

ECONOMIC GROWTH AND CYCLES IN LATIN AMERICAN COUNTRIES IN 20TH CENTURY

Guisan, M. Carmen and Aguayo, Eva
Faculty of Economics. University of Santiago de Compostela (Spain)
Telephone/fax number: 34-981-563676
eccgs@usc.es / economet@usc.es

Abstract

In this paper we analyse the evolution of economic growth and economic fluctuations in Latin American countries during the 20th century, with special emphasis in the period 1951-2000.. We compare the economic fluctuations and the evolution of GDP, Population and GDP by inhabitant of these countries with OECD. We include an econometric causal analysis explaining this evolution.

We also analyse causes of coincidences and discrepancies among countries of this area and a comparison with economic fluctuations in OECD countries.

The conclusions suggest some economic policy recommendations for international organizations and governments in order to improve the economic performance of Latin American countries in future, having into account the main difficulties that restrict their possibilities of sustained growth and stability.

1.- Introduction

The recent socio-economic crisis of Argentina and the difficulties in reaching a high and sustained rate of growth in some big countries of Latin America, such as Mexico and Brazil, has created a lot of social worry over the last few years because the need for improvement in the economic conditions of the population and the demands for reducing poverty are very high in these areas.

Generally public opinion is not very well informed, both inside Latin America and outside, about the real causes of their economic problems, and governments are sometimes very unstable and conditioned by external debt and the urgent need to finance deficits, so usually there is little room to develop efficient policies that could guarantee higher levels of Gross Domestic Product by inhabitant (Gdph).

For example during the year 2001 the insistence of many television news programmes and newspapers upon the great problems of Argentina could make it seem to many people that this country was in very bad circumstances, but the reality is not so, as Argentina was, throughout the 20th century, the most advanced country in Latin America by far in comparison with the other countries, and continues to be so at the beginning of 21th century,

The external debt problems in the 1980s have very negatively affected many Latin American countries, provoking an increase in the intensity of fluctuations and at the same time a reduction in the growth rate of real Gross Domestic Product (Gdp). Many think that this is the main problem of these countries, but if we analyse the main variables that influence economic development we can see that this problem is more a consequence of internal disequilibrium than a cause, although of course it contributes to deepen the internal disequilibrium.

In the next sections we will analyse the main problems that affect economic growth and cycles in Latin American countries, and we will show that economic policies of many governments and international organisations is insufficient in achieving the desired improvement in Latin American development, and we include some comments about the main factors that should be taken into account for the design of more efficient policies, which would be better able to overcome the great economic difficulties of these countries.

2.- Economic growth in Latin America in the period 1913-98.

Tables 1, 2 and 3 present the evolution of exponential rates of growth of real Gross Domestic Product at 1990 prices (Gdp), Population (Pop), and Gdp by inhabitant (Gdph) in Latin American countries, in comparison with other world areas in the period 1913-98.

We present the exponential rates of growth for the periods analysed in the interesting book by Maddison(2001), calculated in Guisan, Aguayo and Exposito(2001), which are: 1913-50, 1950-73 and 1973-98, and include also the average rates for the whole period 1913-98.

Table 1
Average percentage of yearly growth 1913-998: Gdp
(exponential rates)

Area	1913-50	1950-73	1973-98	1913-98
Western Europe	1.18	4.70	2.09	2.40
USA + w.o.s	2.77	3.95	2.94	3.14
Japan	2.19	8.88	2.93	4.22
Asia excl. Japan	0.90	5.05	5.32	3.32
Latino America	3.37	5.19	2.98	3.75
Eastern Europe + exUssr	1.82	4.73	-0.56	1.91
Africa	2.65	4.35	2.70	3.12
World	1.83	4.79	2.97	2.97

Source: Guisan, Aguayo and Exposito(2001), based on Maddison(2001), and
¹ w.o.s means oher western offshoots, name used by this author to include also Canada, Australia and New Zealand, in the same group that USA.

Table 2

Average percentage of yearly growth 1913-1998: Population
(exponential rates)

Area	1913-50	1950-73	1973-98	1913-98
Western Europe	0.42	0.70	0.32	0.47
USA + w.o.s [†]	1.24	1.54	1.01	1.25
Japan	1.30	1.14	0.61	1.05
Asia excl. Japan	0.92	2.17	1.84	1.53
Latino America	1.95	2.69	1.99	2.16
Eastern Europe + exUssr	0.34	1.30	0.54	0.66
Africa	1.64	2.30	2.69	2.12
World	0.93	1.90	1.65	1.40

Source: See Table 1.

Table 3

Average percentage of yearly growth 1913-998: Gdp by inhabitant
(exponential rates)

Area	1913-50	1950-73	1973-98	1913-98
Western Europe	0.76	4.00	1.77	1.93
USA + w.o.s	1.53	2.41	1.93	1.89
Japan	0.89	7.74	2.32	3.16
Asia excl. Japan	-0.02	2.88	3.48	1.79
Latino America	1.42	2.50	0.99	1.59
Eastern Europe + exUssr	1.48	3.43	-1.10	1.25
Africa	1.01	2.05	0.01	1.0
World	0.90	2.89	1.32	1.56

Source: See Table 1.

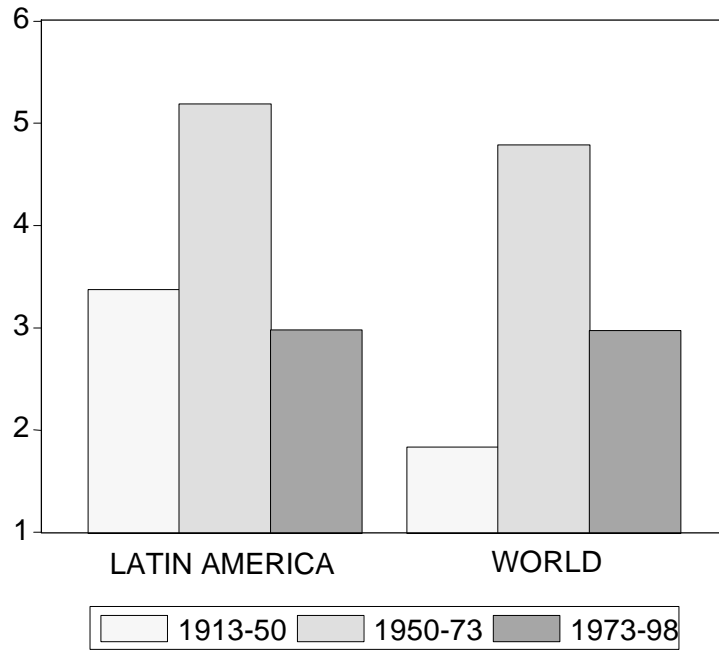
As we have pointed out in Guisan and Exposito(2002) Latin America reaches only fifth position in Gdph, during the period 1913-58, with an average rate of only 1.59 which is the difference between the growth rate of real Gdp, 3.75 and the very high rate of Population growth of 2.16%.

The sixth position among these seven great areas corresponds to East Europe and ex-Ussr, with an average growth rate of Gdph during the period 1913-98 of only 1.25%, the difference between an average growth rate of real Gdp of only 1.91% and a rate of population growth of 0.66%.

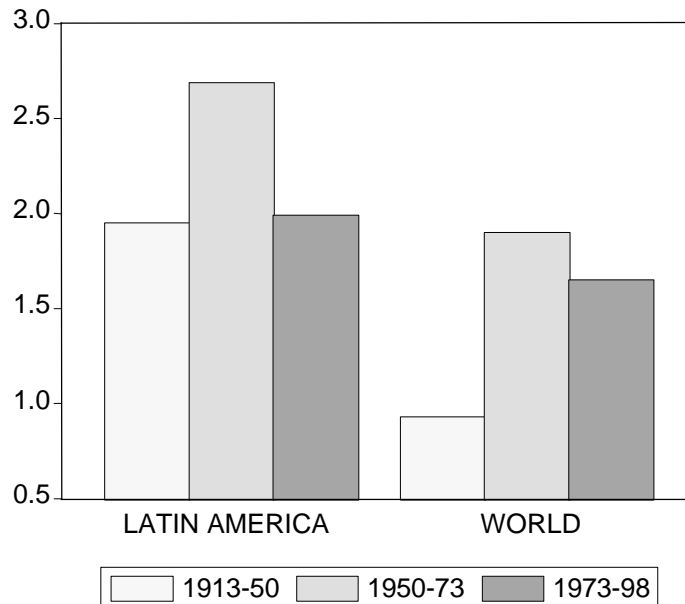
The seventh position belongs to Africa, which is the area with the least growth of Gdph in the 20th century, mainly due to a very high rate of Population growth. So the average growth rate of Gdph was only 1%, which is the difference between the rate of growth of Gdp, 3.13% and the high rate of growth of Population of 2.13%.

The following graphs show the rates of growth of Gdp, Pop and Gdph in Latin America and in the World.

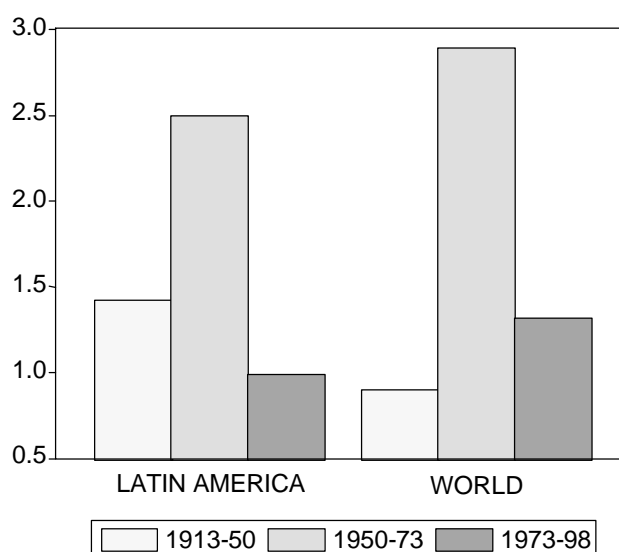
Rates of growth of Gdp



Rates of growth of Pop



Rates of growth fo Gdph



Latin American countries have had a rate of growth of Gdph higher than world average during the period 1913-50. This rate had a great increase during the period 1950-73 although lower than world average.

The negative consequences of petrol crisis from year 1973 on Gdp growth are very outstanding in all areas of the world, but in Asia excluding Japan. During the period 1973-90 Latin America rate of growth of Gdp, 2.98, was very similar to world average, 2.97, but the rate of Gdph was lower in Latin America because the higher rate of growth of Pop.

3. Education and development in Latin America in 1980-98

In table 4 we present the evolution of American areas, including the most developed countries (USA and Canada) for the purpose of comparison. Values are measured in US\$99 according to Purchasing Power Parities.

Table 4
Population, Gross Domestic Product by inhabitant, Education and Fertility

Areas of America	Pop80	Pop99	Gpdh80	Gdph99	Tyr	Eduh	Fer00
1.USA + Canada	251.8	303.5	22062	31319	12.1	1396	2.0
2.Mexico + Central	103.0	151.1	6716	6717	5.9	307	3.1
3. Andean America	85.3	125.9	5052	5726	6.1	204	3.0
4. East South America	155.8	213.4	6901	8203	5.3	260	2.4
America	595.9	793.9	13011	16364	8.1	704	2.5
World	4428.6	5970.6	5284	7125	5.8	258	2.8

We see that America as a whole has a value of Gdp by inhabitant more than twice the world average in 1998 and that the educative level is substantially better than world average, with more years of schooling by inhabitant and greater expenditure on education by inhabitant, and even that in fertility rates, the expected number of children by woman, is moderately more than world average.

We can also appreciate that there are important differences among areas and that all Latin American areas have a low value of expenditure in education by inhabitant, low levels of years of schooling that have improved in the last decades of the 20th century but that are yet very far from industrialized countries, and contrarily they have rather excessive fertility rates, even higher than world average in two areas.

If we see the situation by country we can see that Argentina is the best situated of all Latin American countries with the highest level of Gdph, which reached a value of 12609 US\$ in 1999. The second place in 1999, among Latin American countries, was occupied by Chile with a value of 9419, the third place by Uruguay with 89370, the fourth by Mexico with 8338 and the fifth by Brazil with 7342.

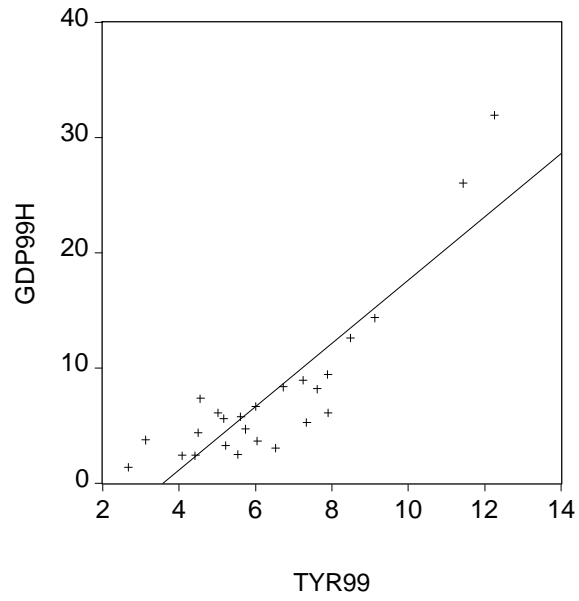
In Table 5 we present production by inhabitant, classified by sector of production, in 1999 and we see that Latin American countries have a very low value of industrial development in comparison with USA and Canada, although Argentina is the most outstanding among them.

Besides this data we present some selected graphics to show the great importance of education for improving production and for reducing average fertility. They present also other important relations, like inter-sector relations, the relation between industrial production and imports, and the relation between imports and exports. The majority of fluctuations depend on insufficient development of external trade and/or industrial production as well as on insufficient education improvement.

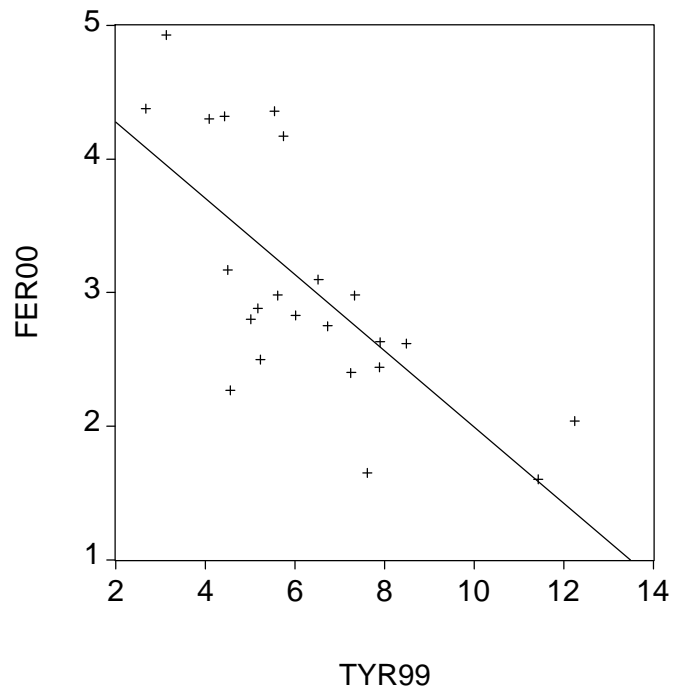
Table 5
Value-Added by sector (US\$99 measured with PPPs)

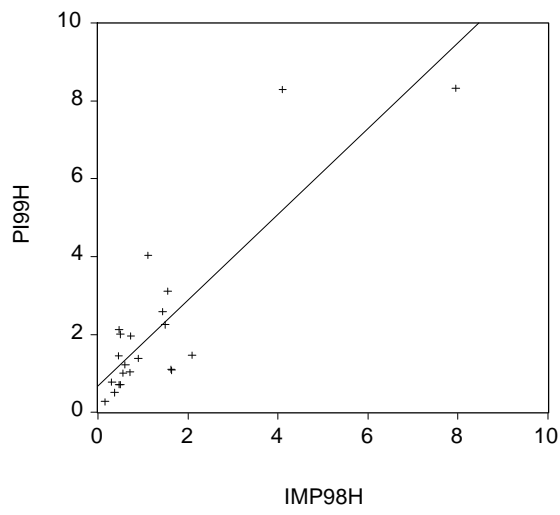
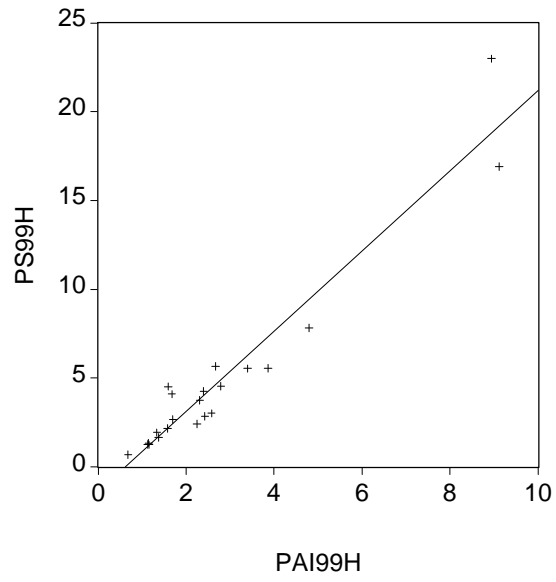
Country	Ph99A	Ph99I	Ph99S	Gdph
ARGENTINA	757	4035	7818	12609
BOLIVIA	375	774	1349	2498
BRASIL	661	2129	4552	7342
CANADÁ	781	8328	16916	26025
CHILE	754	3108	5557	9419
COLOMBIA	851	1458	3767	6075
COSTA RICA	933	1466	4266	6665
ECUADOR	366	1006	1676	3048
EL SALVADOR	480	1222	2662	4364
GUATEMALA	862	712	2173	3747
HAITÍ	408	272	680	1361
HONDURAS	432	720	1248	2400
JAMAICA	262	1079	1929	3269
MÉXICO	638	2251	5670	8338
NICARAGUA	623	503	1270	2397
PANAMÁ	489	1101	4527	6118
PARAGUAY	1217	1030	2433	4680
PERU	422	2003	2847	5272
R. DOMINICANA	616	1959	3023	5598
URUGUAY	804	2592	5541	8937
USA	417	8297	22977	31912
VENEZUELA	288	1384	4094	5767
AMERICA	611	2156	4863	7630

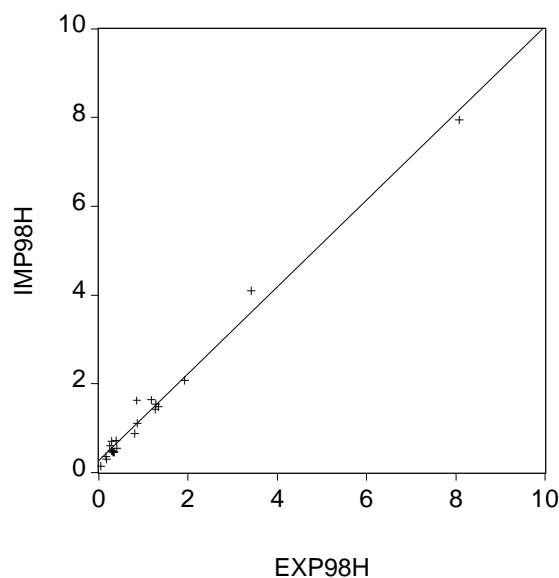
Source: Elaboration based on World Bank, United Nations and other institutions



Relation between Fertility and Schooling (America)







These figures are very important and both governments and international organisations should think about which socio-economic policies are needed to achieve better results for the areas with the lowest levels and growth rates of Gdp by inhabitant, such as Africa.

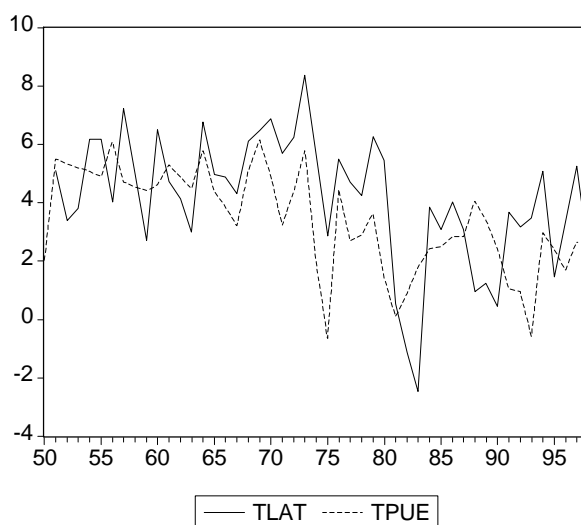
They should take into account that international cooperation should especially address the improvement of education, because this important factor contributes both to the improvement of production and to the reduction of reproduction in a very significant way.

Other measures are also important, such as social peace and laws that guarantee private property, and are generally very positive for creating an adequate environment for increasing investment, according to the institutionalism theories of North(1999) and other economic historians and economics researchers. Although these authors usually recognise that education has a positive effect on development they in generally do not show education to be as important as it really is in development. In our view institutions by themselves could not achieve a great deal of improvement without education but education by itself usually can do a great deal in improving in institutions.

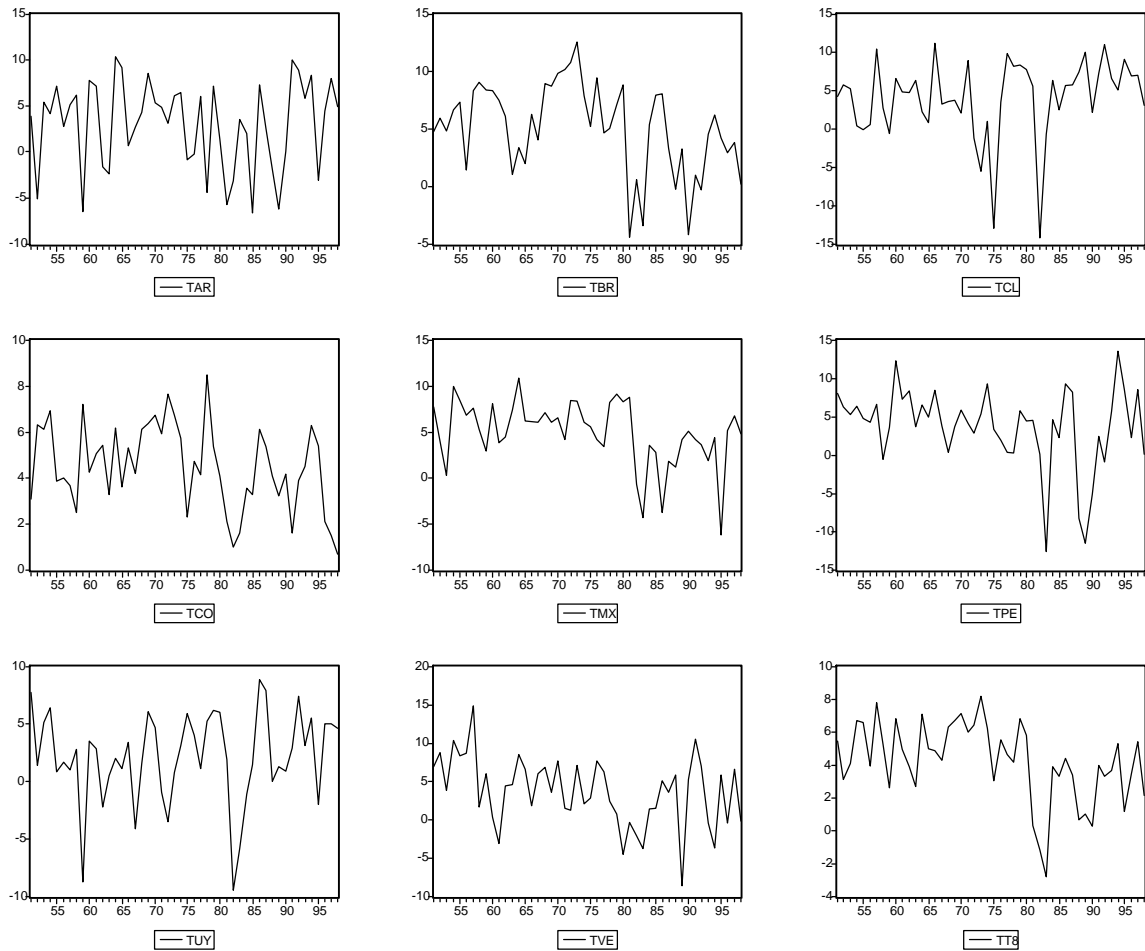
Without these types of measures misery and poverty will not be overcome in many important areas of world. For this reason it is important to insist on the causes of the differences of income among geographical areas: it is not only a problem of solidarity but also, and mainly, a problem of unequal educative levels of populations.

4. Economic Cycles in the period 1950-98.

The table 5 present the rates of growth of real Gdp in 8 Latin American countries, based on Maddison(2001). There are we see that the debt crisis of 1980s slowed down the economic growth in majority of this countries, while in the period 1991-98 has been a recovery.



	1951-60	1961-70	1971-80	1981-90	1991-98	1951-98
Argentina	3.08	4.41	2.96	-0.81	5.90	2.99
Brasil	6.50	5.78	8.16	1.63	2.81	5.07
Chile	3.53	4.26	2.79	3.03	7.01	4.01
Colombia	4.79	5.23	5.52	3.45	3.25	4.50
Mexico	6.13	6.49	6.62	1.88	3.10	4.92
Peru	5.72	5.31	3.80	-0.82	5.06	3.76
Uruguay	2.16	1.59	2.80	0.60	3.94	2.15
Venezuela	6.98	4.70	2.75	0.80	3.16	3.70
Total	5.24	5.30	5.69	1.34	3.56	4.25



5.- Conclusions

Many researchers have shown a clear concern over the last few decades for Latin American development, but they are very far from unanimous about the relative importance and priority of the different measures proposed.

1) Education is a very important moderator of excessively high rates of population reproduction. As the Fertility models point out each two years of increase in average schooling of population generally implies a point in reduction of the fertility rate, that is to say in the average number of children per woman.

2) Education is also a very important factor of production, contributing to improve human and social capital, to increase external trade and industrial production, and thus contributing to the improvement of service sectors through inter-sector relations.

3) The agriculture sector has good level of production per inhabitant in the majority of Latin American countries in comparison with other countries and with the world average but the potential expansion of this sector is rather limited as the last decades experience show that increases from supply could not be followed by similar increases from demand, at world level, and could lead to undue reduction in prices with no profit for producers.

4) Industry is a sector with great possibilities of increase in Latin American countries and policies to improve their capacity for this should be addressed, taking into account the positive consequences that industrial increase has on the development of private and public services. On the other hand other important factors of industrial development need to be improved especially the conditions that improve social cooperation, peace and reduction of high and uncontrolled risks, as they are of utmost importance for the necessary increase of investment.

5) Social improvements in public sector organisation, improvement of transport infrastructures, simplification and harmonization of successful rules among neighbouring countries, improving common markets by area or wholly, are all good measures that together with increases in the education of a population will be of great help in achieving a hopeful future for the development of Latin American countries. International cooperation is indeed necessary for these purposes.

6.- References

Barro, R. and Lee, J.W.(1997). "Schooling Quality in a Cross-section of Countries". *NBER Working Papers Series* n° 6198.

Basu, S. And Taylor, A.M.(1999). "Business Cycles in International Historical Perspective". *Journal of Economic Perspectives*. Vol. 13-n. 12.

Frías, I; Guisan, M.C. and Exposito, P.(2000). "Relaciones intersectoriales en los ciclos de la economía española". *I International Meeting on Economic Cycles*. Ourense.

Guisan, M.C. (2001). "Causality and Dynamic Relations in Applied Econometrics". *Applied Econometrics and Economic Development*. 2001-vol. 1. pp. 5-15.

Guisan, M.C. and Exposito, P.(2002). "Economic growth and Cycles in Asia and Africa in the 20th Century". *II International Meeting on Economic Cycles*. Madrid.

Guisan, M.C.;Aguayo, E. and Exposito, P.(2001). "Economic growth and cycles: international experiences in 1951-2000". *Applied Econometrics and International Development*. AEEADE. Vol.1-1.

Guisan, M.C.; Cancelo, M.T.; Neira, I.; Aguayo, E. y Expósito, P.(2001). “*Crecimiento económico en los países de la OCDE 1. Modelos de crecimiento y empleo en Irlanda, Francia, España, Alemania, USA y Japón*”. Estudios Económicos nº 4. Asociación Hispalink-Galicia. Distribuye Mundi-Prensa. Madrid.

Guisán, M.C. et al (2002). “*World Development 1980-1999 and Perspectives*”. Next publication (<http://www.usc.es/economet>).

Klein, L. R.(1983). “*The Economics of Supply and Demand*”. Basil Blackwell, Oxford.

Liesner, Th. (1984). “*Economic Statistics 1900-1983*”. The Economics, London.

Maddison, A.(2001). “*The World Economy. A Millennial Perspective*”. Development Centre Studies. OECD.

North, D.C.(1991). “*Institutions*”. *Journal of Economic Perspectives*. Vol. 5-1. pp. 97-112.

Summers, R. and Heston, A. (1991). “*The World Table(mark 5): and expanded set of international comparisons, 1950-1988*”. *The Quarterly Journal of Economics*, May 1991, pp. 327-367.

Stiglitz, J.E.(1998). “*Towards a New Paradigm for Development: Strategies, Policies and Processes*”. Prebisch Lecture at UNCTAD Geneva.

Temple, J. (1999). “*The New Growth Evidence*”. *Journal of Economic Literature*. Vol. XXXVII. pp. 112-156.