

Evaluating the Kisan Credit Card Scheme

Work in Progress

Areendam Chanda

Louisiana State University

December 2011

Background Information on KCC

- Introduced in 1998-99 as a flexible means of short term credit for farmers
- Designed to replace the rigid web of multi agency/multi need based demand loan system that was proving to be ineffective.
- Not really a credit card but supposed to have the same concept (revolving credit with a 12 month repayment)
- Renewable for three years
- Money can be used for crop loans, asset maintenance, consumption loans, has a term credit facility and an insurance scheme.
- Provided by Regional Rural Banks, Cooperative Banks, and Commercial Banks in sums ranging from Rs.35K to One Lakh. Security requirements go up obviously as amount increases.

Current Status

- Has become the principal tool for financial inclusion in the agricultural sector.

Current Status

- Has become the principal tool for financial inclusion in the agricultural sector.
- By 2004, almost all crop loans were being routed via KCC.

Current Status

- Has become the principal tool for financial inclusion in the agricultural sector.
- By 2004, almost all crop loans were being routed via KCC.
- States are seeking to achieve 100% coverage for farmers (Lakshwadeep has achieved 100%).

Current Status

- Has become the principal tool for financial inclusion in the agricultural sector.
- By 2004, almost all crop loans were being routed via KCC.
- States are seeking to achieve 100% coverage for farmers (Lakshwadeep has achieved 100%).
- 80 million cards issued so far (debatable)

- Local Bank Official indicated default rate is “zero”.

- Local Bank Official indicated default rate is “zero” .
- Market test for demand - Bribes in rural Bihar (2008)

- Local Bank Official indicated default rate is “zero” .
- Market test for demand - Bribes in rural Bihar (2008)
- Too easy to get?- Report of cards being forged in Bihar (2011)

- Local Bank Official indicated default rate is “zero” .
- Market test for demand - Bribes in rural Bihar (2008)
- Too easy to get?- Report of cards being forged in Bihar (2011)
- Reports of same family holding multiple cards through various banks (is this illegal?)

- Local Bank Official indicated default rate is “zero” .
- Market test for demand - Bribes in rural Bihar (2008)
- Too easy to get?- Report of cards being forged in Bihar (2011)
- Reports of same family holding multiple cards through various banks (is this illegal?)
- NABARD (2010) finds that people who get this card, overwhelmingly renew it.

Existing Studies

- Two major survey based studies. NCAER (2005) and NABARD (2010)

Existing Studies

- Two major survey based studies. NCAER (2005) and NABARD (2010)
- Both excluded Bihar but included many other states

Existing Studies

- Two major survey based studies. NCAER (2005) and NABARD (2010)
- Both excluded Bihar but included many other states
- NABARD study shows 78% satisfaction rate but notes that application procedures is still very cumbersome

Existing Studies

- Two major survey based studies. NCAER (2005) and NABARD (2010)
- Both excluded Bihar but included many other states
- NABARD study shows 78% satisfaction rate but notes that application procedures is still very cumbersome
 - Most farmers end up borrowing entire sums once or twice a year

Existing Studies

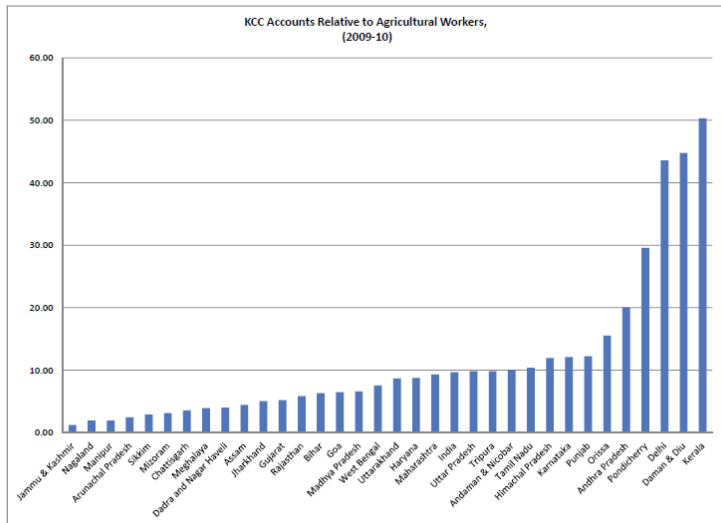
- Two major survey based studies. NCAER (2005) and NABARD (2010)
- Both excluded Bihar but included many other states
- NABARD study shows 78% satisfaction rate but notes that application procedures is still very cumbersome
 - Most farmers end up borrowing entire sums once or twice a year
 - Indeed major benefits in terms of flexibility offered.

Existing Studies

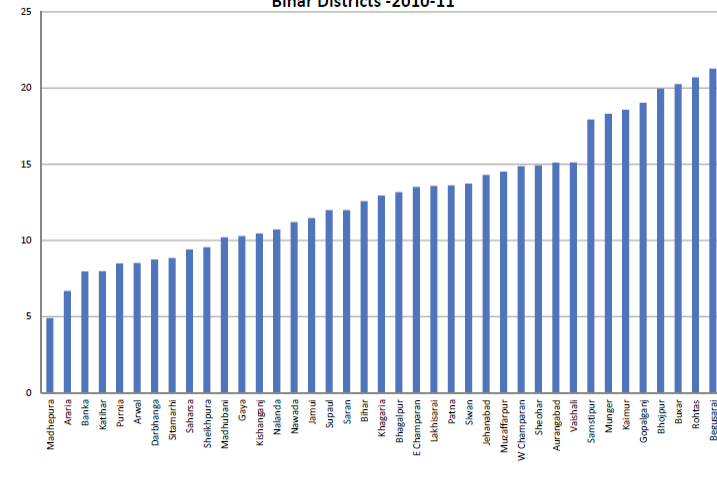
- Two major survey based studies. NCAER (2005) and NABARD (2010)
- Both excluded Bihar but included many other states
- NABARD study shows 78% satisfaction rate but notes that application procedures is still very cumbersome
 - Most farmers end up borrowing entire sums once or twice a year
 - Indeed major benefits in terms of flexibility offered.
 - However, it is still very much branch banking.

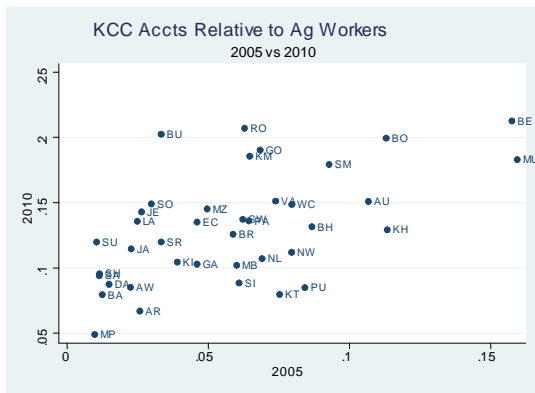
Objectives of this project:

- To examine the macro-regional effects
 - Growth in State per Capita Incomes
 - Growth in Agricultural Productivity (Output per Worker)
 - Growth in Yield per Hectare
 - Effect on Poverty (if I can get the data)
- Regional Coverage
 - Study state level differences (ie Bihar vs. India)
 - Study District Level heterogeneity within Bihar
- Various periods of Study (2001-2010, **2005-2010**) using OLS, IV and Fixed Effects(?)



**KCC Account Holders Relative to Agricultural Workers
Bihar Districts -2010-11**





Bank Composition of KCC Credit (Rupee Share)

	Comm Banks	RRB Banks	Coop Banks
2005			
India	0.39	0.18	0.42
Bihar	0.68	0.32	0.00
Andhra Pradesh	0.78	0.13	0.09
2009			
India	0.69	0.18	0.13
Bihar	0.63	0.35	0.02
Andhra Pradesh	0.88	0.12	0.00

KCC Credit Relative to Other Credit by Commercial Banks

	Relative to	
	Agriculture	All Credit
2005		
India	0.36	0.04
Bihar	0.43	0.10
Andhra Pradesh	0.42	0.09
2009		
India	0.50	0.07
Bihar	0.98	0.27
Andhra Pradesh	0.56	0.12

Results for Today

- Effects of KCC on Medium Run Economic Growth across States (2005-2009)

Results for Today

- Effects of KCC on Medium Run Economic Growth across States (2005-2009)
 - Look at Effects on Real State Domestic Product per Capita and Agricultural Output per Worker

Results for Today

- Effects of KCC on Medium Run Economic Growth across States (2005-2009)
 - Look at Effects on Real State Domestic Product per Capita and Agricultural Output per Worker
 - Look if States with initially higher productivity benefitted more.

Results for Today

- Effects of KCC on Medium Run Economic Growth across States (2005-2009)
 - Look at Effects on Real State Domestic Product per Capita and Agricultural Output per Worker
 - Look if States with initially higher productivity benefitted more.
 - Control for initial income, composition of output, and overall financial market development.

Results for Today

- Effects of KCC on Medium Run Economic Growth across States (2005-2009)
 - Look at Effects on Real State Domestic Product per Capita and Agricultural Output per Worker
 - Look if States with initially higher productivity benefitted more.
 - Control for initial income, composition of output, and overall financial market development.
- Examine Growth in KCC over 2005-2010 within Bihar.

Results for Today

- Effects of KCC on Medium Run Economic Growth across States (2005-2009)
 - Look at Effects on Real State Domestic Product per Capita and Agricultural Output per Worker
 - Look if States with initially higher productivity benefitted more.
 - Control for initial income, composition of output, and overall financial market development.
- Examine Growth in KCC over 2005-2010 within Bihar.
 - See if initial output composition, initial financial market development, and initial incomes played a role.

Summary Statistics¹

Variable	Mean	Std Dev	Min	Max	Bihar
RSNDP pc Growth	0.067	0.02	0.03	0.11	0.08
Agricultural SNDP per Worker Growth	0.03	0.03	-0.04	0.14	0.02
KCC/SNDP	0.07	0.04	0.01	0.15	0.07
Com Bank Credit/SNDP	0.08	0.06	-0.003	0.34	0.04
2005 Agr. SNDP/SNDP	0.17	0.06	0.01	0.32	0.24

¹Values are 2005/06-2009/10 averages unless noted otherwise.

State Growth Regressions

(Dependent Variable: Growth in RSNDP per capita,
2005/6-09/10)

Variables	(1)	(2)	(3)
RSNDP per cap, 2005	0.00307		
	(0.0103)		
Agr. RSNDP per Worker, 2005		-0.0236**	-0.0512**
		(0.00873)	(0.0209)
KCC Credit to GDP Ratio (2005-09)	0.137*	-0.136	3.340*
	(0.0768)	(0.142)	(1.762)
Comm. Bank Credit to GDP Ratio (2005-09)	0.0430	0.103	0.00424
	(0.0522)	(0.0763)	(0.00466)
Share of Agriculture in SNDP	-0.114*	-0.141	-0.179**
	(0.0608)	(0.0925)	(0.0770)
KCC Credit to GDP Ratio × Agr. RSNDP per Worker, 2005			0.558*
			(0.294)
Constant	0.0921	-0.0903*	-0.247**
	(0.0550)	(0.0455)	(0.115)
Observations	29	29	29
R-squared	0.421	0.247	0.310

Growth in KCC Across Districts in Bihar (2004-10)

	Growth in KCC	Growth in Crop Loan
	Accts (2004-10)	Share (2004-10)
	(1)	(2)
KCC Accts per	-15.43***	
Agricultural Worker, 2004	(2.179)	
Crop Loan Share, 2004		-1.050***
		(0.126)
Real GDP pc, 2004	-0.0941	-0.170
	(0.266)	(0.198)
Agricultural Share, 2004	-0.758	0.534
	(0.808)	(0.592)
Loan to GDP ratio, 2004	-2.587	-1.256
	(1.822)	(1.097)
Constant	3.284	0.850
	(2.493)	(1.714)
Observations	38	38
R-squared	0.731	0.656

Future Work

- Deal with Problems of Endogeneity

Future Work

- Deal with Problems of Endogeneity
 - Use Rural Bank Branches per capita from 1999/2000 (Burgess and Pande (2005)) (17)

Future Work

- Deal with Problems of Endogeneity
 - Use Rural Bank Branches per capita from 1999/2000 (Burgess and Pande (2005)) (17)
 - 2004-07 were the years of Big Push on KCC by RBI. Focus on those years?

Future Work

- Deal with Problems of Endogeneity
 - Use Rural Bank Branches per capita from 1999/2000 (Burgess and Pande (2005)) (17)
 - 2004-07 were the years of Big Push on KCC by RBI. Focus on those years?
- Additional Variables of Interest

Future Work

- Deal with Problems of Endogeneity
 - Use Rural Bank Branches per capita from 1999/2000 (Burgess and Pande (2005)) (17)
 - 2004-07 were the years of Big Push on KCC by RBI. Focus on those years?
- Additional Variables of Interest
 - Dependent Variables- Yield per Hectare, Poverty Rates

Future Work

- Deal with Problems of Endogeneity
 - Use Rural Bank Branches per capita from 1999/2000 (Burgess and Pande (2005)) (17)
 - 2004-07 were the years of Big Push on KCC by RBI. Focus on those years?
- Additional Variables of Interest
 - Dependent Variables- Yield per Hectare, Poverty Rates
 - Independent Variables - Rainfall, Education, Net Sown Area,,Anything else?

Future Work

- Deal with Problems of Endogeneity
 - Use Rural Bank Branches per capita from 1999/2000 (Burgess and Pande (2005)) (17)
 - 2004-07 were the years of Big Push on KCC by RBI. Focus on those years?
- Additional Variables of Interest
 - Dependent Variables- Yield per Hectare, Poverty Rates
 - Independent Variables - Rainfall, Education, Net Sown Area,,Anything else?
- Other Possible Projects

Future Work

- Deal with Problems of Endogeneity
 - Use Rural Bank Branches per capita from 1999/2000 (Burgess and Pande (2005)) (17)
 - 2004-07 were the years of Big Push on KCC by RBI. Focus on those years?
- Additional Variables of Interest
 - Dependent Variables- Yield per Hectare, Poverty Rates
 - Independent Variables - Rainfall, Education, Net Sown Area,,Anything else?
- Other Possible Projects
 - Ground Level Survey for Bihar?

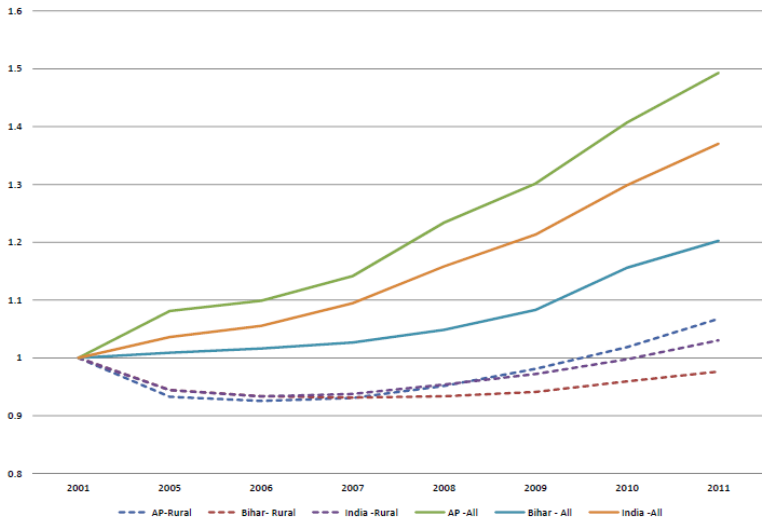
Future Work

- Deal with Problems of Endogeneity
 - Use Rural Bank Branches per capita from 1999/2000 (Burgess and Pande (2005)) (17)
 - 2004-07 were the years of Big Push on KCC by RBI. Focus on those years?
- Additional Variables of Interest
 - Dependent Variables- Yield per Hectare, Poverty Rates
 - Independent Variables - Rainfall, Education, Net Sown Area,,Anything else?
- Other Possible Projects
 - Ground Level Survey for Bihar?
 - What were the efficiency gains to Banks?

Future Work

- Deal with Problems of Endogeneity
 - Use Rural Bank Branches per capita from 1999/2000 (Burgess and Pande (2005)) (17)
 - 2004-07 were the years of Big Push on KCC by RBI. Focus on those years?
- Additional Variables of Interest
 - Dependent Variables- Yield per Hectare, Poverty Rates
 - Independent Variables - Rainfall, Education, Net Sown Area,,Anything else?
- Other Possible Projects
 - Ground Level Survey for Bihar?
 - What were the efficiency gains to Banks?
- Thank you

Commercial Bank Branches



distno	Distname	discode
37	Araria	AR
9	Arwal	AW
11	Aurangabad	AU
31	Banka	BA
24	Begusarai	BE
30	Bhagalpur	BH
3	Bhojpur	BO
0	Bihar	BR
4	Buxar	BU
21	Darbhanga	DA
16	East Champaran	EC
7	Gaya	GA
14	Gopalganj	GO
28	Jamui	JA
8	Jehanabad	JE
6	Kaimur	KM
38	Katihar	KT
29	Khagaria	KH
36	Kishanganj	KI
27	Lakhisarai	LA

distno	Distname	discode
34	Madhepura	MP
22	Madhubani	MB
25	Munger	MU
17	Muzaffarpur	MZ
2	Nalanda	NL
10	Nawada	NW
1	Patna	PA
35	Purnia	PU
5	Rohtas	RO
32	Saharsa	SA
23	Samstipur	SM
12	Saran	SR
26	Sheikhpura	SH
19	Sheohar	SO
18	Sitamarhi	SI
13	Siwan	SW
33	Supaul	SU
20	Vaishali	VA
15	West Champ	WC