Economic development of Comecon countries

Ramona Dumitriu and Răzvan Stefanescu

Dunarea de Jos University of Galati, Dunarea de Jos University of Galati

28 September 2015

Online at https://mpra.ub.uni-muenchen.de/89012/
MPRA Paper No. 89012, posted 15 September 2018 06:57 UTC
Economic Development of Comecon Countries
Ramona Dumitriu, Razvan Stefanescu

Abstract: In 1949, Soviet Union and some of its satellites created Comecon with the announced goal to facilitate economic cooperation between the socialist countries. The inefficiency of socialist systems affected the performances of Comecon members. However, the analysis of economic development from some of these countries should take into consideration the substantial subsidies received from other Comecon members.

Keywords: Economic Development; Comecon; Socialist Systems

JEL: N10, O10, O20, P20, P36

1. INTRODUCTION

The concept of economic development is approached from various perspectives in the specialized literature. The Human Development Report 1990, elaborated by the United Nations Development Programme (UNDP), defines the basic objective of economic development as “to create an environment for people to enjoy long, wealthy and creative lives” (UNDP, 1990). This objective is linked to the quality of life which is evaluated by various indicators: life expectancy, level of nutrition, literacy rates etc. (Birdsall, 1993; Easterlin, 1995; Easterlin, 2000; Alkire, 2002; Veenhoven & Hagerty, 2006; Easterlin & Angelescu, 2012). Sen (2001) included freedom among the main dimensions of the economic development. Todaro & Smith (2012) proposed three aspects to characterize the economic development:

- increase of living conditions;
- improvement of the citizens self-esteem needs;
- free and just society.

Other approaches of economic development are referred to the economic systems qualitative transformation. The industrialization, the reform of agriculture or the information technologies introduction could have a significant impact on the quality of life (Rosenstein-Rodan, 1943; Murphy et al., 1988; Mansell & Wehn, 1998; Saviotti & Pyka, 2004).

The economic growth is considered as the main tool in the life quality improvement (Ramirez et al., 1997; Dollar & Kraay, 2002; Barro & Sala-i-Martin, 2004; Acemoglu, 2008). However, the effects of this process on the quality of life depend on some characteristics of the income distribution (Kuznets, 1955; Cornia et al., 2003; Birdsall, 2007).
The Marxist perspectives on the economic development assigned a primordial role to the mode of production (Marx, 1859; Kolakowski, 1978; Kornai, 1992). In the countries where communist regimes were installed, the application of Marxist principles generated significant changes in the economic systems (Kornai, 1982; Ofer, 1987). These totalitarian regimes also repressed civil liberties and human rights. Some dimensions of the life quality, such as the education and health, were among the main themes of the communist ideology. However, quite often, the governments of the socialist countries mystified the social-economic indicators and this fact affects the economic development analysis.

Another particularity of the Marxism regarded the income distribution. The wage systems applied in the socialist states were based mainly on equalitarianism principles. As a result, in these countries the income inequality was, in general, lower than in the capitalist ones (Wiles & Markowski, 1971). However, this kind of equalitarianism led to the decline of workers motivation (Minard & Michaels, 1982).

In this paper we approach the economic development among members of the former Council for Mutual Economic Assistance, also known as Comecon. This organization was established, in 1949, by Soviet Union and five of its Eastern Europe satellites: Bulgaria, Czechoslovakia, Hungary, Poland and Romania. In the next decades, Comecon composition was modified as new socialist countries joined: Albania in 1949, East Germany in 1950, Mongolia in 1962, Cuba in 1972 and Vietnam in 1978. In 1961, angered by the Nikita Khrushchev’s repudiation of Stalin’s cult of personality, Enver Hoxha de facto withdrew Albania from Comecon.

The creation of Comecon was, in fact, a reaction, mainly a propagandistic one, to the Marshall Plan which was perceived by Joseph Stalin as a threat to its domination on the countries occupied by the Red Army (Mastny, 1998; Zubok, 2009; Leffler & Westad, 2010). In fact, during Joseph Stalin’s life, Comecon institutions were rather bypassed in economic relations among the members. After his death, their successors proclaimed their objectives of economic coordination and specialization by involving Comecon. The achievement of these objectives was affected by the inefficiency of the socialist planning system (Brabant, 1988; Crane & Skoller, 1988; Balassa, 1992; Bruno, 1992).

Three Comecon members (Cuba, Mongolia and Vietnam) had a special situation being the least developed countries. For strategic and propagandistic reasons their economies were supported by other Comecon members.

The relations between Soviet Union and its satellites evolved in time. During the Stalin regime, Soviet Union controlled strictly these countries, exploiting some of their natural resources. Instead, starting with 1970s, Soviet Union had to subsidize the other Comecon members affected by crisis by offering them energy and raw materials at low prices (Balassa, 1992).

We analyze the economic development of Comecon countries through several aspects: the economic systems qualitative transformation, the quality of life, economic growth and economic convergence.
2. THE QUALITATIVE TRANSFORMATION OF ECONOMIC SYSTEMS

The economic development of Comecon countries was marked by some significant qualitative transformation:

a. nationalization;
b. collectivization of agriculture;
c. industrialization;
d. coordination and specialization within Comecon;
e. economic reforms.

a. Nationalization. The Soviet ideology promoted the state ownership of all enterprises. One of the first acts of the newly installed communist regimes from the Eastern Europe was to nationalize almost enterprises (Herman, 1951; Staar, 1982). The state ownership over the economic activity facilitated the government control but it affected the enterprises efficiency (Shirley, 1983; Aharoni, 2000).

b. Collectivization of agriculture. Before the Second World War, Joseph Stalin enforced the collectivization of the Soviet Union agriculture, with the justification that collective farms should be more efficient than the individual ones. It was a long and dramatic process accompanied by the repression of the mid and high – income peasants. After the Second World War, Stalin imposed in the newly Eastern European satellites similar processes of the agriculture collectivization (Staar, 1982; Kligman & Verdery, 2011; Pryor, 2014). In general, the system of control prices for production and the weak motivation for peasants led to a poor efficiency of the collective farms (Suslov, 1967; Goldman, 1983; Easterly & Fischer, 1994; Gardner & Lerman, 2006; Dobb, 2012).

c. Industrialization. The rapid industrialization was another ideological motivated process. The growth of the industrial sector was viewed by the communist regimes as a way to strengthen the proletariat class. For the Eastern European countries, especially for the predominant agricultural ones, such as Bulgaria, Poland and Romania, the industrialization led to significant changes in the social classes. In general, this process increased the environmental pollution. Very often, the lack of qualified force and the inefficient management affected the performances of the industrial entities (Gomulka, 1983; Berend, 1996; Bideleux & Jeffries, 1998; Allen, 2003). The orientation of the industrialization suffered some changes in time. Joseph Stalin was a partisan of the heavy industry, while his successors promoted also the light industry.

d. Coordination and specialization within Comecon. N. S. Khrushchev promoted “the division of labor within the socialist camp” and a significant economic integration among Soviet Union and its satellites. In June 1962, he imposed in Comecon the adoption
of the “Basic Principles for the International Division of Labor”. Khrushchev intended to achieve the economic integration by “planning coordination” on the Comecon level (Graziani, 1981; Balassa, 1992; Bideleux & Jeffries, 1998). However, some leaders of the other Comecon countries viewed the joint planning as a threat to the autonomy they gained since Stalin’s death and their resistance led to the economic integration failure. The most visible opposition came from the Romanian leader Gheorghe Gheorghiu - Dej. Since 1958, when the Red Army had withdrawn from Romania, his position in Romanian Workers’ Party was strengthening and in 1960s he was able to confront with Soviet leaders (Montias, 1964; Betea & Bîrlădeanu, 1997; Neagoe - Plesa, 2005; Bădilă, 2012). In 1964, in the context of dispute over specialization within Comecon, the soviet geographer E.B. Valev published an article that suggested the “creation of an inter-state economic complex”, which should include parts of the southern Soviet Union, the south-east of Romania and the north-east of Bulgaria (Valev, 1964). Gheorghiu – Dej perceived the article as an attack to his industrialization program and he asked Romanian economists to criticize what they called “Valev Plan” (Brucan, 1992; Tismâneanu, 2014; Dumitrescu, 2015). In April 1964, the Plenum of the Romanian Workers’ Party adopted a “Declaration regarding the problems of world communist movement”, practically a Declaration of Independence, in which they stated that “it is a sovereign right of each socialist state, to elaborate, choose or change the forms and methods of socialist construction” (Scânteia,1964; Tismâneanu, 2002; Neagoe-Plesa, 2005; Mureșan, 2008). After Khrushchev was forced to retire, in October 1964, his radical plans of Comecon countries economic integration were abandoned. His successor, L.I. Brezhnev, preferred a more conciliatory approach to the Comecon partners. In 1971, Comecon approved “The Comprehensive Program for the Further Intensification and Improvement of Collaboration and the Development of Socialist Economic Integration of COMECON Member Nations”, which stipulated that joint planning “was not to interfere with the autonomy of internal planning” (Schultz, 1971; Hutchings, 1983; Lavigne, 1983; Brabant, 1988). In the next years, there were concluded bilateral agreements between Comecon countries that stipulated the specialization in some industrial sectors (Brabant, 1988; Balassa, 1992).

e. Economic reforms. Stalin’s successors relaxed his hard policies. Premier G.M. Malenkov reconsidered the industrial policy, assigning a more important role to the light industry. After had consolidated his position, Khrushchev launched an ambitious agricultural policy. These policies were imitated by the leaders of the satellite states. Khrushchev also granted more autonomy to the other Comecon members, allowing them to develop commercial relations with the Western countries (Grzybowski, 1971; Hoyt, 1983). The failure of Khrushchev’s economic policies motivated his successors to reforms. In 1965, Premier A.N. Kosygin implemented an economic reform which granted more independence to enterprises in order to increase their profitability. The Central Committee General Secretary of the Soviet Union Communist Party, L.I. Brezhnev, allowed the leaders of the other Comecon members to implement their own economic reforms as long they didn’t appear to contradict Marxist principles (Hare, 1987; Hankiss, 1990). In Hungary, in 1968, Janos Kadar launched the so-called “New Economic Mechanism” which
established a new system of prices and it granted enterprises the freedom to decide about their production (Kornai, 1980).

In 1970s the “Détente” of the Cold War allowed a controlled access of Comecon countries to the Western markets. Government of the Eastern European states fructified this opportunity by importing modern technologies and consumer goods which increased the quality of life (Ransom, 1971; Kansikas, 2014). In these circumstances, obtaining western currency resources, by exports or by credits, became one of the main objectives of their economic policies. In 1980s, the External Debt Crisis affected Comecon countries, especially Poland and Romania. In order to solve this problem, the governments of the two states introduced, along with austerity, new pragmatic economic policies meant to increase the efficiency of the enterprises.

In June 1987, M.S. Gorbachev presented the basic theses of a radical economic reform called “Perestroika” which was supposed to bring efficiency to the Soviet economy. It should grant more independency to enterprises and allow the foreign investment in Soviet Union. However, the government maintained the control over prices. The leaders of other Comecon countries adopted various positions to Perestroika. In Poland, facing with a severe crisis, the government announced the introduction of the so-called “Market Socialism” which included self-management and self-financing of enterprises and measures to encourage the foreign investment. In Hungary, the leaders of the Communist Party were encouraged to continue the “New Economic Mechanism”. In Romania, Nicolae Ceausescu refused to reform the economy arguing that his economic reforms applied since the early 1980s proved their efficiency. In Cuba, the end of subsidies from Soviet Union forced Fidel Castro to adopt radical measures, reducing the oil consume and shutting down some factories. Under Soviet pressures, although they were skeptic about the economic reforms, other Comecon leaders adopted their own versions of Perestroika. The fall of the Eastern European communist regimes, which started in 1989, ended the Perestroika.

3. THE QUALITY OF LIFE AMONG COMECON MEMBERS

We investigate the quality of life for Comecon countries by employing annual data of two variables provided by World Bank: School Enrollment, Primary (% gross) and Life Expectancy at Birth, Total (years). We use data from nine former Comecon members: Bulgaria, Cuba, Czech Republic (instead of the former Czechoslovakia), Hungary, Mongolia, Poland, Romania, Russian Federation (instead of the former Soviet Union) and Vietnam (until 1975, data expressed the quality of life for both North and South Vietnam). Unfortunately, World Bank doesn’t provide values of these indicators for East Germany. For comparison, we also use the data for OECD members.

a. School Enrollment, Primary (% gross) is defined as “the total enrollment in primary education, regardless of age, expressed as a percentage of the population of official primary education age” (World Bank, 2015). The Table 1 presents the annual
values of this indicator for Comecon countries between 1971 and 1988. The figures suggest, for all the countries, a substantial enrollment in primary education.

b. **Life Expectancy at Birth, Total (years)** represents “the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life” (World Bank, 2015). For most of Comecon members the values of this indicator, reported in the Table 2, were inferior to OECD values. Despite an ascendant trend, the life expectancy in Mongolia and Vietnam remained significant lower comparing to the other Comecon members. The third least developed country, Cuba experienced a substantial increase of life expectancy surpassing, in the middle of 1970s, the other Comecon countries and even OECD members.

<table>
<thead>
<tr>
<th>Tab.1. Evolution of School Enrollment, Primary (% gross) for OECD and some Comecon members between 1971 and 1988</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country Name</strong></td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>Bulgaria</td>
</tr>
<tr>
<td>Cuba</td>
</tr>
<tr>
<td>Czech Republic</td>
</tr>
<tr>
<td>Hungary</td>
</tr>
<tr>
<td>Mongolia</td>
</tr>
<tr>
<td>Poland</td>
</tr>
<tr>
<td>Romania</td>
</tr>
<tr>
<td>Russian Federation</td>
</tr>
<tr>
<td>Vietnam</td>
</tr>
<tr>
<td><strong>OECD members</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Country Name</strong></th>
<th><strong>1977</strong></th>
<th><strong>1978</strong></th>
<th><strong>1979</strong></th>
<th><strong>1980</strong></th>
<th><strong>1981</strong></th>
<th><strong>1982</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>100.4196</td>
<td>103.1068</td>
<td>103.6508</td>
<td>101.4181</td>
<td>100.8171</td>
<td>103.5996</td>
</tr>
<tr>
<td>Cuba</td>
<td>120.7986</td>
<td>118.4519</td>
<td>114.7344</td>
<td>110.3621</td>
<td>105.9468</td>
<td>103.7368</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>121.2278</td>
<td>118.9557</td>
<td>116.4966</td>
<td>x</td>
<td>97.86062</td>
<td>99.83076</td>
</tr>
<tr>
<td>Hungary</td>
<td>103.9511</td>
<td>101.6908</td>
<td>98.54153</td>
<td>97.68563</td>
<td>99.46972</td>
<td>105.3404</td>
</tr>
<tr>
<td>Mongolia</td>
<td>x</td>
<td>105.6883</td>
<td>104.3187</td>
<td>103.2765</td>
<td>103.1111</td>
<td>101.209</td>
</tr>
<tr>
<td>Poland</td>
<td>102.2967</td>
<td>102.127</td>
<td>101.8774</td>
<td>101.623</td>
<td>101.3707</td>
<td>101.8235</td>
</tr>
<tr>
<td>Romania</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>92.69027</td>
<td>x</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>101.8619</td>
<td>104.05</td>
<td>105.2301</td>
<td>105.0742</td>
<td>102.0773</td>
<td>101.3743</td>
</tr>
<tr>
<td>Vietnam</td>
<td>111.8274</td>
<td>110.9078</td>
<td>102.6507</td>
<td>108.7578</td>
<td>106.335</td>
<td>x</td>
</tr>
<tr>
<td><strong>OECD members</strong></td>
<td>101.4629</td>
<td>101.4288</td>
<td>101.9613</td>
<td>103.9105</td>
<td>103.5902</td>
<td>103.9187</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Country Name</strong></th>
<th><strong>1983</strong></th>
<th><strong>1984</strong></th>
<th><strong>1985</strong></th>
<th><strong>1986</strong></th>
<th><strong>1987</strong></th>
<th><strong>1988</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>104.7772</td>
<td>106.6614</td>
<td>107.4105</td>
<td>105.0584</td>
<td>106.0016</td>
<td>103.8419</td>
</tr>
<tr>
<td>Cuba</td>
<td>104.1963</td>
<td>103.7362</td>
<td>102.1442</td>
<td>101.8841</td>
<td>102.4938</td>
<td>101.6974</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>101.266</td>
<td>100.6081</td>
<td>97.92776</td>
<td>96.10893</td>
<td>93.35767</td>
<td>91.41518</td>
</tr>
<tr>
<td>Hungary</td>
<td>108.6221</td>
<td>109.3144</td>
<td>105.6631</td>
<td>98.07509</td>
<td>91.71147</td>
<td>85.53671</td>
</tr>
<tr>
<td>Mongolia</td>
<td>101.2889</td>
<td>101.3588</td>
<td>101.0632</td>
<td>100.1243</td>
<td>100.7107</td>
<td>100.5864</td>
</tr>
<tr>
<td>Poland</td>
<td>102.3532</td>
<td>102.858</td>
<td>103.0505</td>
<td>102.9549</td>
<td>102.4873</td>
<td>101.6469</td>
</tr>
<tr>
<td>Romania</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>97.16381</td>
<td>93.51712</td>
<td>91.01982</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>100.5625</td>
<td>100.9341</td>
<td>102.4254</td>
<td>103.67</td>
<td>106.3248</td>
<td>107.3447</td>
</tr>
<tr>
<td>Vietnam</td>
<td>103.2312</td>
<td>103.5772</td>
<td>102.9046</td>
<td>103.6361</td>
<td>107.0966</td>
<td>107.9766</td>
</tr>
<tr>
<td><strong>OECD members</strong></td>
<td>103.428</td>
<td>103.4932</td>
<td>103.4408</td>
<td>104.0941</td>
<td>104.4535</td>
<td>104.6454</td>
</tr>
</tbody>
</table>

**Note:** x means lack of data.

**Source:** World Bank
### Tab.2 Evolution of Life Expectancy at Birth, Total (years) for OECD and some Comecon members between 1971 and 1988

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>70.87366</td>
<td>70.89951</td>
<td>71.3422</td>
<td>71.20805</td>
<td>71.04976</td>
<td>71.39488</td>
<td>70.1861</td>
<td>71.18463</td>
<td>71.30829</td>
<td>71.15756</td>
<td>71.57195</td>
<td>71.1861</td>
</tr>
<tr>
<td>Cuba</td>
<td>70.37829</td>
<td>70.85639</td>
<td>71.32095</td>
<td>71.76949</td>
<td>72.19761</td>
<td>72.59885</td>
<td>68.37659</td>
<td>68.30854</td>
<td>68.29463</td>
<td>68.32043</td>
<td>67.7239</td>
<td>67.48756</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>69.67707</td>
<td>70.17659</td>
<td>70.02268</td>
<td>70.08659</td>
<td>70.41463</td>
<td>70.53268</td>
<td>59.17424</td>
<td>59.02161</td>
<td>59.38122</td>
<td>60.25344</td>
<td>61.53637</td>
<td>63.04285</td>
</tr>
<tr>
<td>Hungary</td>
<td>69.05244</td>
<td>69.66463</td>
<td>69.51805</td>
<td>69.24805</td>
<td>69.29</td>
<td>69.57317</td>
<td>69.8405</td>
<td>69.3939</td>
<td>69.61537</td>
<td>69.06171</td>
<td>69.13927</td>
<td>69.3578</td>
</tr>
<tr>
<td>Mongolia</td>
<td>55.80146</td>
<td>56.1751</td>
<td>56.46027</td>
<td>56.65951</td>
<td>56.78078</td>
<td>56.8341</td>
<td>69.74195</td>
<td>69.48049</td>
<td>69.15317</td>
<td>69.09098</td>
<td>69.36829</td>
<td>69.53171</td>
</tr>
<tr>
<td>Poland</td>
<td>69.6122</td>
<td>70.66858</td>
<td>70.66341</td>
<td>71.11707</td>
<td>70.56098</td>
<td>70.6561</td>
<td>64.52671</td>
<td>65.79634</td>
<td>66.77251</td>
<td>67.43315</td>
<td>67.82744</td>
<td>68.08729</td>
</tr>
<tr>
<td>Romania</td>
<td>68.50415</td>
<td>68.47024</td>
<td>69.00561</td>
<td>69.49976</td>
<td>69.6139</td>
<td>69.69878</td>
<td>71.68086</td>
<td>71.86287</td>
<td>72.20871</td>
<td>72.2782</td>
<td>72.63848</td>
<td>72.97895</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>68.37659</td>
<td>68.30854</td>
<td>68.29463</td>
<td>68.32043</td>
<td>67.7239</td>
<td>67.48756</td>
<td>67.37634</td>
<td>67.39098</td>
<td>67.11439</td>
<td>67.0339</td>
<td>67.2639</td>
<td>67.8061</td>
</tr>
<tr>
<td>Vietnam</td>
<td>64.52671</td>
<td>65.79634</td>
<td>66.77251</td>
<td>67.43315</td>
<td>67.82744</td>
<td>68.08729</td>
<td>71.68086</td>
<td>71.86287</td>
<td>72.20871</td>
<td>72.2782</td>
<td>72.63848</td>
<td>72.97895</td>
</tr>
<tr>
<td>OECD members</td>
<td>69.78266</td>
<td>70.07942</td>
<td>70.26413</td>
<td>70.68141</td>
<td>71.03591</td>
<td>71.31411</td>
<td>71.68086</td>
<td>71.86287</td>
<td>72.20871</td>
<td>72.2782</td>
<td>72.63848</td>
<td>72.97895</td>
</tr>
</tbody>
</table>

Source: World Bank

### 4. THE ECONOMIC GROWTH OF COMECON COUNTRIES

We investigate the economic growth of some former Comecon members by employing annual values of real 2010 Per Capita ($) GDP as provided by United States Department of Agriculture, Economic Research Service (2015). The Figure 1 presents the values of real 2010 Per Capita ($) GDP between 1971 and 1988 for seven Eastern European Comecon countries: Bulgaria, Czech Republic, Hungary, Poland, Romania,
Slovakia and Soviet Union. Unfortunately, United States Department of Agriculture doesn’t provide GDP values for East Germany. We use data for Czech Republic and Slovakia to express economic growth of the former Czechoslovakia.

Fig. 1 Evolution of the real 2010 Per Capita ($) GDP for some Eastern European Comecon countries between 1971 and 1988

All Eastern European Comecon members experienced ascendant trends of the real Per Capita GDP. There are significant differences among the seven countries. Bulgaria was the poorest Eastern European Comecon country, while the former Czechoslovakia was the richest.

The Figure 2 presents the values of real 2010 Per Capita ($) GDP between 1971 and 1988 for the least developed members of Comecon: Cuba, Mongolia and Vietnam (until 1975 the data reflect the situation for both North and South Vietnam). In that period of time, Cuba and Mongolia experienced substantial economic growth. In case of Vietnam, the slow economic growth until 1980s could be linked to the involvement in military conflicts.
5. THE ECONOMIC CONVERGENCE AMONG COMECON MEMBERS

We investigate the catch-up effect on Comecon countries, employing the real 2010 Per Capita ($) GDP used before to study the economic growth. We analyze two forms of economic convergence: sigma (σ) and beta (β).

a. **Sigma (σ) convergence** reflects the decrease in time of the real per capita GDP dispersion (Barro & Sala-i-Martin, 1992; Quah, 1996). We express the dispersion by the coefficient of variation. The Figure 3 presents the evolution of the variation coefficient of real 2010 Per Capita ($) GDP for Comecon members between 1971 and 1988. Although it decreases for some years, the general trend is ascendant, suggesting a sigma economic divergence.
b. **Beta (β) convergence** reflects a situation when the poorest countries grow faster than the richest ones (Baumol, 1986; Barro & Sala-i-Martin, 1992). It is investigated usually by analyzing the dependence of the income growth on the initial income level:

\[
\frac{1}{T} \times \log\left(\frac{Y_t}{Y_{i0}}\right) = a + b \times \log(Y_{i0}) + \epsilon_t
\]

(1)

where:

- $T$ is the length of time (in years) over which the beta convergence is investigated;
- $Y_{it}$ represents the real per capita GDP of the country $i$ at the end ($t$) of period of analysis;
- $Y_{i0}$ represents the real per capita GDP of the country $i$ at the start (0) of period of analysis;

- $a$ stands for the intercept term corresponding to the (Solow, 1956) steady-state point of convergence;

- $b$ is the slope term reflecting the variation of dependent variable when the independent variable increases by one unit.

Beta convergence occurs when the coefficient $b$ is significant negative.

The parameters of the regression (1), presented in the Table 3, suggest the absence of beta convergence among the Comecon members.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-ratio</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>const</td>
<td>0.0044301</td>
<td>0.0197483</td>
<td>0.2243</td>
<td>0.8281</td>
</tr>
<tr>
<td>log($Y_{i0}$)</td>
<td>0.00185516</td>
<td>0.00224916</td>
<td>0.8248</td>
<td>0.4334</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.078376</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F(1, 8)</td>
<td>0.680333</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P-value(F)</td>
<td>0.433376</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source of data:** United States Department of Agriculture, Economic Research Service (2015). ERS International Macroeconomic Data Set

6. CONCLUSIONS

The Comecon membership influenced the economic development by many channels. First, the national economies’ performances were affected by the inefficiency of socialist systems. In general, the attempts to reform these economies weren’t consistent. Second, the economic integration process was badly designed and faced a consistent resistance from some of the Soviet Union satellites. Despite the specialization, in some industrial sectors the market potential wasn’t fully exploited. Third, the effects of nationalizations, industrialization and agriculture’s collectivization were in general harmful for the national economies. Fourth, the income distribution specific to socialist systems attenuated the social inequalities. Fifth, the communist regimes financed in high proportions the main social services, especially education and health. Sixth, from the mid-1960s, the Soviet Union subsidies supported substantially the economic development of other Comecon countries.

For geostrategic and prestige motivation, Cuba was the main receiver of these subsidies: Soviet Union imported, at preferential prices, large quantities of Cuban sugar production (Pérez-López, 1988; Feinsilver & Apter, 1993). Vietnam also benefited from Soviet Union subsidies but the war efforts hampered the economic development.

For most of the Comecon members the real per capita GDP remained, despite significant economic growth, inferior to the Western countries levels. The substantial wealth of the former Czechoslovakia and Eastern Germany proceeded from times
previous to the communist period. Another symptom of Comecon’s inefficiency is the economic convergence absence.

The lost of Soviet Union markets and subsidies were major challenges for many former Comecon members which had also to face the difficulties of transition to the market economy. The communist regimes survived only in Cuba and Vietnam, but these countries were also forced to substantial economic reforms. However, the effects of some qualitative transformation from Comecon period still persist in these countries.

References


91. United States Department of Agriculture, Economic Research Service, 2015. ERS International Macroeconomic Data Set


