Improved Cook Stove Adoption & Impact Assessment

a proposed methodology

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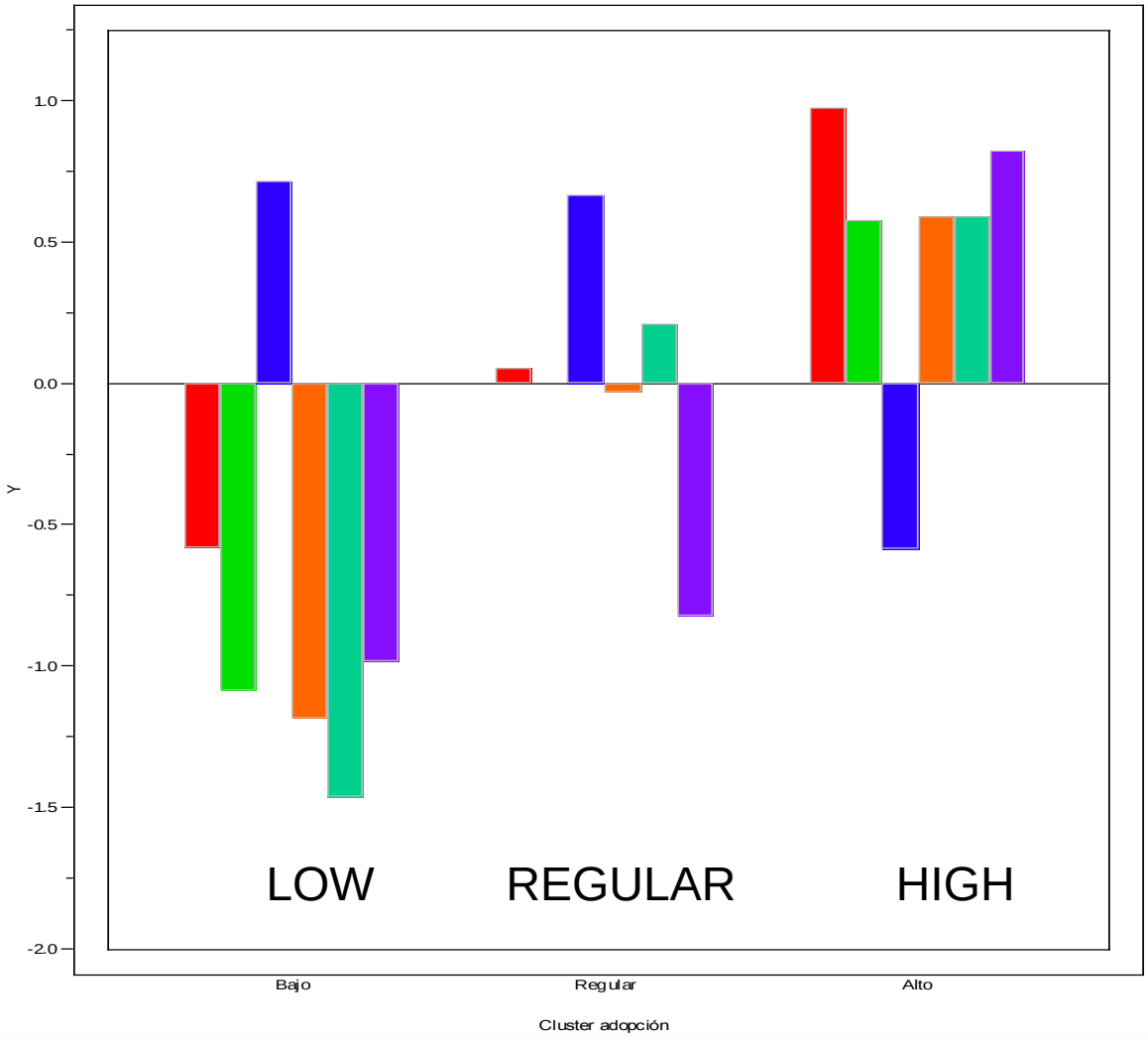
Introduction

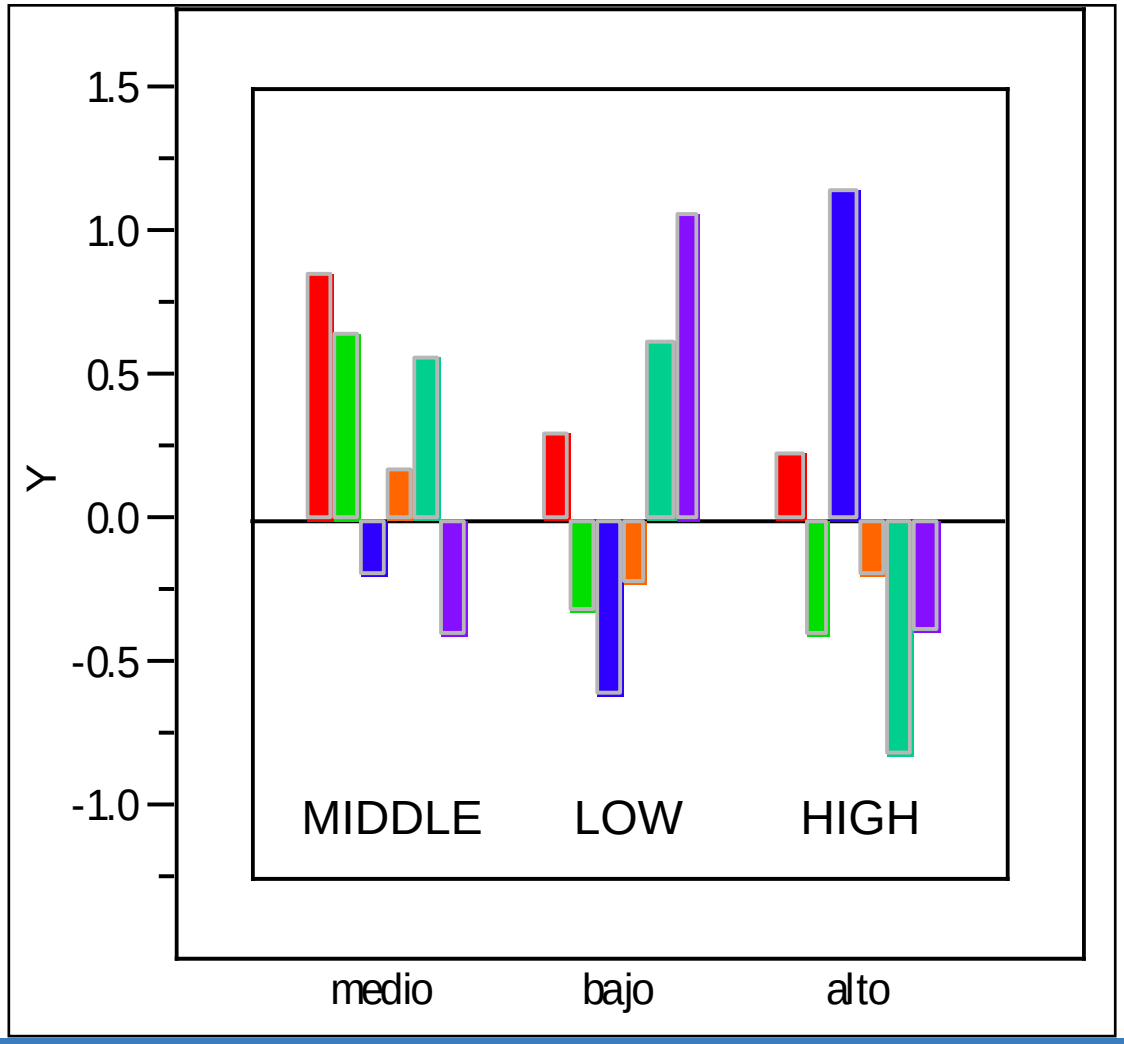
- ICS were developed to address problems associated with the use of the open fire
- However, sometimes the ICS does not substitute the open fire; both coexist simultaneously
- It is important to reach a common understanding when talking about adoption rates and to know the real impact of ICS programs, in order to recover the trust in this technology

Adoption Cluster



- FREQUENCY OF ICS USE
- LEVEL OF USER'S SATISFACTION WITH THE ICS
- CHANGES IN THE ICS
- USER'S PERCEPTION OF THE ICS BENEFITS
- WOULD THE USER BUY THE ICS AGAIN?
- ICS CONDITIONS

Impact Cluster



- NUMBER OF TECHNOLOGIES IN USE
- USER'S SATISFACTION WITH THE OPEN FIRE
- FREQUENCY OF ICS USE
- FREQUENCY OF LPG USE
- FREQUENCY OF OPEN FIRE USE
- CHANGES TO THE ICS

Adoption & Impact Indexes

Adoption index, a function of:

ICS usage frequency (40%*)
ICS condition (30%)
Level of satisfaction with ICS (20%)
Interest in replacing it with a similar ICS at the end of its lifetime (10%)

Impact index, a function of:

Usage of open fire (20%)
ICS usage (20%)
Usage of LPG (10%)
Level of satisfaction with open fire (10%)
Positive change in open fire location (20%)
Perceived health improvements (10%)
Number of technologies used for cooking (10%)

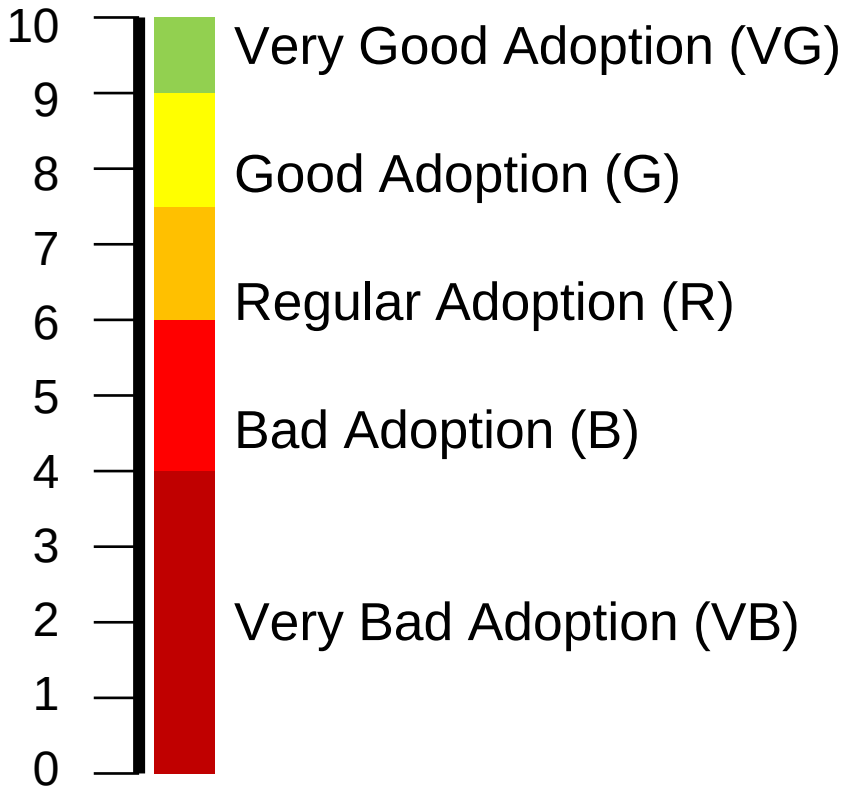
Adoption Index(AI)

AI= FUI (4) + CSC (3) + LSI (2) + BIA (1)

VALUE	FREQUENCY OF USE OF THE ICS (FUI)	ICS CONDITIONS (CSC)	LEVEL OF USER'S SATISFACTION WITH THE ICS (LSI)	WOULD THE USER BUY THE ICS AGAIN? (BIA)
1.0	EVERY DAY	Perfect with good maintenance	VERY SATISFIED	YES
0.8	4 to 6 days per week	Working with low maintenance	SATISFIED	
0.5	2 or 3 days per week	With modifications that do not alter its function	REGULARLY SATISFIED	MAY BE
0.2	Once per week or less	With modifications that alter its function	LOW SATISFACTION	
0.0	NEVER	Destroyed or in disuse	UNSATISFIED	NO

Adoption Index(AI)

AI= FUI (4) + CSC (3) + LSI (2) + BIA (1)



The adoption index will be determined for each user according to the weight of each of the associated variables.

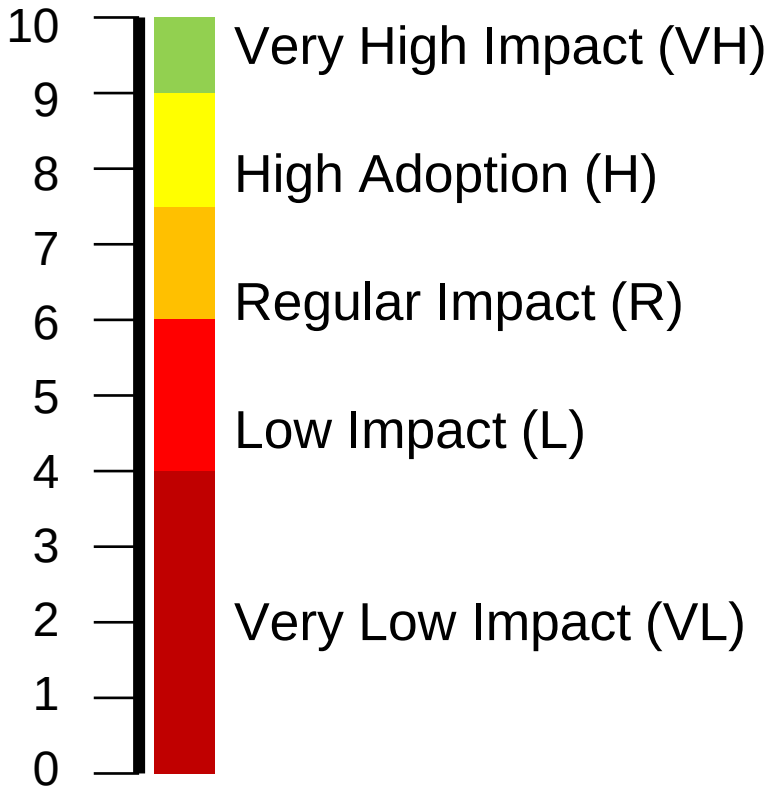
Impact Index (II)

$$II = 2\,FUO + 2\,FUI + FUG + LSO + 2\,CO + CH + NT$$

VARIABLE/VALUE	0.0	0.2	0.5	0.8	1.0
FREQUENCY OF USE OF THE OPEN FIRE (FUO)	EVERY DAY	4 TO 6 DAYS PER WEEK	2 OR 3 DAYS PER WEEK	ONCE PER WEEK	NEVER OR ALMOST NEVER
FREQUENCY OF USE OF THE ICS (FUI)	NEVER OR ALMOST NEVER	ONCE PER WEEK	2 OR 3 DAYS PER WEEK	2 OR 3 DAYS PER WEEK	EVERY DAY
FREQUENCY OF USE OF LPG (FUG)	EVERY DAY	4 TO 6 DAYS PER WEEK	2 OR 3 DAYS PER WEEK	ONCE PER WEEK	NEVER OR ALMOST NEVER
LEVEL OF USER SATISFACTION WITH THE OPEN FIRE (LSO)	VERY SATISFIED	SATISFIED	REGULARLY SATISFIED	LOW SATISFACTION	UNSATISFIED
CHANGES IN THE LOCATION OF THE OPEN FIRE (CO)	OPEN FIRE IN THE KITCHEN	OPEN FIRE OUTSIDE THE HOUSE WITHOUT CHANGES	OPEN FIRE UNDER A CELING AND BEFORE IN THE KITCHEN	OPEN FIRE OUTSIDE AND BEFORE IN THE KITCHEN	OPEN FIRE NO LONGER USED
HEALTH CHANGES PERCEIVED BY THE USER (CH)	NO CHANGES PERCEIVED		ONE CHANGE PERCEIVED	TWO CHANGES PERCEIVED	MANY CHANGES PERCEIVED
NUMBER OF TECHNOLOGIES IN USE (NT)	USES ONLY OPEN FIRE	USES OPEN FIRE AND LPG	USES ICS, LPG AND OPEN FIRE	USES ICS AND LPG	ONLY USES ICS

Impact Index (II)

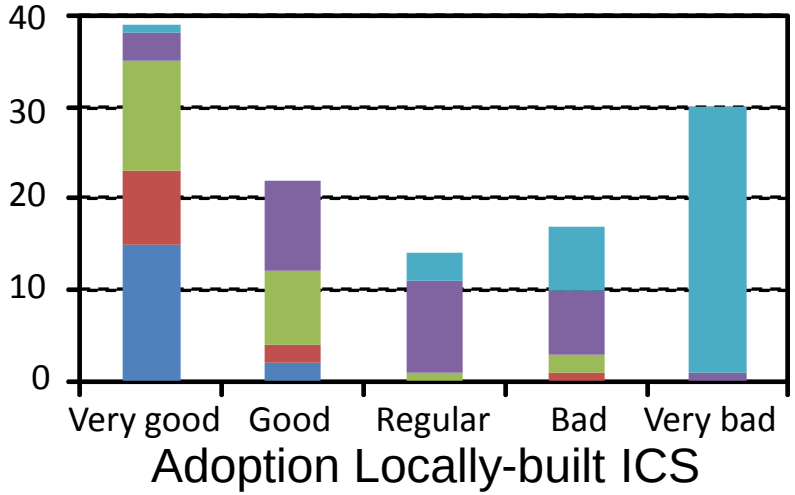
$$II = 2\,FUO + 2\,FUI + FUG + LSO + 2\,CO + CH + NT$$

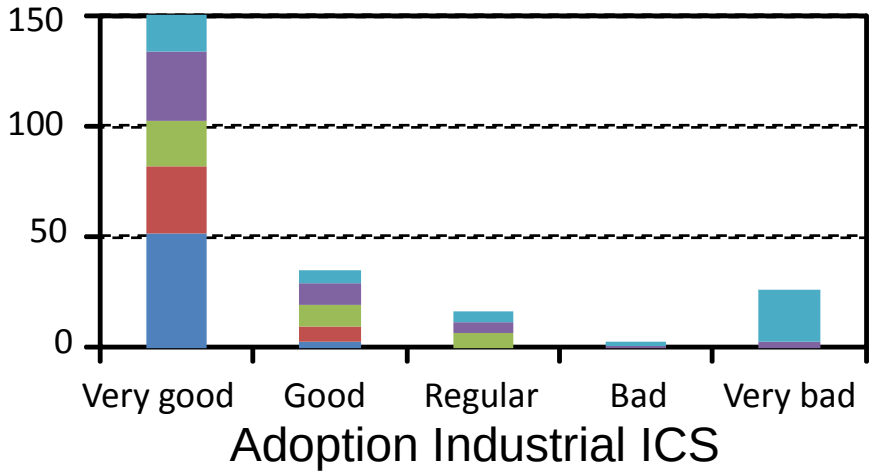


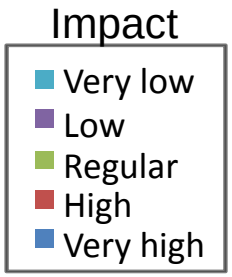
The impact index will be determined for each user according to the weight of each of the associated variables.

Impact-adoption Indexes

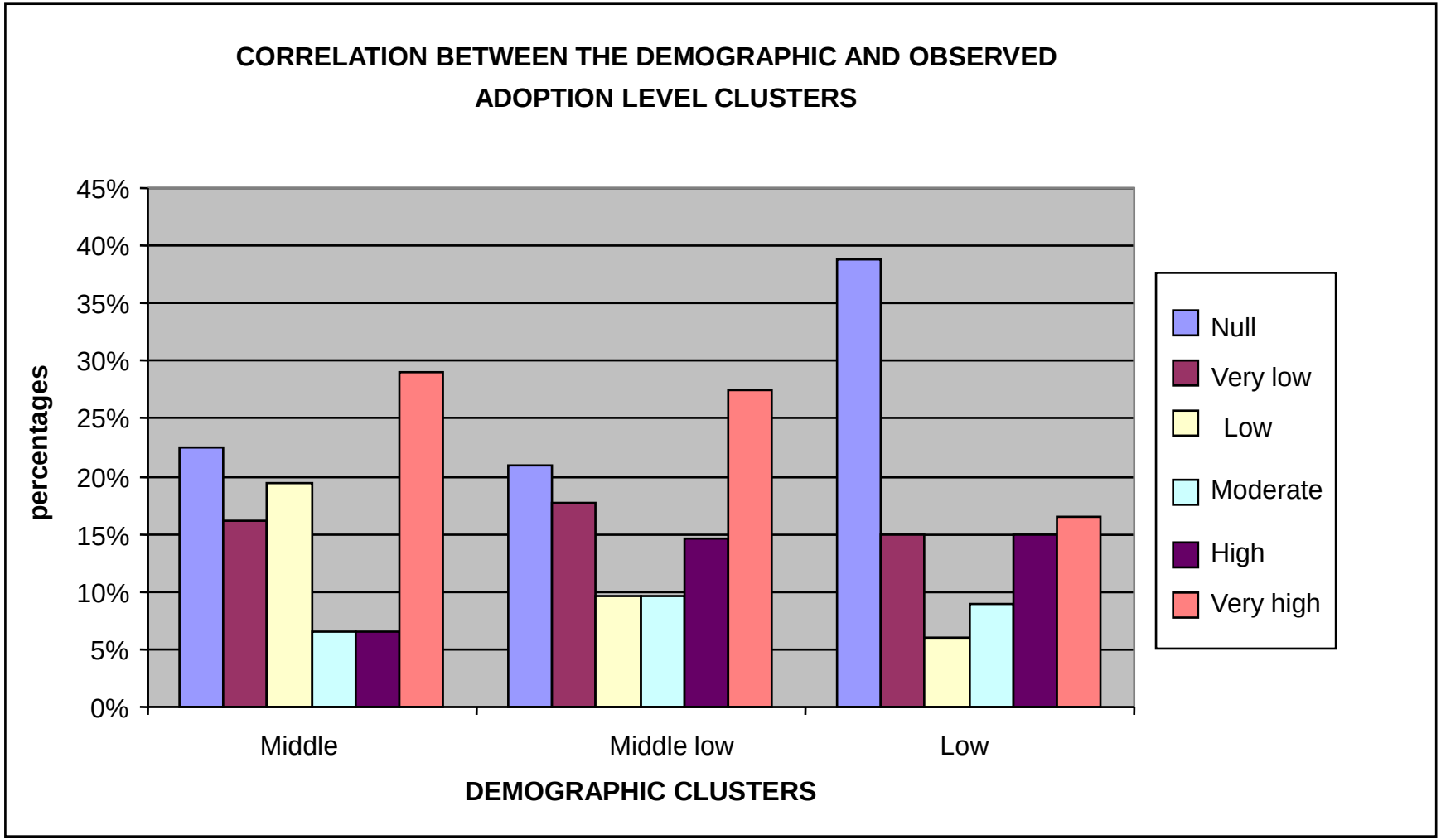
Mexico case study







Adoption Levels - Mexico Case



Conclusions

- **It is important to incorporate the adoption and impact assessments as part of the certification process of a technology.**
- **To do this we need to reach an agreement in terms of what we understand by a good adoption and a good impact.**
- **This is important for:**
  - Guiding government and donor policies and programs
  - Fostering the commercialization of ICS
  - Accessing performance-based financial resources, such as carbon credits


THANK YOU