doesn't suppose a proportional growth of the services and availability of opportunities, but rather results in appearing a series of problems (contamination, urban insecurity, transportation cost and time, etc).

The *table 3* shows that the urban scale has a strong discriminating power in Quality of Life levels (coefficient of discrimination 12,12%). The index reaches its maximum value for the departments that have big MSC (400,000-999,999 inhabitants). Although this is coherent with our previous hypothesis of the existence of an "optimal human scale" with negative consequences of being betted above or below it respectively, we thought that this "good-standard" has to be located in the middle MSC (50.000-399.999 inhabitants). Probably this refers to the behaviour and the weight of the components of a composite index like the one that is used in this paper. In the case of urban scales there are differentiated behaviours.

The toilet readiness for example got strong impacts on the favour of big cities. But we see that the index of this element diminishes as one in the urban scale, particularly passing the 4 and 5 categories and, especially, in category 6 (rural population).

The infantile death rate (TMI) is shown to be virtually constant in relationship with the urban scale. This result doesn't stop to surprise us, although it can be partly due to aspects of information (under-count in rural or isolated areas), but it also shows a kind of "convergence."<sup>1</sup>

<sup>1</sup> In this "convergence" it could have either an *optimistic* vision (The infant mortality in rural or isolated areas is not such a serious problem.) or another *pessimist*: The social fragmentation in urban areas is so huge that it produces global rates (that is to say the average) that are quite similar to the



The educational deficit (population with instruction degree smaller to primary) has got a direct relationship with the urban scale, favouring the big and middle size cities. On the other hand, the environmental index is "better" for the rural population and small towns. It accuses a very strong deterioration in the big cities.

In synthesis, below a certain urban scale, the *lack* of certain services and expectations that can be reached by a certain population quantum affects the conditions of life of Argentineans. Above this scale, the environmental and other factors not considered in our index, as the in-economies of mass, the prohibitive housing costs or the growing insecurity seem to diminish the possibilities to enjoy a good quality of life.

Urban Category	Pop. (thousands)	QL-index	Environ. Index	Education <1ria	TMI Infantile Death Rate	Toilet Lack
1	13712	6,83	0,47	0,74	0,79	0,91
2	3131	7,02	0,64	0,70	0,79	0,86
3	7068	6,61	0,68	0,63	0,78	0,77
4	3469	6,31	0,65	0,53	0,79	0,75
5	4736	5,63	0,67	0,42	0,77	0,60
6	494	4,85	0,78	0,30	0,74	0,35

Table 3: Relationship between urban category and quality of life (1991).  
(Discriminative level (Std. Des./Mean)= 0,752/6,208= 12,12%)

When analysing the weight of the differentiation factors, considered in agreement with their discrimination power (migratory dynamics, GIP, and urban categories), it is necessary to highlight their grade of correspondence and interaction. The Argentineans that reside in not very accessible areas, for example, do also have phenomena in their environments, that are characteristic for certain urban scales. These are population's expulsion, low generation and appropriation of wealth, and absence of services; and each of it in a rather conservative context and in a context of even more social polarisation. Otherwise the favourable conditions also spread, to interact contributing to the perpetuation and increment of the social and regional disintegration to each other.

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traditionally as "poor" considered areas. The finite explanation of this attractive phenomenon probably should incorporate doses of both visions.

#### 4. Discussion: Trends in Argentinean Population after 1991

During the inter-census period 1991-2001, Argentina had got an extremely low growth of population. All the calculations spoke of a minimum level of 37 or 38 million inhabitants. However, the provisional results of the 2001 census show only somewhat more than 36 millions of Argentineans. Although these results are biased by under-registration, it is evident that there were changes or accelerations respectively, of previous tendencies in the Argentinean population. In addition to the historical process of reduction of the fertility we have to stress the growing phenomenon of population's expulsion.

Between the years 1991 and 2001 the migratory overall-balance was negative (-870.468 people) (Gómez Lende, Velázquez, 2002). When speaking of "balance" we are assuming that the expulsion of Argentineans went upper to the 870.468 aforementioned people. This is because during this lapse there were also immigrants, basically bordering, and this is rather due to structural reasons, than due to the situation itself. Concerning these *structural reasons* we should point out, that during the nineties there has persisted a difference of development between Argentina and Bolivia, Paraguay or Peru respectively, all of them main centres of population's expulsion. The effect of the *situation* on the other hand had increased this process during the described decade by the persistence of the Plan of Convertibility, that implied the appreciation of the Argentinean monetary sign (peso). Thus, the possibility of remission of the "Argen-Dollars" acted as situational incentive for much of the bordering immigrants. It's clear that this phenomenon must have had great effects on the different regions and countries.

Applying the same demographic equation for the inter-census period 1991-2001 shows, that only 8 provinces had got a positive migratory balance, whereas the 16 remaining had lost population. Of these 16 counties, 9 had a rate upper to the national average (2,5 for thousand).

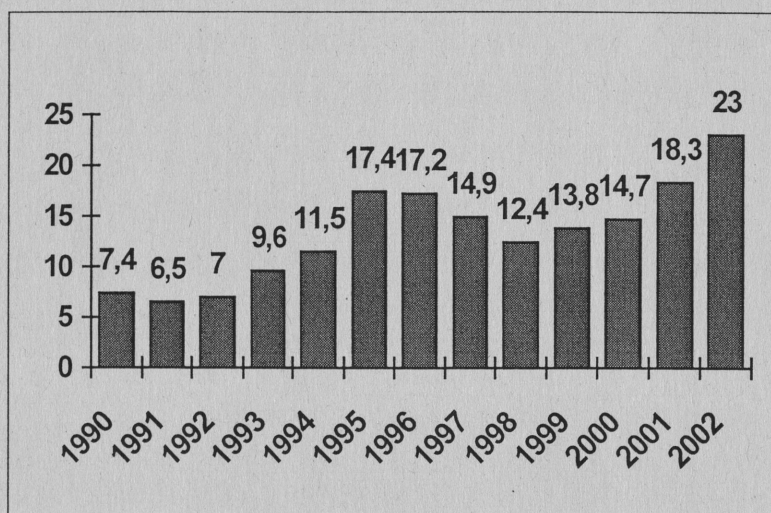
At the same time, the unemployment rate increased too (see *graph 1*). This evolution of the unemployment rate in Argentina, starting from the nineties, is associated with the *economic adjusting* of politicians. The high increase of the rate between 1991 and 1995 is related with:

- The "Reform of the State" (with axes in privatisation and deregulation) was carried out in disordered form, without the smallest official interest or on the part of the



favoured managers groups, for the possibility of reinsertion of the labour mass farewell or retreat.

- The indiscriminate external opening, favoured by the exchange rate that encouraged the imports until the crisis of 1995 (that diminishes their strong growth), however after 1996 the commercial opening continued.
- Rates more and more high for the credits, exacerbating the financing of small enterprises. This stratum, that has been the most generating of employment in the Argentina, suffers from attenuation or disappearance of numerous units.

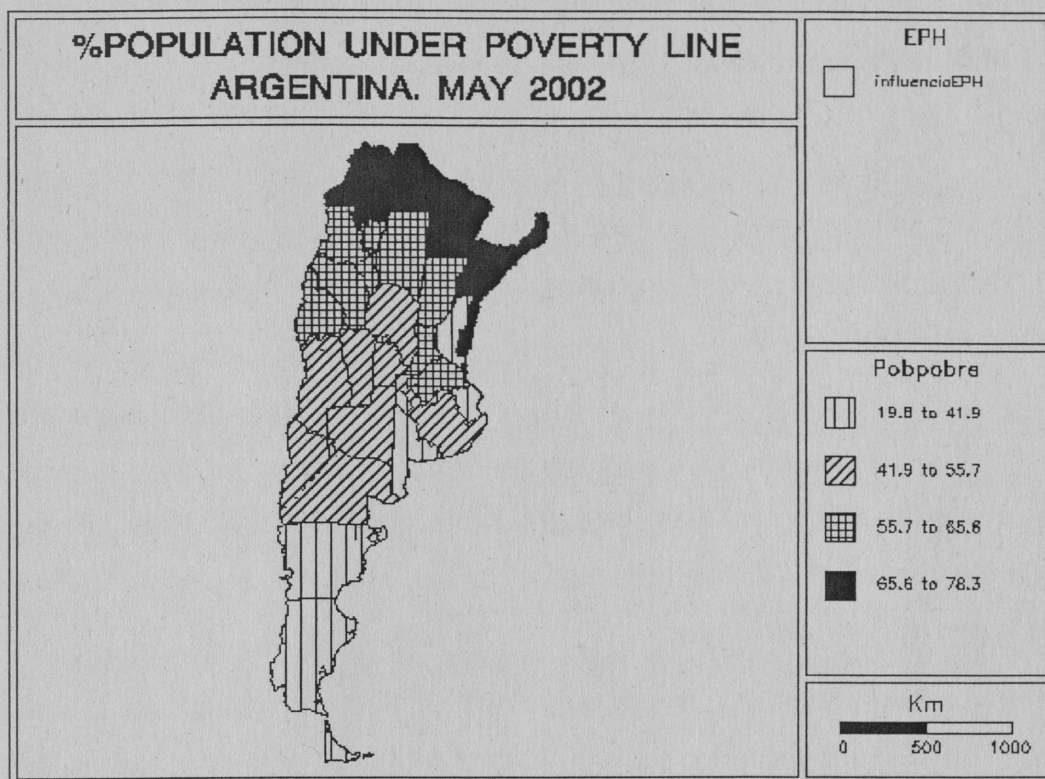


Graph 1: Unemployment Rate. Argentina, 1990-2002

After 1995 the unemployment-rate became diminished by the force against creating positions of bad quality and low wages. But, however, since 2001, the unemployment has been increased again, in spite of the persistence of the degradation of the labour conditions (*graph 1*).

Another phenomenon, which most of the Argentineans are suffering from, is the exceptional expansion of poverty, that has reached it's "record" levels during 2002 (see map 2).

Map 2: % Population under poverty line. Argentina. May 2002.





It can be seen that poor population's proportion is high all over Argentina, but especially high in the north, where it overcomes two thirds of the total! Otherwise, the best relative situation can be registered in the Patagonic region. This map is in similarity with that of the Quality of Life in 1991 (see map 1) but, from then, the situation has worsened notably.

Finally, economic differentiation had also increased among the Argentinean provinces. In 1989, discarding the extreme values, the difference between the population groups with more GIP per capita (Buenos Aires City) and the minor ones (Chaco in NE) was from 250 to 37. According to the last calculation corresponding to the year 2000, this difference has risen from 347 to 26 between Buenos Aires City and Santiago del Estero in NW.

The preliminary results of the 2001 census indicate the presence of substantial changes in the Argentinean social-geographic situation, pointing out that during the nineties historically winning or loosing zones have modified (drastically, in some cases) their relative position within the national context. Thus, the social gap between upper and lower classes has widened.

The current context seems nearer to situations of fragmentation than those of dichotomies, since space units appear with "hybrid" features, in what concerns to it's economic and demographic dynamics.

Something is clear in this sense: the social and economic reformations implemented in the mark of the nineties have left as balance an enormous majority of losers in front of a little handful of winners.

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