

Kaloyan Haralampiev¹, Georgi Naidenov²,

ECONOMIC CHARACTERISTICS OF THE FIRST „LATIN AMERICAN“ CLUSTER

*We present briefly the project "Clusters of Capitalism. Typology and Dynamics of Capitalist Economies", continued in 2014 under the title "Identification and Comparative Analysis of the Types of State Capitalism and the Types of Liberal Capitalism (Based on Cluster Analysis)." It is a study in which for the first time the typology of the capitalist way of production has been done **inductively**, not **deductively**, and with the application of modern statistical methods. We examine the economic characteristics of one of the twelve revealed distinctive types of capitalism in the twentieth century, namely the First "Latin American" cluster. A brief comparative analysis is made with similar characteristics of the First "West European" and First "East European" clusters.*

Keywords: Cluster analysis, types of capitalism, liberal capitalism, state capitalism, Latin American

1. Cluster analysis of the types of capitalism

Most often in order to distinguish the types of capitalism the dichotomy **liberal capitalism – state capitalism** is applied. Societies of liberal capitalism are those societies that have a democratic political system, a limited state sector and minimized state intervention in the economic processes. Societies of state capitalism are the societies where the state has a significant role in both economy and politics.

For a long time West European capitalism was considered the only “**authentic**”, **autochthonous and natural** one. The capitalist development of the countries from the second and third echelons of capitalism is considered successful only on condition that the development resembles the development of the countries from the first echelon. Over the last decades a new view has established – the view that the different countries and regions realized the transition from traditional, patriarchal society to modern

¹ Associated Professor, PhD, Sofia University “St. Kliment Ohridski”

² Professor, Doctor of Sociological Sciences, University of National and World Economy

capitalist society in a **specific way**. The prevailing opinion is that there are **different types of capitalism** and that each of them is **natural and authentic** for the countries and regions where the transition is being carried out. In time and space there are different **clusters** of countries with a **similar** way of production depending on the specific natural and climatic conditions, particular historical development, etc. Each of these clusters represents a specific **type** of capitalism.

The next step in the scientific research of the types of capitalism is to establish these original types of capitalism not in a **deductive**, but in an **inductive** way. This means to establish the original types of capitalism in a “**natural**” way, i.e. through a cluster analysis according to several main indicators.

In order to conduct the clustering, we collected data according to three main indicators:

- degree of country development, which is examined through the gross domestic product per capita of the countries;

- share of the state sector in the national economy – for it we use an expert appraisal based on a five-stage scale:

- Share of the state sector up to 20%
- Share of the state sector between 20% and 40%
- Share of the state sector between 40% and 60%
- Share of the state sector between 60% and 80%
- Share of the state sector over 80%

- participation of the state in the re-distribution of the Gross Domestic Product, which is examined in two ways: a) we trace the dynamics of the share of governmental revenue compared to the gross domestic product; b) we trace the dynamics of the share of governmental expenditure compared to the gross domestic product. Then, we take the smaller share.

The methodology of statistical analysis of data and clustering is “hierarchical agglomerative clustering”. The countries are grouped in qualitatively homogeneous groups based on the values of the three quantitative indicators.

The period for which we found time series of statistical data long enough for a minimum of countries is from 1900 to 2005. The step that we use is 5 years.

As a result from the clustering for each of the 22 fixed years we received four to ten clusters. In each cluster there are between 1 and 34 countries.

We found out that there are cores of countries (or a cluster state) that last successively for a longer or shorter period of time during these 22 fixed years. With the flow of time the cores “attract” other countries or vice versa – some countries “run away” from their cluster. We identified **twelve** such „cases” and think that they develop in time and become **original** types of capitalism. Provisionally, we designate these clusters as First “West European” cluster; Second “West European” cluster; First “Latin American” cluster; Second “Latin American” cluster; First “East European” cluster; Second “East European” cluster; “the USA”; “Japan”; First “Arab” cluster; Second “Arab” cluster; First cluster of the developing countries; Second cluster of the developing countries.³

The designations first and second refer to: a) their earlier or later emergence in time; b) longer or shorter duration.

We would like to state explicitly that the names we suggest are only the first step towards the determination of the type of capitalism of each cluster. At this stage the names of the clusters are so to say “**geographical**”. Later, we will try to find a suitable name for each type of capitalism – liberal or state – of the clusters. This can be done after the examination of the distinctive features of the particular type.

Having done the clustering with reference to the three indicators, we gathered statistical information with reference to 20 more indicators, grouped in four sections: economic indicators; social indicators; demographic indicators and infrastructural indicators. Together with the three main economic indicators, the indicators become 23 – nine economic, three social (in the sphere of education), six demographic and infrastructural ones. Our main source of primary data was B. R. Mitchell’s book “International Historical Statistics. 1750-2005”. It has three volumes respectively for Europe, for North and South America and for Africa, Asia and Oceania. The indicators

³ We use quotes for these provisional names in order to show that:

- when the name of the cluster is collective like the First “West European” cluster the quotes show that the cluster includes countries that are not from the given geographical region. (In the particular example, these are more often Australia, New Zealand and Canada.)

- when the name of the cluster includes one country only like “the USA”, the quotes mean that this country is the core of the cluster and that over the years it includes other countries. (In the particular example Australia and Switzerland often appear together with the USA.)

used by us are the result of recalculation based on capita or 1000 people (1 000 000 people respectively) of the population.

The nine economic indicators are: GDP per capita, annual growth rate of GDP (%), share of GDP re-distributed by the state (%), share of the state sector in national economy, unemployment (% of overall population), unemployment (% of labor force), industrial (labor) disputes (per 1000 000 people of the population), employees involved in industrial (labor) disputes (per 1000 people of the population), days lost because of industrial (labor) disputes (per 1000 people of the population).

The social indicators are from the sphere of **education** and they are: children in primary and secondary schools (per 1000 people of the population), teachers in primary and secondary schools (per 1000 people of the population), university students (per 1000 people of the population).

The six demographic indicators are: birth rate and death rate, life expectancy, infant mortality, coefficients of emigration and immigration.

The five infrastructural indicators are: Length of the railway (kilometers per 1000 people of the population); Freights transported by trains (tons per capita); Passengers transported by trains (per capita); Postal services (letters per capita); Telegraphic services (telegrams per capita).

In this study we consider economic indicators of the First “Latin American” cluster which is a cluster with great duration and sustainability in time. During the first decade of the XX century it included one country only – Brazil. Later, it „enlarged” and by 1990 it had become the most numerous cluster including the greatest number of countries. After 1990, however, the situation became rather complex. Whether because of the Velvet Revolutions in Europe, because of the policy of “neoliberalism” in a number of Latin American countries or for some other reasons, there can be observed an extraordinary “mixture” in the composition of the clusters. There is a reason for one of these clusters to be considered the same as the one for the period 1995-2005. However, the countries in it are very different from those in 1990. For example, in 1995 the countries are Ecuador, Zimbabwe, Iran, Jordan, China, Costa Rica, Morocco, Peru, Poland, Syria, Thailand, the Philippines, Chile, Sri Lanka and RSA. That is why at this stage we restrain from stating definitely that this is the First “Latin American” cluster. Even if we exclude the period 1995-2005, we can definitely say that the First “Latin

American” cluster is one of the clusters with the greatest duration and sustainability in time.

Table 1

Composition of the First “Latin American” cluster

Year	Countries
1900	Brazil
1905	Brazil
1910	Brazil
1915	Brazil, Japan
1920	Brazil, Japan
1925	Brazil, Bulgaria, Guatemala, Mexico, Honduras, Japan
1930	Brazil, Bulgaria, Guatemala, Cuba, Mexico, Hungary, Finland, Honduras, Japan
1935	Brazil, Bulgaria, Guatemala, Mexico, Honduras
1940	Brazil, Bulgaria, Ecuador, Cuba, Mexico, Honduras
1945	Argentina, Brazil, Guatemala, Denmark, Ecuador, Colombia, Cuba, Mexico, Peru, Honduras, Chile
1950	Bolivia, Brazil, Guatemala, Ecuador, Colombia, Costa Rica, Cuba, Mexico, Panama, Peru, Puerto Rico, Honduras
1955	Bolivia, Brazil, Guatemala, Ecuador, Colombia, Costa Rica, Mexico, Panama, Peru, Puerto Rico, Salvador, Honduras, Japan
1960	Argentina, Bolivia, Brazil, Guatemala, Greece, Ecuador, Iran, Colombia, Costa Rica, Mexico, Nicaragua, Panama, Paraguay, Peru, Portugal, Puerto Rico, Salvador, Turkey, Uruguay, Honduras, Chile, Japan
1965	Argentina, Bolivia, Brazil, Guatemala, Greece, Dominican Republic, Ecuador, Iran, Spain, Colombia, Costa Rica, Mexico, Nicaragua, Panama, Paraguay, Peru, Portugal, Puerto Rico, Salvador, Turkey, Uruguay, Honduras, Chile
1970	Argentina, Bolivia, Brazil, Guatemala, Greece, Dominican Republic, Ecuador, Ireland, Spain, Colombia, Costa Rica, Mexico, Nicaragua, Panama, Paraguay, Peru, Portugal, Puerto Rico, Salvador, Turkey, Uruguay, Honduras, Chile
1975	Argentina, Burma, Bolivia, Brazil, Guatemala, Greece, Dominican Republic, Ecuador, Ireland, Spain, Colombia, Costa Rica, Mexico, Nicaragua, Panama, Paraguay, Peru, Portugal, Puerto Rico, Salvador, Turkey, Uruguay, Honduras
1980	Argentina, Burma, Bolivia, Brazil, Venezuela, Guatemala, Greece, Dominican Republic, Egypt, Ecuador, Zaire, Spain, Yemen, China, Colombia, Costa Rica, Madagascar, Mexico, Nicaragua, Panama, Paraguay, Peru, Portugal, Puerto Rico, Salvador, Uruguay, Honduras, Chile, RSA
1985	Argentina, Burma, Bolivia, Brazil, Venezuela, Guatemala, Dominican Republic, Ecuador, Zaire, Zimbabwe, Iran, Spain, Cameroon, China, Colombia, Costa Rica, Mauritius, Madagascar, Malawi, Morocco, Mexico, Panama, Paraguay, Peru, Portugal, Salvador, Thailand, Turkey, Uruguay, Philippines, Honduras, Chile, RSA, South Korea

Year	Countries
1990	Argentina, Benin, Bolivia, Brazil, Venezuela, Guatemala, Dominican Republic, Ecuador, Zaire, Zimbabwe, Iran, Cameroon, China, Colombia, Costa Rica, Mauritius, Madagascar, Malawi, Morocco, Mexico, Nicaragua, Panama, Paraguay, Peru, Salvador, Syria, Thailand, Turkey, Uruguay, the Philippines, Honduras, Chile, Sri Lanka, RSA

2. Economic characteristics of the First “Latin American” cluster

a) First, we consider the dynamics of the GDP per capita and the annual growth rate of the GDP of the First “Latin American” cluster⁴.

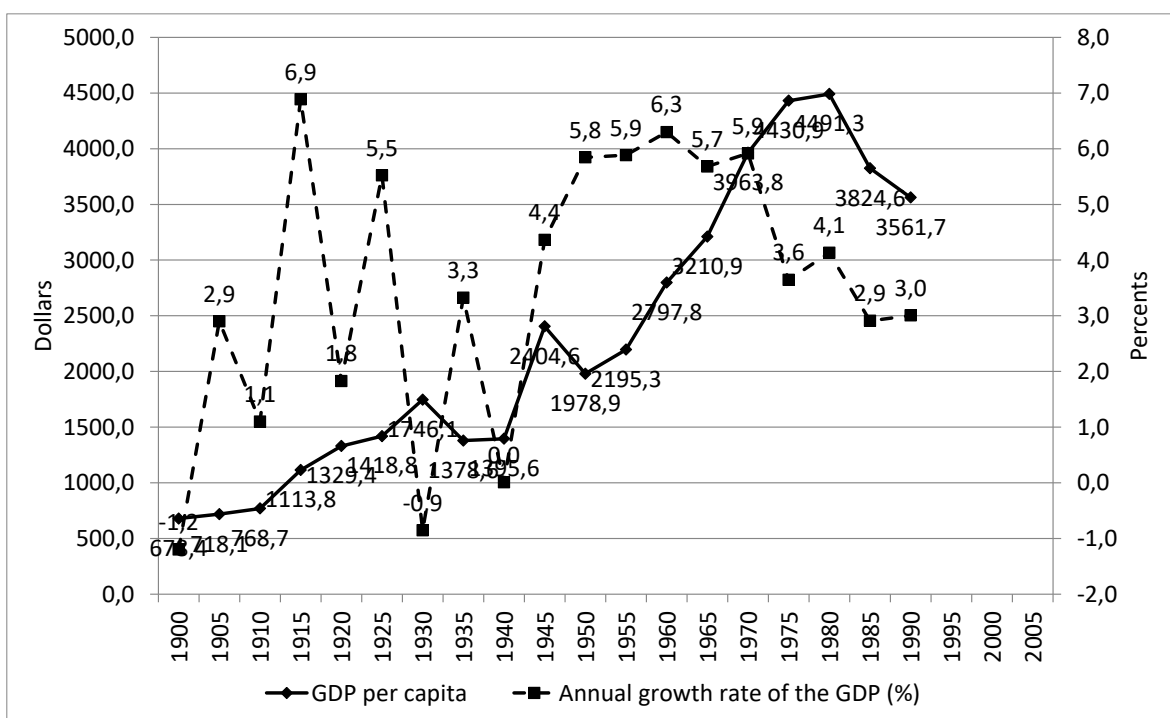


Chart 1. Dynamics of the GDP per capita and the annual growth rate of the GDP of the First “Latin American” cluster

As a whole, the GDP per capita of the First “Latin American” cluster is characterized by a sustainable growth from the beginning of the 80s of the XX century. There is only one period – that between 1930 and 1950 – when there are fluctuations. Nevertheless, as a whole as well as during this period there is an increase in the GDP

⁴ The source of information about the GDP per capita is Angus Maddison’s data (<http://www.ggdc.net/MADDISON/oriindex.htm>). He gives the GDP per capita in a provisional currency called Geary-Khamis dollars which makes the data about the countries comparable. The data about the annual rate of the GDP (in %) are the result of our calculations based again on Angus Maddison’s primary data.

per capita. The 80s of the XX century, however, are **unsuccessful** and the economy of the First “Latin American” cluster is unsuccessful as well. The GDP per capita shows a downward trend and decreases noticeably. The reasons for this are a lot and we do not aim at focusing on their relative importance. They are of internal economic nature, demographic, of foreign economic and political nature, etc. Obviously, they are related to the general pace of world economy and, most of all, to the successful domination of world capital and particularly of the Saxon American and American Jewish capitals during that period. At that time world economy is in an upward phase, which is usually characterized by an intensive process of concentration and centralization of world capital. Hence, there are national economies that lose and national economies that win. The national economies from the First “Latin American” cluster belong to the group of the losing ones.

There are three periods in the annual growth rate of GDP of the First “Latin American” cluster. The first period is from 1900 to 1940 and it is characterized by an extremely unstable growth rate and drop of GDP, respectively. There are sharp ups and downs of the GDP growth. The second period is from 1940 to 1960 and it is characterized by a sustainable GDP growth. The third period is from 1960 to 1990 and it is characterized by an unstable growth rate of GDP. Definitely, the trend is of decrease in the growth rate of the GDP.

Let us compare these two economic indicators of the First “Latin American” and of the First “West European” clusters.

b) Comparative analysis of the dynamics of the GDP per capita and of the annual growth rate of the GDP of the First “Latin American” and of the First “West European” clusters.

The starting positions of the GDP per capita of the First “Latin American” and of the First “West European” clusters at the beginning of the XX century are different. The GDP per capita of the First “West European” cluster is 4,30 times bigger than that of the First “Latin American” cluster: 2917,0 compared to 678,4 dollars. This difference remains and even increases until 1990. Then, the GDP per capita of the First “West European” cluster is 4,78 times bigger than that of the First “Latin American” cluster: 17013,6 compared to 3561,7 dollars. The increase in the relative and absolute distance

regarding the GDP per capita of the First “Latin American” and the First “West European” clusters begins after 1940. Regardless of its disastrous consequences, the World War II increases the technological advantage of the First “West European” cluster. Another “advantage” gained as a result of the World War II is the low value of the workforce of the First “West European” cluster. This is something that the national capital takes advantage of. The increase in the distance between the GDP per capita of the First “Latin American” and the First “West European” clusters in the XX century does not mean that the second cluster’s economic development is poorer. The increase in the distance is mostly due to the faster growth of the **population** of the First “Latin American” cluster which inevitably leads to a slower pace of the GDP growth per capita.

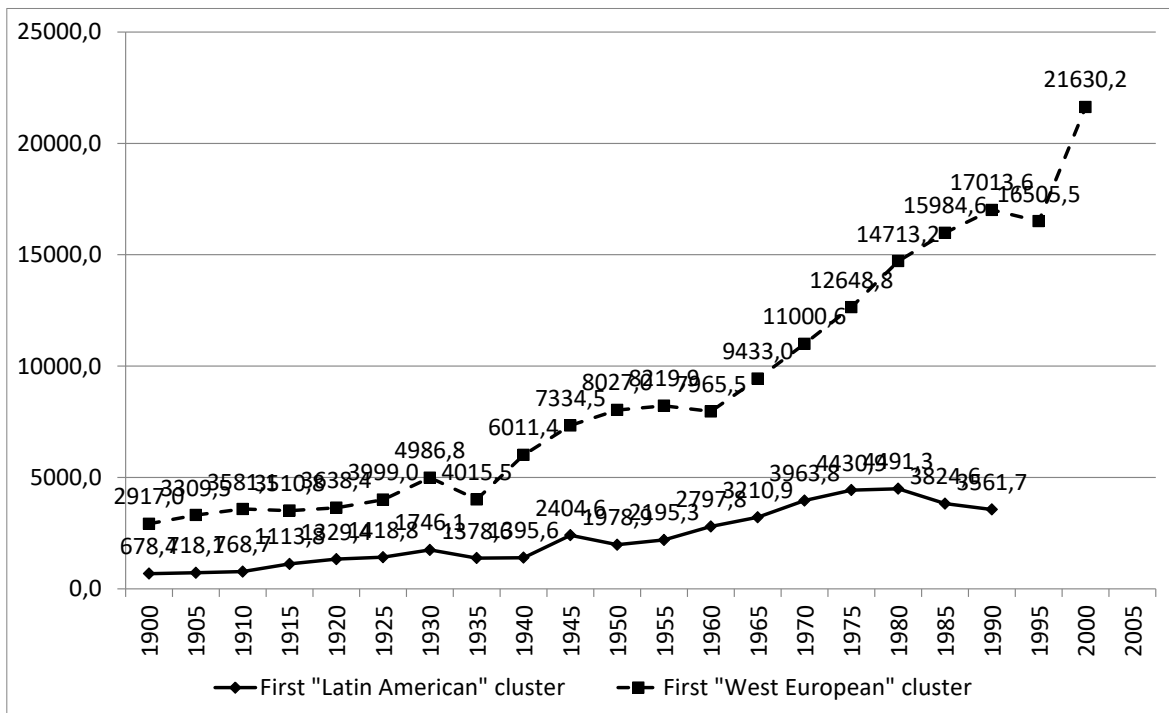


Chart 2. Dynamics of the GDP per capita of the First “Latin American” and of the First “West European” clusters

In the beginning of the XX century the annual growth rate of the GDP of the First “West European” cluster was noticeably stronger compared to that of the First “Latin American” cluster. During the first half of the XX century the dynamics of the annual growth rate of GDP of both clusters is similar – the periods of rapid growth are

frequently followed by periods of a sharp fall. During the second half of the XX century, until 1990 there is no instability any more. For both clusters there is a downward trend of the annual growth rate of the GDP.

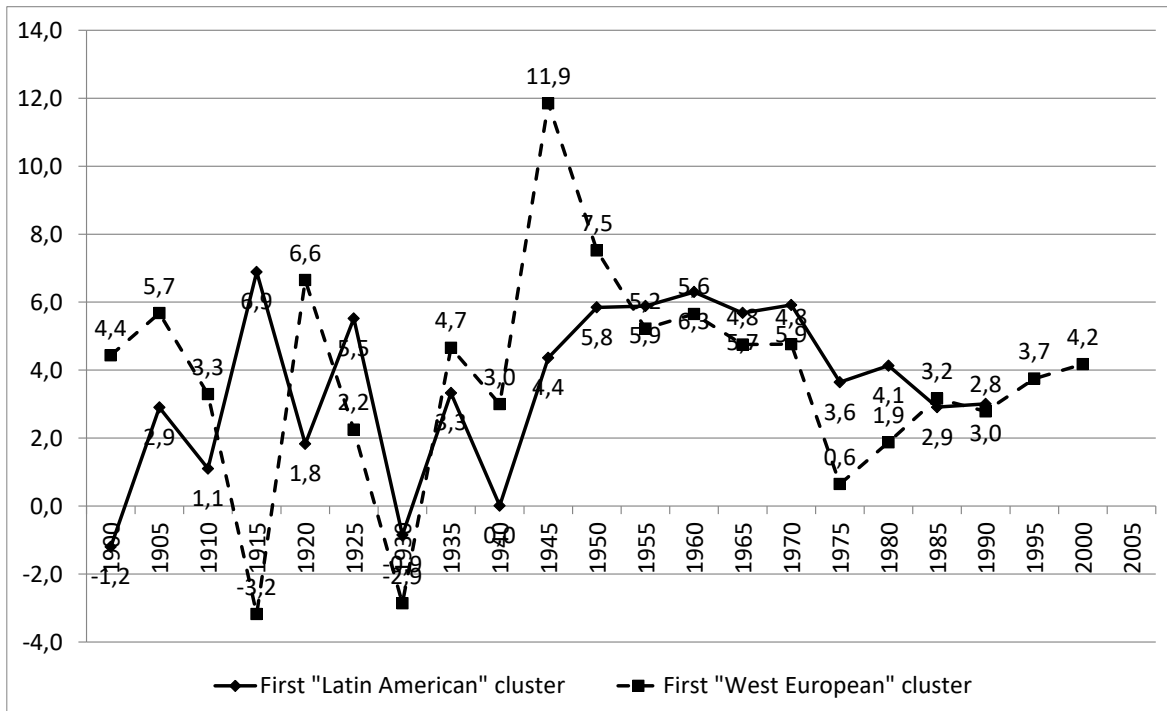


Chart 3. Dynamics of the annual growth rate of GDP of the First “Latin American” and the First “West European” clusters

c) Dynamics of the share of GDP allocated by the state and of the share of the public sector in the national economy of the First “Latin American” cluster

As we mentioned above the results about the share of the public sector in the national economy are based on expert appraisals.

There are two periods in the dynamics of the GDP share allocated by the state of the First “Latin American” cluster. During the first half of the XX century the periods of rapid growth are frequently followed by periods of a rapid fall. However, the amplitude of the rise and fall is not very big. The most substantial fall is observed in the period 1920-1925 when the GDP share allocated by the state falls from 14,4 % to 10,2%. During the second half of the XX century the GDP share allocated by the state marks a sustainable rise and reaches 18% in the middle of the century which is its highest value for the whole period of observation. As a whole there is increase in the GDP share

allocated by the state of the First “Latin American” cluster from the beginning of the XX century until 1990. However, this increase is not considerable. The values of this indicator of the cluster remain within the liberal capitalism.

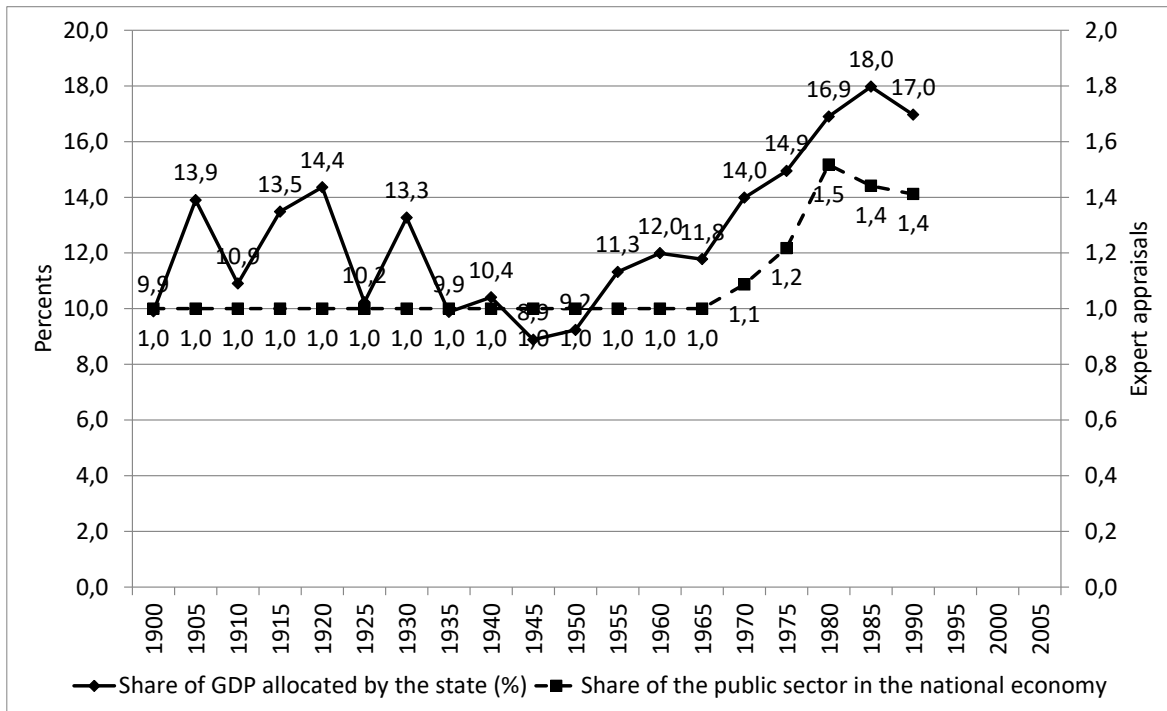


Chart 4. Dynamics of the share of GDP allocated by the state and of the share of the public sector in the national economy of the First “Latin American” cluster

The dynamics of the share of the public sector in the national economy of the First “Latin American” cluster is characterized by two or three periods. From the beginning of the XX century until 1965 the share of the public sector in the national economy remains within the lowest limits between 0 and 20% of state property with no change. During the second period, from 1965 to 1980 the share goes up slowly and sustainably reaching 20%. In the 80s it drops to 18%. For all periods the dynamics remains in the first group – between 0 and 20% which similarly to the previous indicator characterizes the First “Latin American” cluster as liberal capitalism.

d) Dynamics of the unemployment of the First “Latin American” cluster

There are two indicators of the dynamics of the unemployment of the First “Latin American” cluster: a) unemployment in % of the overall population; b) unemployment in % of the labor force.

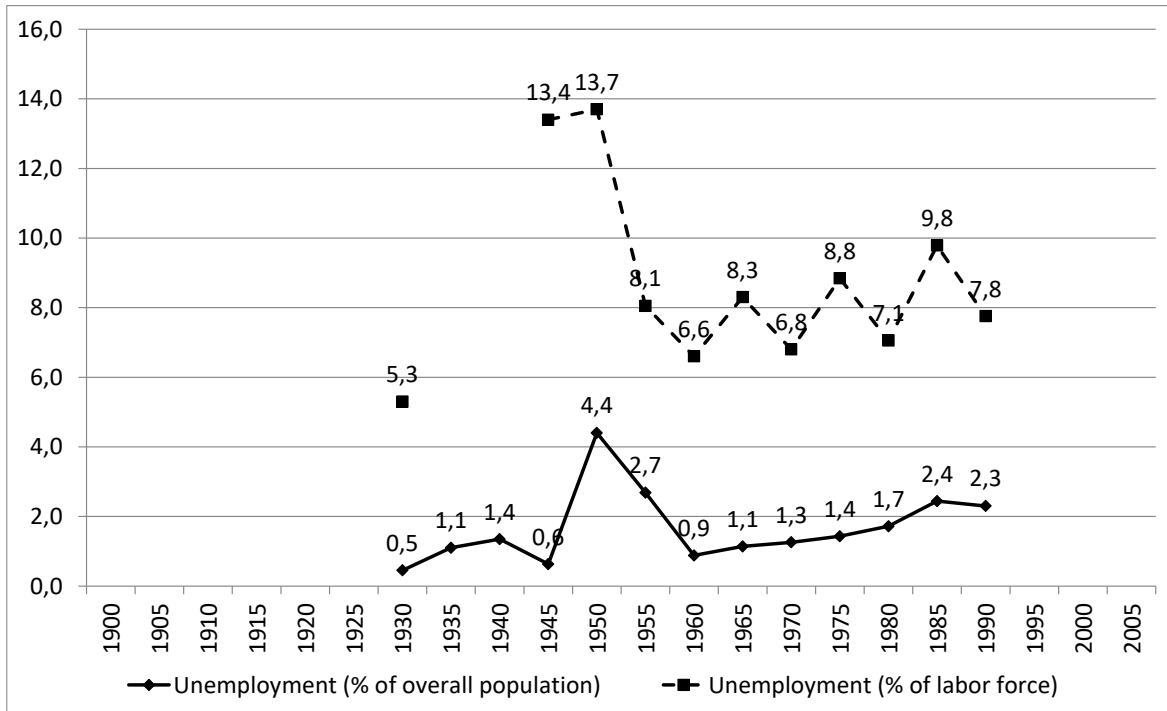


Chart 5. Dynamics of the unemployment of the First “Latin American” cluster

The first thing that we notice is that there is a peak of the two types of unemployment in 1950. Apart from this peak there is a trend of slow and gradual rise for both types of unemployment for the period 1930-1990. The fluctuations in the dynamics of the unemployment in % of the overall population are few and have small amplitude. From 0,5% in 1930 this type of unemployment reaches 2,3% in 1990. The fluctuations in the dynamics of the other type, unemployment in % of the labor force, are a lot and of big amplitude. From 5,3% in 1930 this type of unemployment reaches 7,8% in 1990.

The rise of both types of unemployment is typical for this cluster because it is characterized by fast industrialization and urbanization. Actually, in 1990 the unemployment in % of the overall population of the First “Latin American” cluster is lower than that of the First “West European” cluster: 2,3% compared to 3,0% which is

good for the former. However, it is higher than that of the First “East European” cluster for the period for which we have data – 1955-1980.⁵ This is quite natural because the economy of the Soviet state capitalism is characterized by low unemployment.

Regarding the unemployment in % of the labor force of the First “Latin American” cluster, although it is higher than that of the First “West European” cluster (e.g. in 1990 it is 7,8% compared to 6,7%) the difference is not very big.⁶

The second thing that is worth noticing is the reason why there was a peak in 1950.

First, we checked whether the reason was not the dramatic rise of the birth-rate in the period 1925-1930. This is a possible explanation of the peak of unemployment because a new, numerous, labor active generation entered the workforce in 1950. We found out that there was no such peak of the birth-rate. Then, we asked ourselves if there was a similar peak (of the unemployment in % of the overall population and of the unemployment in % of the labor force) of the First “West European”, the First “East European” clusters and the USA cluster because this would mean that was some specific state of world economy. It turned out, however, that there was no peak in these clusters. Next, we checked the dynamics of the migration of the First “Latin American” cluster.

On the charts of the dynamics of the unemployment in % of the overall population and of the unemployment in % of the labor force we put the charts of the dynamics of migration – emigration and immigration per 1000 people of the population. (Chart 6)

Unfortunately, this chart does not provide unambiguous results either. During the period of the peak, in 1950, there is nothing specific about the migrant flows. Therefore, to establish the reasons for the peak of unemployment in 1950 we definitely need to apply qualitative methods. This, however, is beyond the scope of our current study.

⁵ Naidenov, G., K. Haralampiev, V. Prodanov, P. Pachkova. Clusters of Capitalism (Typology and Dynamics of Capitalist Economies), UNWE Publishing unit, Sofia, 2012, p. 121

⁶ The same reference

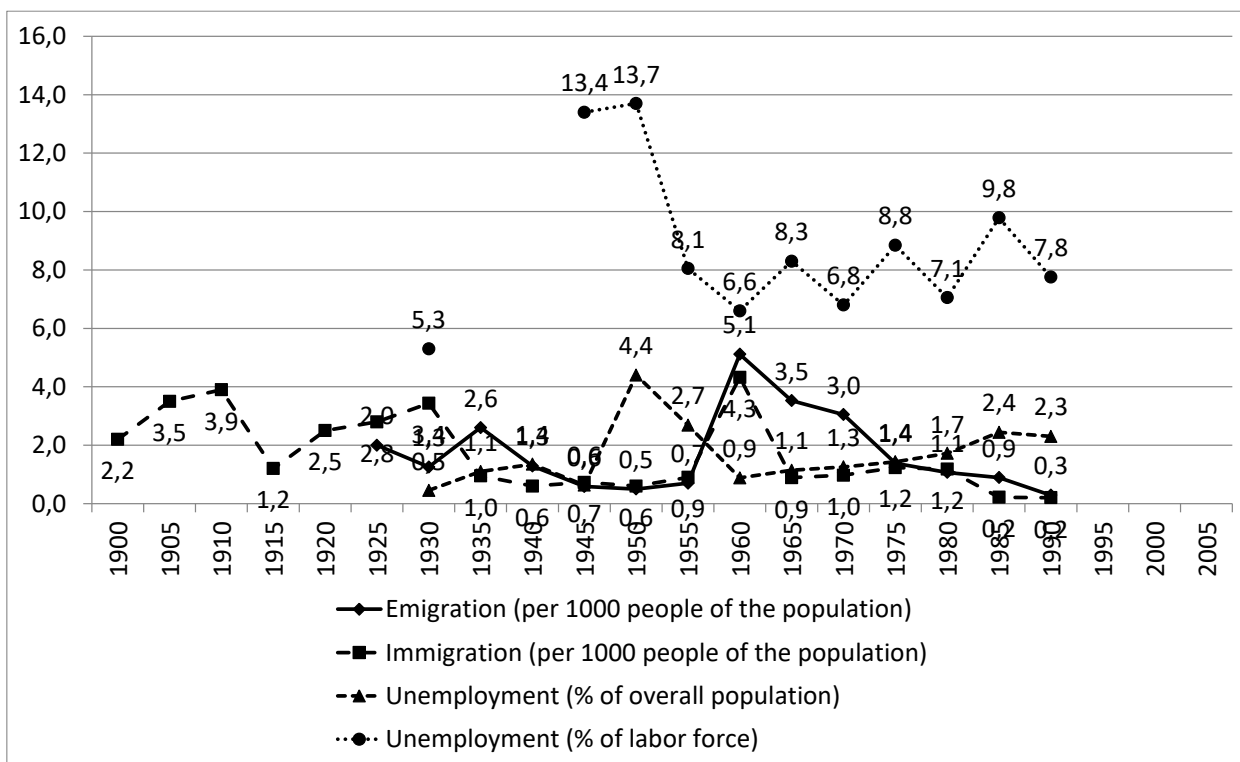


Chart 6. Dynamics of the unemployment and migration of the First “Latin American” cluster

Conclusion: In a previous study of the demographic and educational features of the First “Latin American” cluster we characterized the development of this original type of capitalism as good and successful⁷. The study of 6 of the 9 economic indicators gives us a reason to evaluate the economic development which is probably the most important feature as **good** and **successful** for the First “Latin American” cluster.

References:

Haralampiev, K., G. Naidenov. 2015. Demographic and Educational Characteristics of the First "Latin American" Cluster. XIII International scientific conference "Management and engineering'15", Conference proceedings, Vol. II (in Bulgarian)

Mitchell B. R. International Historical Statistics: Africa, Asia and Oceania, 1750-2005. Palgrave Macmillan, 2007

⁷ Haralampiev, K., G. Naidenov. 2015. Demographic and Educational Characteristics of the First "Latin American" Cluster. XIII International scientific conference "Management and engineering'15", Conference proceedings, Vol. II, p. 1352

Mitchell B. R. International Historical Statistics: Europe, 1750-2005. Palgrave Macmillan, 2007

Mitchell B. R. International Historical Statistics: The Americas, 1750-2005. Palgrave Macmillan, 2007

Naidenov, G., K. Haralampiev, V. Prodanov, P. Pachkova. Clusters of Capitalism (Typology and Dynamics of Capitalist Economies), UNWE Publishing unit, Sofia, 2012 (in Bulgarian)