Economic Policy Uncertainty Indices for Colombia

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Abstract:

In this document, the Economic Policy Uncertainty Index (EPU) is developed using the methodology proposed by Baker et al. (2016). The index has been built based on the frequency of coverage provided by the newspaper *El Tiempo*. It was found that in periods of political tension and economic instability the uncertainty rose, with the index having its peaks during the proposal for a political referendum in 2000, the bankruptcy of Lehman Brothers, the debt ceiling crisis in the United States, the Brexit referendum and the plebiscite on the peace agreement.

1. Introduction:

The uncertainty has increased its academic importance as one of the factors that explains the behavior of the economy, given its relevance in the economic recession and political nervousness in recent years. It has been identified that in emerging countries there is greater uncertainty because, as mentioned by Bloom (2014), in these countries there is a non-diversified economy, the goods they focus on have a volatile price, and there is greater political instability. The research on the behavior and effect of uncertainty have been focused in the developed nations, stopping the verification of its impact in economic variables compared to developed countries and its behavior though time.

One of the main drawbacks for the research is the difficulty in measuring uncertainty and the effect it generates on economic variables. Consequently, this economic policy uncertainty index is constructed based on the methodology by Baker et al. (2016) to explain the behavior that this has experienced in the period 2000 to the present.

2. Indices Construction:

The economic policy uncertainty index (EPU) for Colombia index reflects the frequency of articles in the newspaper *El Tiempo* that contain the terms associated with "Uncertainty".

This newspaper was chosen because it is the only newspaper that has a digital file covering the entire period measured, in addition to It, it has a daily publication, national circulation and national and international news sections.

The words of each category are the following: E: "any word that begins with" econ "." P: "Politics, politician, government, tax, reform, fiscal deficit, public debt, public spending, Congress, crisis, Bank of the Republic, Ministry of Finance, corruption, peace, conflict, subsidy." U: "Uncertainty or uncertain." (Table 1 and Table 2 provides a detailed account of the terms used in the text search). Following the research by Cerda et at. (2016) an index is constructed where the category C is included: Colombia. For the construction of the indexes, the monthly count of the news mentioning at least one word of each category is searched, then it is divided into the total monthly count of news published by the newspaper, once the entire series is obtained, the standard deviation of the data between the month of January 2000 and December 2017 is calculated, the series is normalized and adjusted so that the average of the series in this period has a value of 100, likewise, the EPU index is constructed for quarterly and annual data.

3. Economic Policy Uncertainty Index (EPU) for Colombia:

Figure 1 shows the behavior of the economic policy uncertainty index (EPU) between January 2000 and the present. It reflects that the EPU index has its peaks at times when there was a strong economic instability and political tensions. Below there is a brief description of the behavior of the EPU index obtained:

Figure 1. Monthly index of economic policy uncertainty (EPU) for Colombia 2000 -2017.
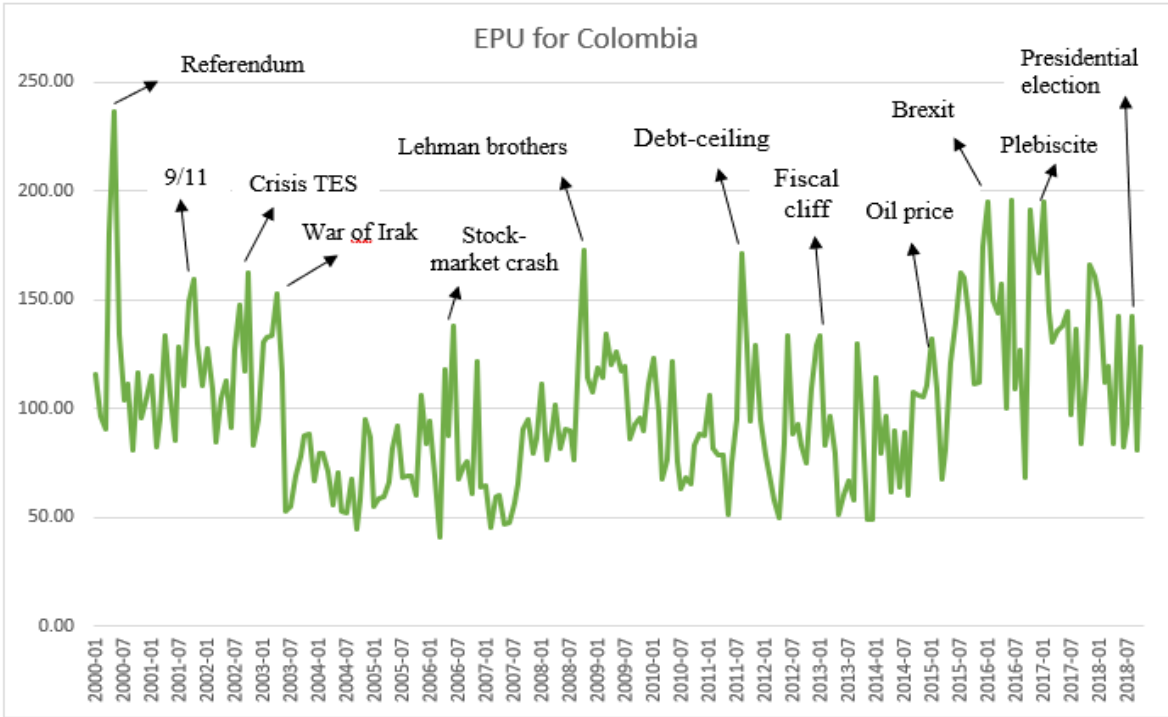
Colombia begins the 21st century with a strong political tension, to the extent that the then President Pastrana proposed a call for a referendum to carry out a political reform that included the revocation of members of the Congress, in response, the Liberal party asked for the revocation of the president and the present peace accord that had started in January 1999 with the FARC (Londoño, 2016). This political tension would lead to risk rating firms decreasing their rating in May 2000, indicating the lack of clarity to solve the economic problem.

From then on, the uncertainty would have high values due to events such as the fall of the twin towers in September 2001; the TES crisis in August 2002, when the price of Colombian bonds fell to its historic minimum caused by the electoral uncertainty in Brazil, the fear of Lula's victory reduced the investment inflow to the region and in March 2003 with the start of the Iraq war.

After these events, the Colombian economy would enter a period of upward drift, without major repercussions that would allow uncertainty to remain low from mid-2003 to April 2006, at that moment the dialogues on the future free trade agreement with the United States began and the scandal of *parapolítica*, where they relate to congressmen with the paramilitaries, had started. Conjointly, on June 12 of that year there was a fall of 10.46% in the stock market of Colombia, which would lead to an increase of the uncertainty for that month. In 2007, there was a recovery to the low uncertainty such as that prior to April 2006, that year had the greatest economic growth in Colombia for the twenty-first century period.

By the beginning of 2008, the uncertainty would arise due to the US stock market crisis in January, the Andean crisis in March 2008 and the *Yidispolítica* scandal in April; After the bankruptcy of Lehman Brothers in September 2008, there was a period of uncertainty in Colombia that lasted until mid-2009 due to several events such as: the reelection referendum proposal, the *DAS* and *Agro Ingreso Seguro* scandal, the permanent struggle between the president and the supreme Court of Justice known as "train clash", the breakdown of diplomatic relations with Venezuela in July 2009 and the economic recession for the fourth quarter of 2008 and the first half of 2009.

By the beginning of 2010, the issue of the reelection referendum and the future presidential elections would again increase the uncertainty followed by the diplomatic crisis that occurred with Venezuela over the alleged presence of the *FARC* and *ELN* in Venezuelan territory. Once these events were concluded, the uncertainty would recover from June 2010 to July 2011. For the second half of 2011 it would increase due to the crisis of the US debt ceiling and the debt crisis in the European Union. By early 2012 the uncertainty would decrease again and would stop in June due to the reform of the justice system and by the end of that year with the fiscal abyss of the United States.

For 2013, uncertainty would again recover, except for September, when uncertainty would once more arise regarding the US debt. For the second half of 2014, the drop in the price of the oil -main good and generator of an important source of government revenue- led to a rise in uncertainty. Uncertainty would increase further in mid-2015 due to various factors

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such as the closing of the border with Venezuela, the failure to comply with the fiscal rule and the rise in the interest rates of the *FED*.

For 2016 and 2017 economic and political, national and international events would cause a strong uncertainty in these two years. Amongst the national events, the most relevant were: The plebiscite for peace, which led to a polarization of the Colombian people; the tax reform in 2016; corruption scandals like *Reficar*, the "ring community", Odebrecht and the cartel *toga*; the attacks and dialogue with the *ELN*; fiscal deficit and a high inflation rate. Amongst the international events: Venezuela's economic and political crisis; the political crisis in Brazil; the victory of yes in Brexit and the fear of Europe; the presidential elections in the United States and the future possession of Donald Trump; the slowdown of China; the elections in France, the Netherlands and the United Kingdom, the first elections with the fear of a candidate of the extreme right and the latter with terrorist attacks by the Islamic state. In 2018 the uncertainty would remain with the presidential elections in May and June, besides in Latin America there were other elections in Brazil and Mexico that generated uncertainty.

Figure 2. Monthly index of economic policy uncertainty (EPU) for Colombia and the United States.
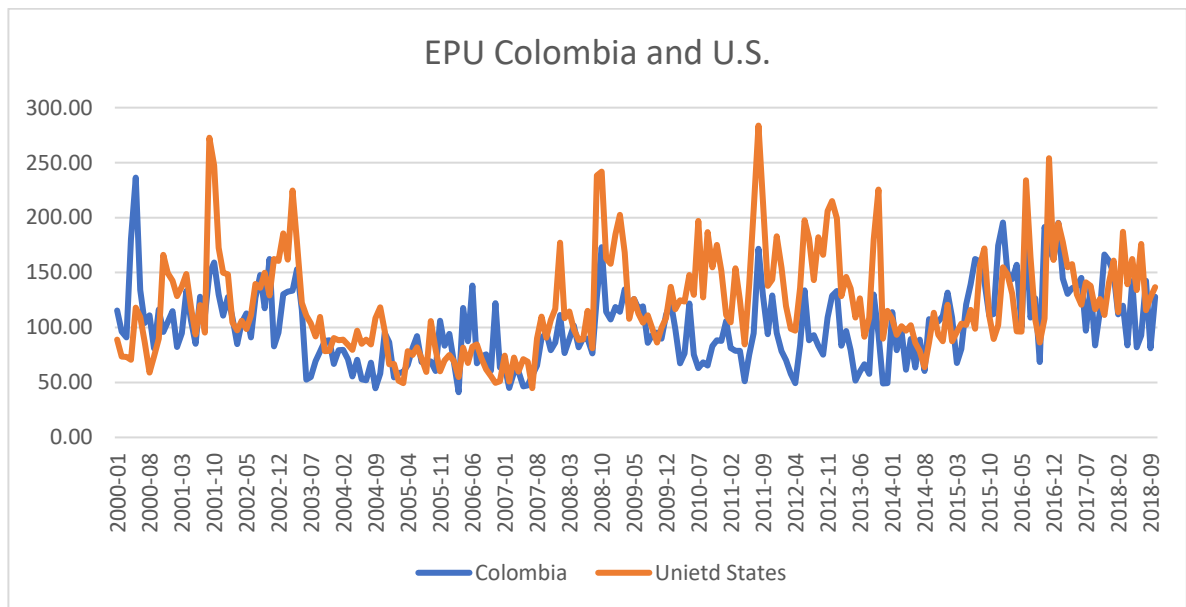
Figure 2 shows the EPU index for Colombia and the United States, it highlights the similar behavior that they have had, except when national events generated uncertainty when uncertainty in the United States was low, such as the referendum proposal 2000, the Colombian stock market crisis and the fall of oil prices in 2014. Likewise, it is observed that events that occurred in the United States had a lesser effect on the uncertainty in Colombia than in that country, such as the twin towers attack, the Iraq war, the financial crisis and the debt ceiling.

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Although Colombia has a strong relationship with the United States, the correlation is not high (0.4972), which indicates that there are conditions that increase uncertainty and distance themselves from what happens in other countries.

4. Conclusions:

The economic policy uncertainty index (EPU) for Colombia was developed for the period 2000-present, based in the methodology proposed by Baker et al. (2016); the newspaper El Tiempo is taken as reference for the construction of the index. The index has its maximum points in periods of political tension and economic instability such as the proposal for a political referendum in 2000, the crisis of the *TES*, the stock market crisis in 2006, the bankruptcy of Lehman Brothers and the plebiscite for peace.

References:

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Table 1. Keywords in English

Category	Words
Economic (E)	Any word beginning with "econ".
Policy (P)	Politics* or politician* or government* or tax* or reform* or fiscal deficit or public debt or public spending or Congress or crisis or Bank of the Republic or Ministry of Finance or corruption or peace or conflict* or subsidy.
Uncertainty (U)	Uncertainty or uncertain
Colombia (C)	Any words beginning with "Colombia".
Note: An * is included to account for words that begin with the word previous to the symbol. For instance, "tax*" include both the word tax and taxes.	

Table 2. Keywords in Spanish

Category	Words
Economic (E)	Any word beginning with "econ".
Policy (P)	Política* or político* or gobierno* or impuesto* or reforma* or déficit fiscal or deuda pública or gasto público or Congreso or crisis or Banco de la Republica or Ministerio de Hacienda or corrupción or paz or conflicto* or subsidio*.
Uncertainty (U)	Incertidumbre or incierto
Colombia (C)	Any words beginning with "Colombia".
Note: An * is included to account for words that begin with the word previous to the symbol. For instance, "tax*" include both the word tax and taxes.	