Estimating the Impact of Climatic Shocks on Credit Supply and the Probability of Default in The Bahamas (Comments)

Sharon Branch, Lavashti Dames, Nathan Rolle, Lynsey Ward, and Allan Wright

Juan Vélez[1]

[1]CEPCO
Banco de la República, Cali, Colombia

14th annual BIS Consultative Council for the Americas (CCA) Research Conference, Dec 2024

Table of Contents

Summary and general assessment

Comments

Table of Contents

Summary and general assessment

Comments

The authors seek to assess the effect of catastrophic events on

- Credit supply
- Probability of default

They do so by using data from two sources:

They rely on panel data methods to recover the effect of an additional hurricane on

The authors seek to assess the effect of catastrophic events on

- Credit supply
- Probability of default

They do so by using data from two sources:

- Quarterly Statistical Digest (Loans data)
- ND-Gains (Climate shock data)

They rely on panel data methods to recover the effect of an additional hurricane on

The authors seek to assess the effect of catastrophic events on

- Credit supply
- Probability of default

They do so by using data from two sources:

- Quarterly Statistical Digest (Loans data)
- ND-Gains (Climate shock data)

They rely on panel data methods to recover the effect of an additional hurricane on

- Credit (amount and as ratio of GDP)
- Incidence of delinquency

- Interesting and crucial topic. Especially for The Bahamas (1.5 meters above sea level!)

- Interesting and crucial topic. Especially for The Bahamas (1.5 meters above sea level!)
- Important sector that act as a multiplier of the economy

- Interesting and crucial topic. Especially for The Bahamas (1.5 meters above sea level!)
- Important sector that act as a multiplier of the economy
- The data and tools might not be adequate to achieve their goals (as stated)

Assessment

- Interesting and crucial topic. Especially for The Bahamas (1.5 meters above sea level!)
- Important sector that act as a multiplier of the economy
- The data and tools might not be adequate to achieve their goals (as stated)
- I think the current version does not do justice to the work the authors have done.

Table of Contents

Summary and general assessment

Comments

- Do you really want to assess the effect of climatic shocks on supply of credit alone?

- Do you really want to assess the effect of climatic shocks on supply of credit alone?
- I do not think that you can tell whether an observed reduction of credit is caused to a contraction of demand or a contraction of supply

- Do you really want to assess the effect of climatic shocks on supply of credit alone?
- I do not think that you can tell whether an observed reduction of credit is caused to a contraction of demand or a contraction of supply
- Is it bad if credit is rationed after a hurricane?

It is crucial to better describe the data being used because everything hinges on the data.

- Panel: what comprises the cross-sectional dimension?

Too much emphasis on arguing that The Bahamas is vulnerable could be replaced by a thorough description of the data.

It is crucial to better describe the data being used because everything hinges on the data.

- Panel: what comprises the cross-sectional dimension?
- Loans data: proportion of GDP?

Too much emphasis on arguing that The Bahamas is vulnerable could be replaced by a thorough description of the data.

It is crucial to better describe the data being used because everything hinges on the data.

- Panel: what comprises the cross-sectional dimension?
- Loans data: proportion of GDP?
- ND-Gains data: it is a very rich data set. Be explicit about what is being used.

Too much emphasis on arguing that The Bahamas is vulnerable could be replaced by a thorough description of the data.

It is crucial to better describe the data being used because everything hinges on the data.

- Panel: what comprises the cross-sectional dimension?
- Loans data: proportion of GDP?
- ND-Gains data: it is a very rich data set. Be explicit about what is being used.
- Why is data on hurricanes not directly used?

Too much emphasis on arguing that The Bahamas is vulnerable could be replaced by a thorough description of the data.

It is crucial to better describe the data being used because everything hinges on the data.

- Panel: what comprises the cross-sectional dimension?
- Loans data: proportion of GDP?
- ND-Gains data: it is a very rich data set. Be explicit about what is being used.
- Why is data on hurricanes not directly used?
- Category index (frequency and intensity): how is it constructed?

Too much emphasis on arguing that The Bahamas is vulnerable could be replaced by a thorough description of the data.

The empirical strategy could benefit from:

The empirical strategy could benefit from:

- A discussion of the possible causes of endogeneity. More risk averse people live in the islands that are less likely to be hit by hurricanes?
- Having regression tables at least in the Appendix

The empirical strategy could benefit from:

- A discussion of the possible causes of endogeneity. More risk averse people live in the islands that are less likely to be hit by hurricanes?
- Having regression tables at least in the Appendix

I do not think even the best rendition of the methodology proposed would convincingly separate supply from demand.

The empirical strategy could benefit from:

- A discussion of the possible causes of endogeneity. More risk averse people live in the islands that are less likely to be hit by hurricanes?
- Having regression tables at least in the Appendix

I do not think even the best rendition of the methodology proposed would convincingly separate supply from demand.

- Structural model?
- Demand shifters?
- A clever use of other data (do the NPL inform us about whether banks are lending more?) New versus old borrowers

Improve motivation

- Do we expect hurricanes to increase demand for loans (repairs) or to decrease it (lower expected income).

Look at impact on other characteristics of the loans

Improve motivation

- Do we expect hurricanes to increase demand for loans (repairs) or to decrease it (lower expected income).
- Do we expect supply to increase (more deposits) or to decrease (banks turn more leery and conservative)

Look at impact on other characteristics of the loans

Improve motivation

- Do we expect hurricanes to increase demand for loans (repairs) or to decrease it (lower expected income).
- Do we expect supply to increase (more deposits) or to decrease (banks turn more leery and conservative)

Look at impact on other characteristics of the loans

- Term to maturity

Improve motivation

- Do we expect hurricanes to increase demand for loans (repairs) or to decrease it (lower expected income).
- Do we expect supply to increase (more deposits) or to decrease (banks turn more leery and conservative)

Look at impact on other characteristics of the loans

- Term to maturity
- Probability of default at grant or credit score

Improve motivation

- Do we expect hurricanes to increase demand for loans (repairs) or to decrease it (lower expected income).
- Do we expect supply to increase (more deposits) or to decrease (banks turn more leery and conservative)

Look at impact on other characteristics of the loans

- Term to maturity
- Probability of default at grant or credit score
- Proportion of loans issued to inside borrowers

Improve motivation

- Do we expect hurricanes to increase demand for loans (repairs) or to decrease it (lower expected income).
- Do we expect supply to increase (more deposits) or to decrease (banks turn more leery and conservative)

Look at impact on other characteristics of the loans

- Term to maturity
- Probability of default at grant or credit score
- Proportion of loans issued to inside borrowers
- Amount

Improve motivation

- Do we expect hurricanes to increase demand for loans (repairs) or to decrease it (lower expected income).
- Do we expect supply to increase (more deposits) or to decrease (banks turn more leery and conservative)

Look at impact on other characteristics of the loans

- Term to maturity
- Probability of default at grant or credit score
- Proportion of loans issued to inside borrowers
- Amount
- Other ways of credit rationing (maybe micro loans fall but secured loans increase)

- Keep in mind that credit markets are selection markets and so marginal cost depends on the demand. More people demanding increases cost as more likely it is that default will increase.

Empirical strategy III

- Keep in mind that credit markets are selection markets and so marginal cost depends on the demand. More people demanding increases cost as more likely it is that default will increase.
- Instruments that shift demand without affecting marginal costs won't work
  - E.g, the local share of children affects cereal demand but is unlikely to affect the marginal costs of production

Empirical strategy III

- Keep in mind that credit markets are selection markets and so marginal cost depends on the demand. More people demanding increases cost as more likely it is that default will increase.
- Instruments that shift demand without affecting marginal costs won't work
  - E.g, the local share of children affects cereal demand but is unlikely to affect the marginal costs of production
- In markets with adverse selection such instruments also correlate with marginal costs, violating the exclusion restriction.
  - E.g., firm growth rates, assets, and the age of the CEO correlate with borrower-specific marginal cost changes.