

## Economic Competitiveness: A Principal-Components Analysis for Latin America and Europe in a Comparative Perspective

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### Abstract

We study economic competitiveness using principal-components analysis for Latin America and Europe. We construct an aggregate economic competitiveness index in order to measure fifteen dimensions related to endogenous and exogenous economic performance. Moreover, we analyze economic competitiveness behavior, per country, during the period 2001-2011. The results suggest that the most important variables related to economic competitiveness are the Exports of Goods and Services as a percentage of GDP, the Per Capita GDP; and the Commercial Sector. We conclude that in a globalized trade context, the strengthen of the markets, in terms of exportations, commerce, and its positive spillovers like the increase of the GDP per capita; would improve economic competitiveness of countries. We use annual data for twenty economies obtained from the World Bank, Cepalstat, and Eurostat database.

### Competitiveness, Sectors, Principal Components Analysis (PCA), Europe, Latin America

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## Introduction

Paradoxically, there is no consensus to define competitiveness. According to the OECD (2001) economic competitiveness is the level in which countries can produce goods and services to preserve and increase the income of their populations on the long run. For the International Institute for Management Development (2013) competitiveness is a measurement of countries ability to create and maintain an environment that sustains value creation for its enterprises and prosperity for its people. The World Economic Forum (2013) defines competitiveness as a framework of institutions, policies and factors that determines countries' productivity. For the World Bank (2014) competitiveness is related to the state regulations that conditionate firms' performance and national competitiveness. In addition to the previous concepts, the European Union (2013) argues that the competitiveness of a territory is also a systemic concept.

We study competitiveness emphasizing a multidimensional analysis. A multidimensional approach generates accurate and specialize results. According to Bruneckiene and Paltanaviciene (2012) the competitiveness estimations produces several advantages: a) data analysis for investors that show, by socio-economic dimension, potential strengths and weaknesses. b) For governments, to offer crucial information in decision-making procedures. c) For companies, giving strong empirical evidence to measure economic factors and the specific subdivisions of development. d) For the academic field, to generate quantitative results which support scientific studies. And, e) for the society, doing evaluations for national economic performance and government intervention policies.

In this framework, we believe necessary the construction of an economic competitiveness index that can overcome the methodological limitations of other indices.

These limitations include the availability of comparable data, the complexity of the indicators, the use of quantitative and qualitative variables, etc. What we propose is to build such indices with basis on principal-components and panel-data. We aim at overcoming the limitations indicated above. We use this approach because it allows us to establish the main determinants of competitiveness with basis on statistical criteria. We build such indices under the consideration that competitiveness cannot necessarily be constrained to a single measure. Using World Bank, Cepalstat and Eurostat databases, we create our own information panel data according to statistical comparative equivalences.

Insofar to the design of our study, we present the results of our research according to the next order: First, we provide an academic context of the approaches to the study of competitiveness. Next, we explore the recent literature related to the measurement of competitiveness in a brief review. Then, we describe the methodology that we apply to estimate competitiveness. In addition, we present the results of our research in three subsequent parts: the descriptive statistics, the statistical analysis of the variables, and the ranking of the economic competitiveness with the annual analysis of the performance for the three top countries ranked. Finally, we show the principal components analysis results and posit our conclusions.

## The Economic Competitiveness of Countries

Economic competition is a very important precondition that affects the effectiveness of development of national economy under the conditions of globalization (Stevans, Neelankavil, Mendoza and Shankar, 2012). Economists use to argue that economic globalization has the potential of increasing economic welfare for all.

In traditional economics, the competitiveness of countries is determined through production inputs. Those inputs like labor, land, capital, and natural resources has been the measures of competitiveness mostly quantifiable factors that contributed to the gross domestic product of a country. In the era of globalization and the resulting interlink between countries and their economic interdependence, classical theories of competitiveness are no applicable due to modern dynamics of economic performance. Besides quantifiable factors, qualitative influences are equally important in determining competitiveness. Factors like public and private issues, institutional governmental actuations, extractive procedures and development subjects, among others (Tan, 2004).

An economic competitiveness index is a systematic instrument, which estimates the performance of a particular economy; it is strongly linked with a general evaluation using specific dimensions. An economic competitiveness index implies variables related with commerce, performance of firms, economic growth estimations, among others. In a quantitative way, an economic competitiveness index is calculated using econometric models for correlated variables of socio-economic data. There are a couple of economic competitiveness indices that are the most accepted of the market:

1. The World Economic Forum's Global Competitiveness Index: Calculated every year since 1979, is an instrument that measures the ability of countries to supply high levels of prosperity to their population. It estimates the effectiveness of a country using their productive resources at short and long run. The calculus works using public information and the results of the executive survey to great businesspersons who participate at the World Economic Forum in Davos, Switzerland. The evaluation uses 140 world economies per annum (www.weforum.org).

2. The IMD World Competitiveness Yearbook (WCY): Elaborated for the IMD World Competitiveness Center. The study has been made since 1989. It measures the economic competitiveness of nations; in other words, produces a classification that shows how different economies managed their resources and competences to increase the quality of life of their population. It compares the competitiveness of 60 countries and uses at least 300 elements of analysis. The IMD World Competitiveness Yearbook is developed using four socio-economical dimensions. Those sectors are measured using top business executives survey and data from international institutions like World Bank, IMF, OECD, among others. They give variables weights in an arbitrary way according to preliminary sectors delimitation in order of importance. IMD World Competitiveness Yearbook is considered the most reliable instrument for economic performance comparisons and professional benchmarking (www.imd.org/wcc/).

Many other studies have been developing alternative models to determinate economic competitiveness. For instance, using firm's regulations as competitiveness main determinant (World Bank Doing Business Index, 2014). To rank international competitiveness according to a specific industry development (IMCO International Competitiveness Index, 2011). And even to measure regional competitiveness, in a comparative way for a unified market (EU Regional Competitiveness Index, 2013). Those studies are focusing on the solution of several problems from original sources: econometric (or statistical) modeling corrections, simplification in the presentation of results, optimal recollection of data, and other adjustment techniques (Oral and Chabchoub, 1996).

Countries strive for competitiveness to attract foreign direct investments (FDI) and also to attract skilled work-force to their shores. Besides the quantifiable factors and the natural resources of a country, some qualitative variables are also important to achieve competitiveness. Competitiveness is a unit that can measure the relation between economic growth and national development. Furthermore comparisons between development platforms are possible using a competitiveness index (Ogrea, Herciu, 2012). Steve Lall demonstrated how important is competitiveness measuring for decision makers. His study suggests the necessity to coordinate competitive ness information with a precise analysis to launch reasonable platforms of development (Lall, 2001).

### Literature Review

There are several proposals to establish rankings of economic competitiveness. For instance, The World Bank Doing Business Index (2014) uses firm's regulations to establish the degree of competitiveness. The IMCO International Competitiveness Index (2011) considers the degree of industry development. The European Union Regional Competitiveness Index (2013) measure the degree of regional competitiveness.

Methodologically, these indices are built using several techniques. However we should recognize that several problems exist to build adequate measures. These problems include econometric modeling problems, complex results, and data unavailable, among others.

Reiljan, Hinrikus and Ivanov (2000) state that economic competitiveness studies show the importance of having indices per dimensions. According to this idea, the complexity of competitiveness scrutiny can be reduced with multidimensional analysis.

Buracas, Zvirblis and Joksiene (2012) say that economic competitiveness can be interpreted as multidimensional phenomena; and because of that, should be measured using multicriteria methodologies. Jesionsky (1996) indicate that competitiveness indices as an overall ranking are not precise; and for that reason, competitiveness measurement should be differentiated. These kinds of results, the author concludes, can produce distinctive rankings that should be very useful for small and medium size economies.

Ogrea and Herciu (2012) admitted that a multidimensional study of competitive ness allows the structuration of competitive ness comparisons. Bruneckiene, Cincikaite and Kilijoniene (2012) add that according to national and international perspectives, multidimensional studies can measure public policies effectiveness for specific socioeconomic dimensions. Several studies and estimations prove that a multidimensional measurement of competitiveness implies more precise results and a necessary differentiated focus.

### Methodology

The principal components analysis (PCA) is a method for re-expressing multivariate data. It allows reorienting the data so that the first few dimensions account for much as information as possible. The central idea is based on the concept of the proportion of the total variance (the sum of the variance of the p original variables) that is accounted for by each of the new variables. PCA transforms the set of correlated variables ( $x_1 \dots x_p$ ) to a set of uncorrelated variables ( $y_1 \dots y_p$ ) called principal components in such a way that  $y_1$  explains the maximum possible of the total variance,  $y_2$  the maximum possible of the remaining variance, and so on.

The aim of PCA is to interpret the underlying structure of the data in terms of the most important principal components.

Usually, the first principal component may be interpreted as a measure of what is common to the set of correlated variables (x1...xp). Such interpretation relies on the fact that the first principal component is the best one-dimensional summary of the data. Particularly, for the aims of the analysis developed here, the first principal component may be interpreted as a scale index that summarizes the information contained on a particular set of variables.

### Descriptive Statistics

According with our selection of variables, we use a sample of 220 observations for the 20 study countries. Variables listing in the economic competitiveness index construction are organized and described as follows:

Variable	Description
ecppib	GDP at constant prices (dollars).
ecpibc	GDP per capita in constant prices
ectpib	Annual growth rate of GDP
eccpib	Annual growth rate of GDP per capita
ecahbr	Gross saving as a percentage of GDP
ecinve	Foreign direct investment (dollars)
ecbcbs	Trade balance of goods and services as a percentage of GDP
ecom	Commercial sector as percentage of GDP
ecybys	Exports of goods and services as a percentage of GDP
ecfbc	Gross capital formation as a percentage of GDP
ecggf	Final consumption expenditure of the federal government as a percentage of GDP
ecrese	Total reserves (dollars)
ecgnb	Gross national expenditure as percentage of GDP
ecibys	Imports of goods and services as a percentage of GDP
ecrm	Total income from natural resources as a percentage of GDP

Source: Authors Elaboration.

**Table 1** Variables Description

The descriptive statistics for the variables on the economic competitiveness index are expressed like:

Variable	Obs	Mean	Std. Dev.	Min	Max
ecppib	220	7.72E+11	8.35E+11	215900.1	3.05E+12
ecpibc	220	17774.07	16512.03	2089.79	55377.82
ectpib	220	3.125182	3.793696	-10.89	18.29
eccpib	220	2.077455	3.724217	-11.73	16.2
ecahbr	220	21.58077	6.143185	8.07	40.69
ecinve	220	2.29E+10	3.71E+10	2.49E+10	2.62E+11
ecbcbs	220	1.402227	6.682388	-16.95	19.19
ecom	220	61.75632	23.82413	21.74	157.06
ecybys	220	31.5795	13.22574	10.87	83
ecggf	220	15.96118	5.635712	6.21	28.63
ecrese	220	6.43E+10	8.61E+10	2.61E+08	4.97E+11
ecgnb	220	98.59786	6.682322	80.81	116.95
ecibys	220	30.17714	11.45462	10.21	74.06
ecrm	220	7.243455	10.1838	0.02	47.92

Source: Authors Elaboration.

**Table 2** Variables Descriptive Statistics

Economic competitiveness index, variables pairwise correlations, provides the next results (significance levels):

	ecppib	ecpibc	ectpib	eccpib	ecahbr	ecinve	ecbcbs
ecppib	1.0000						
ecpibc	0.5530*** (0.0000)	1.0000					
ectpib	0.2932*** (0.0000)	0.3237*** (0.0000)	1.0000				
eccpib	0.1931*** (0.0040)	0.2337*** (0.0005)	0.9844*** (0.0000)	1.0000			
ecahbr	-0.1189* (0.0785)	0.2461*** (0.0002)	0.1136* (0.0928)	0.1633** (0.0153)	1.0000		
ecinve	0.5320*** (0.0000)	0.3853*** (0.0000)	-0.1128* (0.0952)	-0.0592 (0.3819)	-0.0671 (0.3215)	1.0000	
ecbcbs	0.0034 (0.9596)	0.2699*** (0.0000)	-0.0318 (0.6386)	0.0646 (0.3406)	0.7560*** (0.0000)	-0.0262 (0.6996)	1.00
ecom	0.0527 (0.4371)	0.6198*** (0.0000)	-0.1205* (0.0744)	-0.0708 (0.2957)	0.3573*** (0.0000)	0.0581 (0.3909)	0.274 (0.00

ecbys	0.0483 (0.4760)	0.6264*** (0.0000)	-0.1166* (0.0844)	-0.0475 (0.4835)	0.5128*** (0.0000)	0.0457 (0.4998)	0.499 (0.0)
ecfbc	-0.1569** (0.0199)	-0.1182* (0.0802)	0.2914*** (0.0000)	0.2662*** (0.0001)	0.4811*** (0.0000)	-0.0311 (0.6459)	0.0 (0.9)
ecggf	0.5716*** (0.0000)	0.6207*** (0.0000)	0.3115*** (0.0000)	0.2080*** (0.0019)	0.0376 (0.5791)	0.3906*** (0.0000)	0.239 (0.0)
ecrsse	0.3720*** (0.0000)	0.1348** (0.0458)	-0.0618 (0.3613)	0.0220 (0.7458)	0.2150*** (0.0013)	0.2423*** (0.0003)	0.253 (0.0)
ecgnb	-0.0034 (0.9594)	0.2699*** (0.0000)	0.0319 (0.6385)	-0.0645 (0.3407)	0.7560*** (0.0000)	0.0262 (0.6997)	1.000 (0.0)
ecibys	0.0538 (0.4274)	0.5658*** (0.0000)	-0.1161* (0.0858)	-0.0925 (0.1716)	0.1511** (0.0250)	0.0681 (0.3148)	-0.0 (0.9)
ecrn	0.3525*** (0.0000)	0.4948*** (0.0000)	0.3121*** (0.0000)	0.3035*** (0.0000)	0.5488*** (0.0000)	0.1828*** (0.0066)	0.449 (0.0)
	eccom	ecbys	ecfbc	ecggf	ecrsse	ecgnb	ecibys
eccom	1.0000						
ecbys	0.9701*** (0.0000)	1.0000					
ecfbc	-0.0542 (0.4238)	-0.0480 (0.4788)	1.0000				
ecggf	0.2921*** (0.0000)	0.3236*** (0.0000)	0.1906*** (0.0046)	1.0000			
ecrsse	-0.0732 (0.2795)	-0.0019 (0.9782)	0.0405 (0.5506)	0.2391*** (0.0003)	1.0000		
ecgnb	0.2746*** (0.0000)	0.4999*** (0.0000)	-0.0032 (0.9620)	0.2396*** (0.0003)	0.2538*** (0.0001)	1.0000	
ecibys	0.9599*** (0.0000)	0.8630*** (0.0000)	-0.0573 (0.3974)	0.2339*** (0.0005)	-0.1502** (0.0259)	0.0062 (0.9277)	1.0000
ecrn	0.2015*** (0.0027)	-0.0681 (0.3147)	0.3629*** (0.0000)	0.2865*** (0.0000)	0.1101 (0.1035)	0.4491*** (0.0000)	0.3406*** (0.0000)
	ecrn						
ecrn	1.0000						

Table 3 Variables Pairwise Correlations Analysis

## Statistical Analysis

Economic competitiveness index principal components correlations and eigenvalues are expressed like:

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	4.4402	0.9652	0.2960	0.2960
Comp2	3.4750	1.2696	0.2317	0.5277
Comp3	2.2054	0.5493	0.1470	0.6747
Comp4	1.6561	0.6301	0.1104	0.7851
Comp5	1.0260	0.3474	0.0684	0.8535
Comp6	0.6785	0.1029	0.0452	0.8987
Comp7	0.5756	0.1604	0.0384	0.9371
Component	Eigenvalue	Difference	Proportion	Cumulative
Comp9	0.3218	0.1852	0.0215	0.9863
Comp10	0.1367	0.0714	0.0091	0.9954
Comp11	0.0653	0.0612	0.0044	0.9997
Comp12	0.0042	0.0042	0.0003	1.0000
Comp13	0.0000	0.0000	0.0000	1.0000
Comp14	0.0000	0.0000	0.0000	1.0000
Comp15	0.0000	.	0.0000	1.0000

Source: Authors Elaboration.

Table 4 Principal Components Eigenvalues Analysis

Eigenvalues are the scalar expression of the linear transformation of a vector space. In this case, eigenvalues reflect the variance or the information contained in the data (for each principal component). So, the component 1 has a proportion of 0.2960, this is that contains almost the 30% of the information data, and describes itself the 30% of the economic competitiveness index. The component 2 has a proportion of 0.2317, and in a cumulative with component 1, describes the 53% of the economic competitiveness index. And so on until get 100%.

Variable	Comp1	Comp2	Comp3	Comp4	Comp5	Comp6	Comp7
ecppib	0.1895	0.2487	0.3504	0.2840	0.0329	-0.0160	0.1518
ecpibc	0.4026	0.1457	0.0266	0.1489	0.0372	-0.1330	0.2629
ectpib	0.1725	0.2809	-0.1838	0.5181	-0.2593	-0.0194	0.0651
ecopib	0.1224	0.2889	-0.1323	0.5518	-0.3021	-0.0021	0.0913
ecalbr	0.2265	0.4197	0.0675	-0.0375	0.2730	-0.0429	0.0797
ecinva	0.1385	0.1691	0.2630	0.3786	0.1476	-0.3353	0.7234
ecobcs	0.2624	0.3561	0.2312	-0.1726	-0.2315	-0.1211	0.0221
ecoom	0.3923	0.0238	-0.3585	0.0304	0.0216	0.1311	0.1347
ecobys	0.4196	0.1114	-0.2645	-0.0162	-0.0391	0.0875	0.1157
ecfbc	0.0588	0.2473	-0.0356	0.2175	0.7708	-0.1187	0.2829
ecggf	0.2952	0.1589	0.2417	0.1462	-0.1235	-0.2187	0.3282
ecrose	0.0948	0.0551	0.4167	0.1832	0.0704	0.8482	0.0632
ecgnb	0.2625	0.3561	-0.2312	0.1726	0.2315	0.1211	0.0221
ecibys	0.3314	0.0791	-0.4402	0.0819	0.0900	0.1717	0.1465
ecrm	0.0983	0.4331	0.1380	-0.0993	0.1057	-0.0489	0.3462

Variable	Comp8	Comp9	Comp10	Comp11	Comp12	Unexplain	ed
ecppib	0.0902	0.7835	-0.1826	-0.1281	0.0509		0.0000
ecpibc	0.3580	0.0926	0.5536	0.5123	-0.0076		0.0000
ectpib	0.0255	0.0156	0.0604	-0.0206	0.7158		0.0000
ecopib	0.0180	0.0134	-0.0269	0.0080	-0.6919		0.0000
ecalbr	0.1613	0.0031	0.4220	-0.6917	-0.0363		0.0000
ecinva	0.1073	0.2511	-0.0563	-0.0668	-0.0031		0.0000
ecobcs	0.1407	0.0560	-0.2861	0.1085	0.0396		0.0000
ecoom	0.0972	0.0769	-0.1044	0.0047	0.0089		0.0000
ecobys	0.0520	0.0551	-0.1664	0.0316	0.0182		0.0000
ecfbc	0.0354	0.1049	-0.3675	0.2263	0.0090		0.0000
ecggf	0.7370	0.2735	0.0432	-0.1293	0.0221		0.0000
ecrose	0.0229	0.2146	0.0212	0.0684	0.0262		0.0000
ecgnb	0.1407	0.0560	0.2861	-0.1085	-0.0396		0.0000
ecibys	0.1421	0.0963	-0.0251	-0.0269	-0.0026		0.0000
ecrm	0.4565	0.3971	0.3665	0.3739	-0.0132		0.0000

Source: Authors Elaboration.

**Table 5** Principal Components Variables Analysis

This table reflects the information data that contains each of the economic competitiveness index variables.

For the first component, the most important variable is the exports of goods and services as a percentage of GDP (ecbys), which provides the 42% of information data. GDP per capita in constant prices (ecpibc), is the second variable in importance to the component 1. Provides the 40% of information data. This results help us to pose a preliminary conclusion: to improve economic competitiveness, is necessary increase the exports of goods and services and the GDP per capita, in that order.

### Rankings

We present multidimensional indices results. We adjusted the outcomes to analyze data rankings in a comparative way. With that purpose we standardized according to the formula:

$$AVCP = (VCP - \text{Min VCP} / \text{Max VCP} - \text{Min VCP}) / 100 \quad (1)$$

Where:

AVCP = Principal Component Adjusted Value

VCP = Principal Component Value

Min VCP = Principal Component Minimum Value

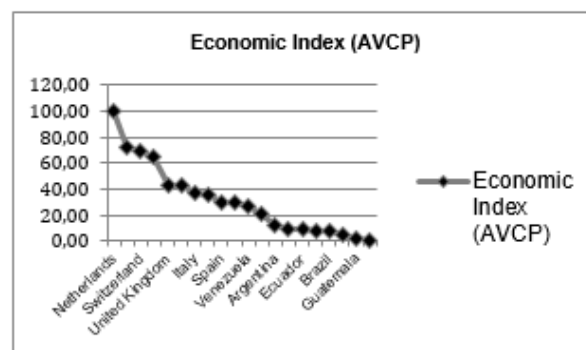
Max VCP = Principal Component Maximum Value

Rank	Country	Economic Index (AVCP)
1	Netherlands	100.00
2	Sweden	71.72
3	Switzerland	70.06
4	Germany	64.56
5	United Kingdom	43.79
6	France	43.26
7	Italy	36.95
8	Russia	36.32
9	Spain	29.56
10	Chile	29.43
11	Venezuela	26.63
12	Mexico	20.88
13	Argentina	12.40
14	Turkey	10.14
15	Ecuador	10.09
16	Dominican Rep.	8.35
17	Brazil	7.77
18	Peru	5.68
19	Guatemala	1.76
20	Colombia	0.00

Source: Authors elaboration. Adjusted from original results, using the methodology of Ruiz-Porras and Hostein to analyze data rankings in a comparative way (Ruiz-Porras and Hostein, 2012).

**Table 6** Economic Competitiveness Index Ranking

The economic competitiveness index ranking shows many European countries at top levels. All developed economies defend their top position using their good economic performance. Many of top countries are big economies with industrialization and large infrastructure development. The second part of the ranking demonstrate how developing countries can improve their economic competitiveness increasing their exports and GDP per capita.



Source: Authors elaboration.

**Graphic 1** Economic Competitiveness Index Graphic Comparison

The graphic expression of the economic competitiveness index ranking, allows a comparative analysis in the same geometric plane. It shows the rank difference between countries and provides the opportunity to determine how close or far is a particular country of its economic development, in comparison with others. Onwards, we show the three top countries economic competitiveness index performance. Added to the graphic modeling, we present a description of each economic competitiveness performance using time contextualization to outline preliminary conclusions.

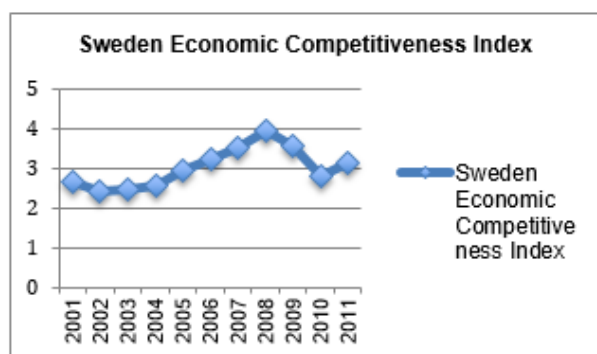


Source: Authors elaboration.

**Graphic 2** Netherlands Economic Competitiveness Index Performance



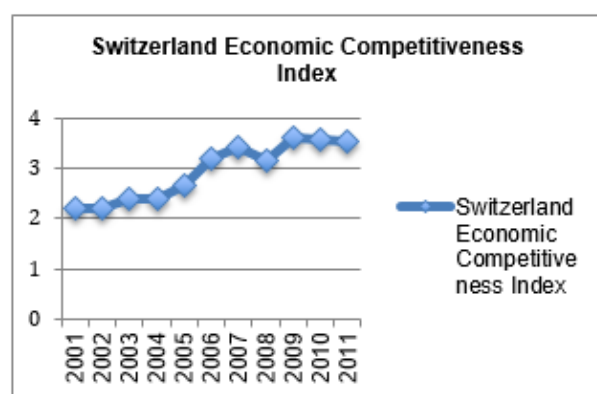
Netherlands economic competitiveness performance has increased since 2001. In 2008 and 2009 arrested its development, and even decrease, obviously as a reflection of financial crisis. It improve its performance in 2010, and for the last year, achieve its maximum level.



Source: Authors elaboration.

**Graphic 3** Sweden Economic Competitiveness Index Performance

Sweden economic competitiveness performance has increase since 2001. Sweden economic constant development decrease on the period 2009-2010, as a result of world financial crisis. For the last year, the Swedish economy has a recovery. Sweden is experimenting an improvement of its economic competitiveness, but has not get its top level, that was achieved in 2008.



Source: Authors elaboration.

**Graphic 4** Switzerland Economic Competitiveness Index Performance

Switzerland economic competitiveness performance has increase since 2001. Its constant development lowered its rate in 2008 period. Its increasing to high levels even after 2008 crisis and its largest improve corresponds to the 2009. Last couple of years, Switzerland economic competitiveness have been decreasing.

### Principal Components Analysis

According with our primary selection of variables, we use a sample of 220 observations for 20 countries (ten biggest economies from Latin-America, and ten biggest economies from Europe).

We focus on the group of variables importance levels to competitiveness indices elaboration. Our results show the component 1 equation and variables relative weights on competitiveness determination for each dimension. In this case and because of the large number of variables, we use just the three most important variables. This analysis also allows outlining the conclusions section. Next table focuses on the group of variables importance levels to economic competitiveness index elaboration.

Variables	Equation
ecebys (0.4196)	Comp1= (0.4196) ecebys + (0.4026) ecpibc + (0.3923) eecom...
ecpibc (0.4026)	
eecom (0.3923)	

Source: Authors elaboration.

**Table 7** Principal Components Variables Weights Analysis and Equation

### Conclusions

The results of our study shows that the most important variable to economic competitiveness determination is exports of goods and services as a percentage of GDP.

According to our competitiveness index results, if a country wants to improve its competitiveness at the economic dimension, it should increase its exports of goods and services, its GDP per capita, and develop its commercial sector. In this order of importance.

These aspects strengthen the idea which indicates that international trade and commerce produces growth and national development. Many of those ideas have been established by traditional economists like Adam Smith (Smith, 1776), or in more recent studies, in the context of the Heckscher-Ohlin model (Blaug, 1997).

In relation to future research, we consider that is necessary to develop new methods to estimate competitiveness. Whether the new methods enhance accuracy or diminish data bias, the better measurement of the phenomena would provide better basis to delineate public policy in order to achieve economic competitiveness of countries.

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