

Burcea, Felix-Constantin

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Quality of investment environment. Evidence from Romania

Phd. Candidate Felix-Constantin Burcea

Bucharest Academy of Economic Studies

Abstract

The aim of the present paper is to describe the investment environment in Romania, to highlight the stringent problems that need to be solved and also to propose solutions for a better investment environment.

In the actual economic context, policymakers across all regions are facing difficult economic management challenges. After closing the output gap and reducing the excess capacity generated during the crisis, emerging and developing countries are benefitting from buoyant internal demand, although they are now facing inflationary pressures caused by rising commodity prices. In advanced economies, the devastating earthquake in Japan and doubts about the sustainability of public debt in Europe, US and Japan, are undermining investor and business confidence and casting a shadow of uncertainty over the short-term economic outlook.

*By implementing the Porter's Diamond analysis in the present paper, we can observe what is the Romanian place among the European Union concerning the country competitiveness and, therefore, the quality of the investment environment. I applied the methodology used in the Global Competitiveness Report 2011-2012, and the pillars for this analysis are: **Basic Requirements** (Institutions, Infrastructure, Macroeconomic stability, Health and primary education), **Efficiency enhancers** (Superior education and training, Goods market efficiency, Labor market efficiency, Financial market sophistication, Technological readiness, Size of market) and **Factors of innovation and sophistication** (Business sophistication, Innovation).*

To highlight the existent problems in the Romanian investment environment and to identify possible solutions for the future, I made an analysis in which Romania is compared with the average performance from EU 27 for as series of indicators from Porter's Diamond, using the data's from the Global Competitiveness Report 2011-2012, considering: the competitive advantage or disadvantage by comparing the Romanian Score with EU average; the intensity of the competitive (dis)advantage by comparing the score difference between Romania and EU average with the standard deviation of data series for each indicator.

The last part of the paper is dedicated to a microeconomic model applied for the Romanian case that was developed by Abhijit Banerjee on the economy of India and published with the launch of the study “Equity and Growth in a Globalizing World” by the Commission for Growth and Development in 2010. This microeconomic model has like primary goal to determine the minimum wealth for a person required to start a business and to highlight the problems in the Romanian investment environment.

Key words: *investment environment, clusters, Porter’s Diamond, competitiveness*

Jel Codes: *E22, F21, L26*

1. Investment environment in Romania

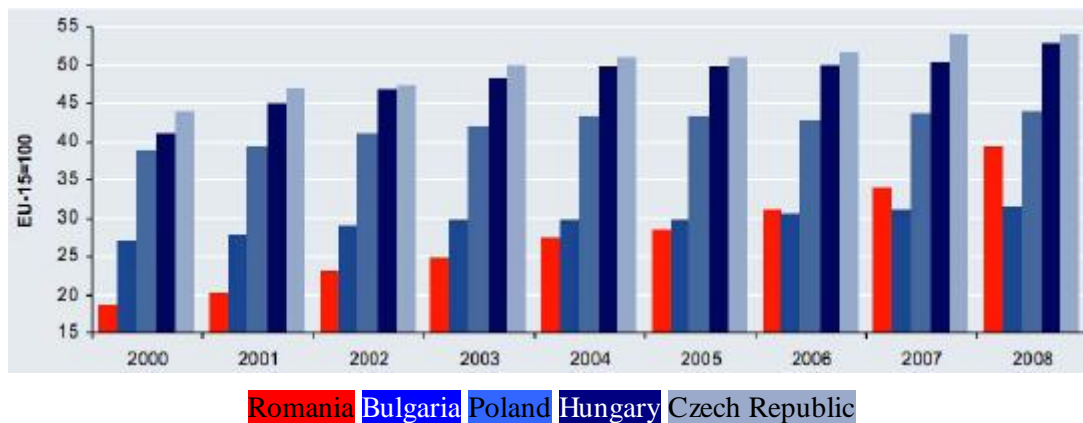
To better understand the quality of an investment environment, we need to analyze the country competitiveness. As Michael Porter described in his famous work, “About Competitiveness”, the competitiveness of a country is not referring mainly neither at macroeconomic stability, work force or public policies, but at productivity. A country is competitive when is allowing the development of productivity drivers and the increase of productivity rate.

From this perspective, Romanian competitiveness has substantial improved in the last decade, because we reduced the productivity gap comparing with the European mean. Comparing with EU 15, our productivity has been improved by three times, and comparing with EU 27, by five times. Even so, we arrived in 2008 at only at 50% of the European mean, and after the crisis, we are at about 47%. (Figure 1).

Analyzing the competitiveness only by productivity is a limited view. We need to determine the health sector productivity, the educational one, which counts together more than half of employees from the Romanian public sector.

One single indicator will not be reliable in our analysis, because we need to take into consideration also other qualitative factors not only the quantitative ones. Porter developed the analysis framework for a country competitiveness, known in economic literature as “Porter’s Diamond”. This is the most used and probably most reliable way to analyze the national competitiveness.

Figure 1. Labor productivity, *EU-15 = 100*, 2000-2008



Source: Eurostat

One recent example in the economic literature is the paper work “Handbook on Small Nations in the Global Economy”¹, where “Porter’s Diamond” is user in analyzing the competitiveness of the following economies: Holland, Belgium, Ireland, Slovenia, Denmark, Finland, Norway, Canada, Chile, Mauritius, New Zealand, Cambodia.

At his origins, Porter’s Diamond has 4 dimensions:

- factors (offer) conditions. Here we can include natural, human, financial resources, physique and administrative infrastructure, informational, scientific and technological infrastructure also. All of those contribute to the specialization of production factors.
- demand conditions. Are included not only the size and dynamics of the market, but also the sophistication degree of local customers, the pressure on innovation over the competitors on the market, the existence of some niches on the market.
- the context for companies strategy and competitiveness. It refers to the intensity of the local competition that can stimulate.
- upstream and downstream industries. It refers at the existence of local suppliers and similar industries which can allow the vertical collaboration.

Porter’s Diamond concept has been improved after by Jacobs and de Jong in 2002 and Jacobs and Lankhuizen in 2005 with two components. One is the moral hazard, that refers to unpredictable and exogenous trends in a country. For example, the increase in the

¹ Van den Bulcke, D., Verbeke, A. și Yuan, W. (eds.) (2009), *Handbook on Small Nations in the Global Economy*

international price of oil, or, why not, a Vulcan eruption. The global economic crisis is also a moral hazard factor.

The other aspect is concerning the role of governments. Governments influence also the other sides of the diamond, especially the factor conditions (by investing in infrastructure and education mainly). From a small perspective, the role of the governments is referring to fiscal and spending policies. From a wider perspective, the role of the government is a catalyst one, for encouraging the development of companies, to facilitate the creation of specialized competences, for assuring safety and environment standards, to promote antitrust policies and to stimulate the investments in human capital, in innovation and infrastructure.

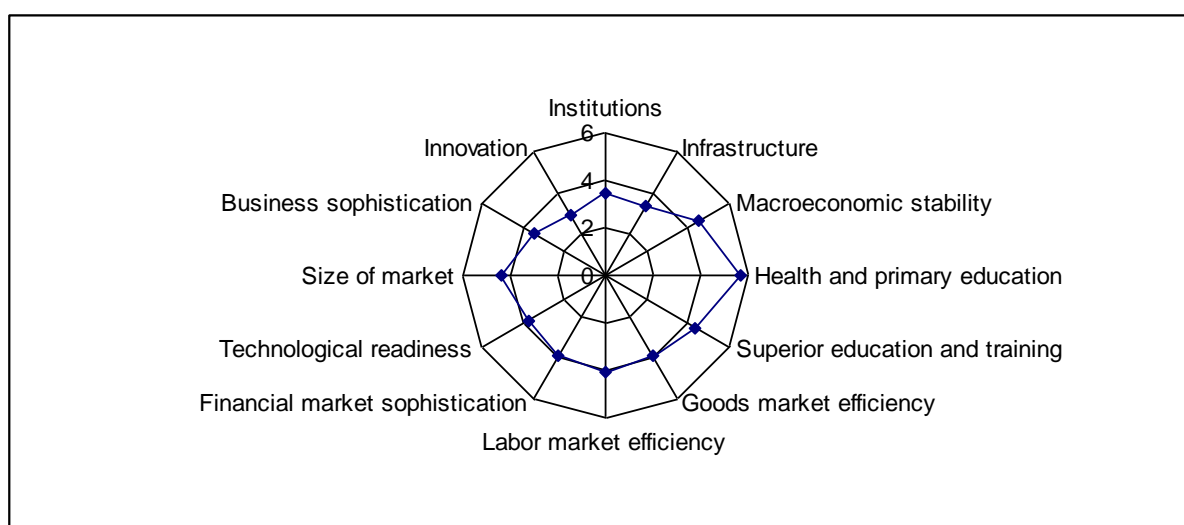
Unfortunately, at the last two chapters, innovation and infrastructure, Romania has the weaker competitive position, like we can see in the Figure 1.2. The performance analysis is made after 12 competitiveness pillars grouped in three categories: basic demands, efficiency enhancers and innovation and sophistication factors.

Table 1. Competitiveness Pillars (on a scale from 1 (the weakest) to 7 (the strongest))

Basic requirements	Score for Romania
Institutions	3.49
Infrastructure	3.37
Macroeconomic stability	4.52
Health and primary education	5.72
Efficiency enhancers	
Superior education and training	4.42
Goods market efficiency	3.96
Labor market efficiency	4.10
Financial market sophistication	3.91
Technological readiness	3.76
Size of market	4.39
Factors of innovation and sophistication	
Business sophistication	3.48
Innovation	2.91

Source: Global Competitiveness Report 2011-2012

Figure 2. Competitiveness position of Romania



Source: Global Competitiveness Report 2011-2012, author's own manipulation

Further, I made an analysis in which Romania is compared with the average performance from EU 27 for as series of indicators from Porter's Diamond, using the data's from the Global Competitiveness Report 2011-2012, considering:

- the competitive advantage or disadvantage by comparing the Romanian Score with EU average;
- intensity of the competitive (dis)advantage by comparing the score difference between Romania and EU average with the standard deviation of data series for each indicator.

Therefore: - Romania has competitive advantage/ disadvantage if the score is bigger/ lower than EU average;

- intensity of this advantage/ disadvantage is in normal limits if it fits to the standard deviation and is stronger if it is higher than the standard deviation.

Table 2. Factor conditions- Romania

	Competitive advantage	Competitive disadvantage
Normal limit intensity	<ul style="list-style-type: none"> - Costs regarding dismissal - Correlation of salaries with the productivity - Investors protection 	<ul style="list-style-type: none"> - Enrolment in tertiary education - Access to loans for investments

Strong intensity		<ul style="list-style-type: none"> - Protection of intellectual property - Infrastructure quality - Roads quality - Education expenses - Quality of education system - Work force flexibility
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Source: *Global Competitiveness Report 2011-2012, author's own manipulation*

On the offer side, Romania has some competitive advantages chained to dismissal costs (practically there are not costs on individual dismissal), protection of investors and the correlation of compensations with the productivity. The last one can be included in the moral hazard chapter, represented by the rise of crisis, which aligned the salaries with the productivity after a period of high and over productivity wages. (2004-2008).

There are some disadvantages in normal limits, as access to loans for investment, that can be improved after the government needs for loans for financing the deficit will temperate.

But, there are too many competitive disadvantages with high intensity, which have a strong impact on investment environment and requires the government intervention. The intellectual property problem and workforce flexibility can be solved by legislative instruments. We can't say the same thing about the infrastructure and education system, which requires high levels of investment.

In the economic literature we can identify four stages types of an economy development:

- economy based on factors (production factors);
- economy based on investments;
- economy based on innovation (high levels of expenses on R&D);
- economy based on welfare (welfare distribution is the main priority- Scandinavian Economies).

Romania has been an economy based on factors, especially on natural resources and cheap labor force. In the communist period, Romania tended to be "a premature welfare nation". In the first decade of the 21st century, Romania started to become an economy based on investments, if we consider the stock of FDI and the higher rate of brut fix capital formation. Investment rate was much higher than the saving one in the boom period, but the trend started to change after 2008.

But the explosive increase of investments, most of them in the real estate or retail (cars- which are considered fix assets), negatively impacted the investments in infrastructure and education. Without a developed infrastructure and education system, the potential of investment to increase is limited. Economic crisis reduced dramatically the investment volume.

Table 3. Demand conditions - Romania

	Competitive Advantage	Competitive Disadvantage
Normal limit intensity	- Market size	- sophistication degree of clients
Strong intensity		- Degree of orientation to clients - Internet users

Source: *Global Competitiveness Report 2011-2012, author's own manipulation*

On the demand side, Romania has the advantage of the market size, but also we need to interlock it with the purchasing power, which decreased after the crisis, when the population consumption has been contracted with over 10%. The competitive disadvantage comes from the lower degree of clients sophistication, which attracts a lower degree of orientation to clients from the companies perspective. Therefore, the companies do not rely on innovation, but they concentrate on the price, as the clients buy almost anything if it's cheaper. Also it is about the customer education- where public intervention can ameliorate the situation.

Table 4. Support industries in upstream and downstream – Romania

	Competitive Advantage	Competitive Disadvantage
Normal limit intensity		- Quantity of local offer (local suppliers)
Strong intensity		- Quality of local offer (local suppliers) - Cluster development

Source: *Global Competitiveness Report 2011-2012, author's own manipulation*

The local suppliers problem tend to be solved, at least considering the quality index. The worse competitive disadvantage is in the sphere of clusters development. Clusters are geographical conglomerations of companies from same industries or related industries.

Clusters can have better access to specialized inputs and workforce, higher access to information and can benefit from the complementarity with the other companies from the cluster.

For the national economy, the cluster has a big potential to create higher added value than a isolated company. There are only few clusters in Romania, the most known one is the one that concerns the Renault Factory from Pitesti Area, and also we can consider the investment of Ford in Craiova, that will be added to this cluster.

For small businesses, I believe that clusters represent the solution to progress and to reduce the operational and distribution costs. In Romania, unfortunately, has been encouraged the development of industrial parks by neglecting the cluster, even if the parks don't have synergic advantages.

Like solutions for improving the investment environment, Romania needs to attract investors in key areas, where is potential, and to focus on creating clusters, that will bring progress and cost decreases.

Table 5. Companies strategy- Romania

	Competitive Advantage	Competitive Disadvantage
Normal limit intensity	- Education quality in mathematics and exact sciences domain	- Local capacity for innovation - Companies expenditures for R&D
Strong intensity		- High end technology availability - Technological absorption - Nature of competitive advantage - Marketing development

Source: Global Competitiveness Report 2011-2012, author's own manipulation

Concerning the companies strategy, the results are in line with the situation from the demand side: unsophisticated and non-educated buyers don't require a marketing development, therefore, the absorption of latest technologies is not urgently required and it's no pressure for changing the nature of competitive advantage (which is based mainly on cost reduction and not on quality).

Table 6. Government Role- Romania

	Competitive Advantage	Competitive Disadvantage
Normal limit intensity		<ul style="list-style-type: none">- Public expenditure efficiency- Burden of administrative regulations- Size and fiscal effects- Public acquisition of sophisticated products.
Strong intensity		

Source: *Global Competitiveness Report 2011-2012, author's own manipulation*

Referring to fiscal and expenditure policies, Romania has a competitive disadvantage mainly on the efficiency of public expenditures, burden of administrative regulations, but also the fiscal effects on the economy.

Mainly, the fiscal regulation is the main obstacle for the business environment to recover, but also problems exists in the area of public policies, bureaucracy and corruption.

Also, Romania has a big competitive disadvantage also considering the budgetary revenues. Romania has the lowest share of budgetary incomes in GDP from all EU 27 countries, below 32%.

What can government do to increase competitiveness? Most common solution would be to increase the public investment. But a problem for increased investment is given by the ratio between the marginal productivity of capital and the interest rate. As long the marginal productivity of capital is not higher than the interest rate, then the speculative investment will dominate, and not the productive ones, in the private sector, and the public sector will refrain from investments because it would make them with a more expensive loan capital. As long as the government will be dependent on expensive loans (the internal market ones are more expensive, and in 2009 Romania has borrowed more money from the internal market than from the IMF), will not be able to do massive public investment. To reverse this relationship, is needed or a an increase of the marginal productivity of capital, by calling new technology, but this it takes time, either of a drastic reduction in interest rates. Of course, the interest rate is limited by the high inflation, but there are historical times where the reference interest rate is below the inflation, in order to stimulate the economy.

Another problem for the public investment is, as we have already noted, the lack of financial resources. It must be founded in the context alternatives financing solutions as the European funds or public private partnerships.

Monetary policy can bring a short-term macroeconomic stability, with many casualties, together with a mix of policies aimed at resuming lending and stimulate consumption, increase of the public investment and increasing of the structural funds absorption; it is possible to have a resumption of economic growth in Romania, but not a sustainable one at high growth rates. It may that resuming lending to avoid the liquidity trap (liquidity injections into the economy which is not reflected in the sustained crediting growth) and the Japanese trap (the consumption in Japan has remained in a negative territory two decades after the real estate and banking crisis in the late '80s). It may be that public investment to overcome the Portuguese trap (the economic growth in Portugal has remained well below potential since 2001, despite some massive public investment programs). But structural imbalances of the economy remain in place. Rodrik² believe that non orthodox solutions should prevail (heterodox), and put prominently between them the industrial policy relaunch. Also the EU through the Europe Strategy 2020, launched in March 2010, continuing the Lisbon Strategy emphasizes the role of industrial policy. This does not mean necessarily that the government should pick winning industries (champions) and invest in them. The role of government is especially that of a facilitator. Thus, one of the pillars of the new European strategy is called "An industrial policy for the globalization era". At national level, the role of governments, as defined in Europe Strategy 2020, consists of:

- business environment improvement especially for innovative SMEs, including through public procurement to support innovative initiatives;
- improvement of intellectual property protection;
- reduce administrative burdens on companies and improve the quality of legislation;
- cooperation with stakeholders (representatives of employers, unions, consumers, academia, NGOs) in order to identify and resolve any faults.

We add to this list, under our analysis, also the public expenditure efficiency, in order to find resources for investment in infrastructure and education, and stimulating the development of clusters.

² Rodrik, D. (2009), *One Economics, Many Recipes: Globalization, Institutions, and Economic Growth*, Princeton University Press, Princeton, NJ

2. Microeconomic model. Evidence from Romania

To better understand the investment process, we will apply in the case of Romania a model developed by Abhijit V. Banerjee (2010) on the economy of India and published with the launch of the study “Equity and Growth in a Globalizing World” by the Commission for Growth and Development in 2010.

Banerjee has developed a model in which analyses the correlation between entrepreneurial talent and wealth, and reveals that due to the fix investment costs and imperfect credit market, those with a bigger wealth can invest better in their projects.

We will consider an economy where wealth has a distribution $G(w)$, meaning wealth W . This economy has only one good and a single technology for production (for simplicity). This technology requires a minimum investment of capital K , the later output of investment being aK , “ a ” representing the entrepreneur’s talent and ranging between the \underline{a} and \bar{a} (distribution of talent is independent of wealth).

The normal question that we put is how can someone who has no minimum K wealth invest something? The obvious answer is that through loan. Suppose the interest rate is r .

Each entrepreneur which has an investment multiplier $a > 1+r$ will be happy to barrow in order to invest. Only those who have a high level of “ a ” will invest, and the rest will lend their wealth.

In the case of the marginal investor, we will apply the equation:

$$\frac{\bar{a} - a^m}{a - \underline{a}} * K = W, \quad (1)$$

or

$$a^m = \bar{a} - (\bar{a} - \underline{a}) * \frac{W}{K}, \quad (2)$$

and the level of the interest rate on the market is $1 + a^m$.

In the case of Romania, for illustrating the applicability of this model, we will consider that the value of $\frac{W}{K}$ is 0,1. (this is the value considered by V. Banerjee).

In order to calculate the wealth of a person (we will consider the wealth of the entire family) we will take into consideration the GDP/capita indicator and the average number of persons from a Romanian family.

Thus, according to Eurostat, GDP/capita= 5700 Euros, and in conformity with the Census from 2002 the average number of persons from a Romanian family is 2,89.

Making the calculations we obtain $W=5700*2,89= 16.400$ Euro.

According to the studies made by V. Banerjee, 30% of the total wealth W is represented by the real estate. Thus, the amount left for investment will be 11.480 Euros.

Because the value of the ratio is 0,1 it results that the value of K will be minimum 114.800 Euro.

If $\frac{W}{K}$ is 0,1, this thing will cause interest rate to climb up until the point where only the top 10% of the most talented people will invest.

The average productivity of the one that would invest is:

$$A_{av} = \frac{\bar{a} + a^m}{2} = \bar{a} - \frac{1}{20}(\bar{a} - \underline{a}) \quad (3)$$

In this case, would mean that some persons to borrow an amount that would represent their wealth multiplied by many times. Suppose like an alternative that people can borrow an amount equal to the multiplied wealth $\lambda(r)$.

Most model son the credit markets suggest that λ should decrease then when r would increase. this can be explained as fallows: the creditors try to limit loans to persons because they are worried that they might not be paid and have to worry even more when r increases and consequently expect also a higher remuneration.

The presence of credit constrain means first that not everyone has the option to invest, to reach the minimum level K , one's wealth should be at least $K= 1+ \lambda(r)$.

What plausible value should have $\lambda(r)$? In the study made by Banerjee, λ is equal with 1/3 or less. the author assume that λ can not be bigger than 1. $\lambda=1$ is appropriate to the case where an entrepreneur invests all its assets in a factory in order to increase his working capital. In this case, the minimum wealth for a person starting a business in $K/2$, which, base don the assumptions above, would be approximately 57500 Euros.

The next questions that arises naturally from our study is how many people in Romania have a wealth of 57500 Euros.

According to the assumptions of the study developed by Banerjee, we will suppose that approximately 10% can start a business, compared to the rest of the population in which there are not any credit constraints, the fraction of that segment that will start a business will be ten times higher. This situation involves widening the research in talent's distribution.

To see the difference made by this distribution, we see that the minimum level of talent of an entrepreneur who starts a business, in this case a^c , will be given by the relation:

$$\frac{\bar{a} - a^c}{a - \underline{a}} = 10 * \frac{\bar{a} - a^m}{a - \underline{a}}, \quad (4)$$

from this equation results that the productivity of those who invest in this case will be:

$$A_{av} = \bar{a} - \frac{1}{2}(\bar{a} - \underline{a}) \quad (5)$$

compared with

$$\bar{a} - \frac{1}{20}(\bar{a} - \underline{a}), \text{ in case of credit constraint absence.} \quad (6)$$

For example, if $\bar{a} = 2$ and $\underline{a} = 1$, the average productivity would decrease from 1,95 to 1,5. in this linear model, the economic growth rate is proportional to the net productivity verage, $A_{av} - 1$.

By the assumed data, this model will imply the fact that the economic growth rate is effectively halved in the presence of credit constraints.

Conclusion

As the economic environment is more and more challenging, countries needs to assure a stable and qualitative investment environment in order to progress and to have the desired economic growth.

By analyzing the Romanian situation, we can conclude that policy makers need to be focused on some important aspects in order assure a competitive investment environment. We can highlight the following: promote the cluster strategy, so the local economy can benefit in the near future of technological progress, higher level of knowledge, high specialized work force, etc.; high rates of public investment in infrastructure, educational and health system.

Considering the applied economic model, we can conclude that the measures taken by the Romanian government and the bad policy of commercial banks crediting led to a very low level of investment and consequently to a strong contraction of the economy.

Another problem detected with the help of the microeconomic model is wealth distribution. In Romania, like in many other former communist countries, wealth is unfairly divided between the members of society. Thus, a big part of Romanian wealth is concentrated at a small part from the population. Even if a person have very good entrepreneurial skills, it is likely that this one to not be able to start an investment process due to the lack of that minimum of capital K and the credit market bad policy.

Moving to macroeconomic level, I consider that the investment policies of the Romanian government should be more coherent, and the started investment projects to have an increased efficiency.

For the investment environment to be stimulated, will have to be taken measures for the capable entrepreneurs to have access to sources in order to start an investment project, public-private partnership should be much more exploited, and the credit markets will have to be much more flexible.

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