

What characteristics drive fire managers to make a decision

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Intro

- Information has value
- 2200 wildfires and burned 36524 acres each year
- Survey only includes fire management relative people
- Endogenous and exogenous factors for decision

Hypothesis

- People have different education level may use different level information
- People may use less information during wildfire happening

Literature

- Idea is based on David R. Just(2002)
- Just(2002) collected data in four different commodity systems
- Frisvold(2013) examined that producers' characteristic
- Freebairn(2002) estimated mainly the benefits
- We only chosen fire managers this job
- Introduce community may affected people

Data

- Reached 477, 206 valid. Response rate is 43.2%
- Websites, education, job, experience
- Using dummy Variables for each category

Table 1.

	Population	Sample
Forest Service	49.5%	47.6%
Bureau of Land Management	15.9%	13.1%
Bureau of Indian Affairs	12.2%	10.7%
AZ Department of Forestry & Fire Management	7.8%	9.7%
National Park Service	5.0%	5.3%
NM Forestry Division	2.9%	3.9%
Fish & Wildlife Service	2.7%	4.4%
Tribal Agencies	1.9%	1.5%
NOAA	1.5%	2.4%
AZ Department of Environmental Quality	0.6%	1.5%

Agency	Age	Experience	Role	Education	Dispatch center
C1_Forest service	C3_ less than 30	C4_0-4 years	C5_Agency administrator	C6_High school graduate	AZ-ADC
C1_BLM	C3_30-39	C4_5-9 years	C5_Fire Manager(Fuels and fire)	C6_Some college	AZ-FDC
C1_Bureau of Indian Affairs	C3_40-49	C4_10-14 years	C5_Fire Manager, Suppression	C6_College Graduate	AZ-PHC
C1_National Park Service	C3_50-59	C4_15-19 years	C5_Other	C6_Masters/Professional degree	AZ-PDC
C1_Arizona Department of Forestry and Fire Management	C3_60 and more	C4_20-29 years		C6_Doctoral degree	AZ-SDC
C1_New Mexico Forestry Division		C4_30 and more years			AZ-TDC
C1_Other					AZ-WDC
C1_NOAA					NM-ADC
C1_Arizona Department of Environmental Quality					NM-ABC
					NM-SFC
					NM-SDC
					NM-TDC
					Other

Model

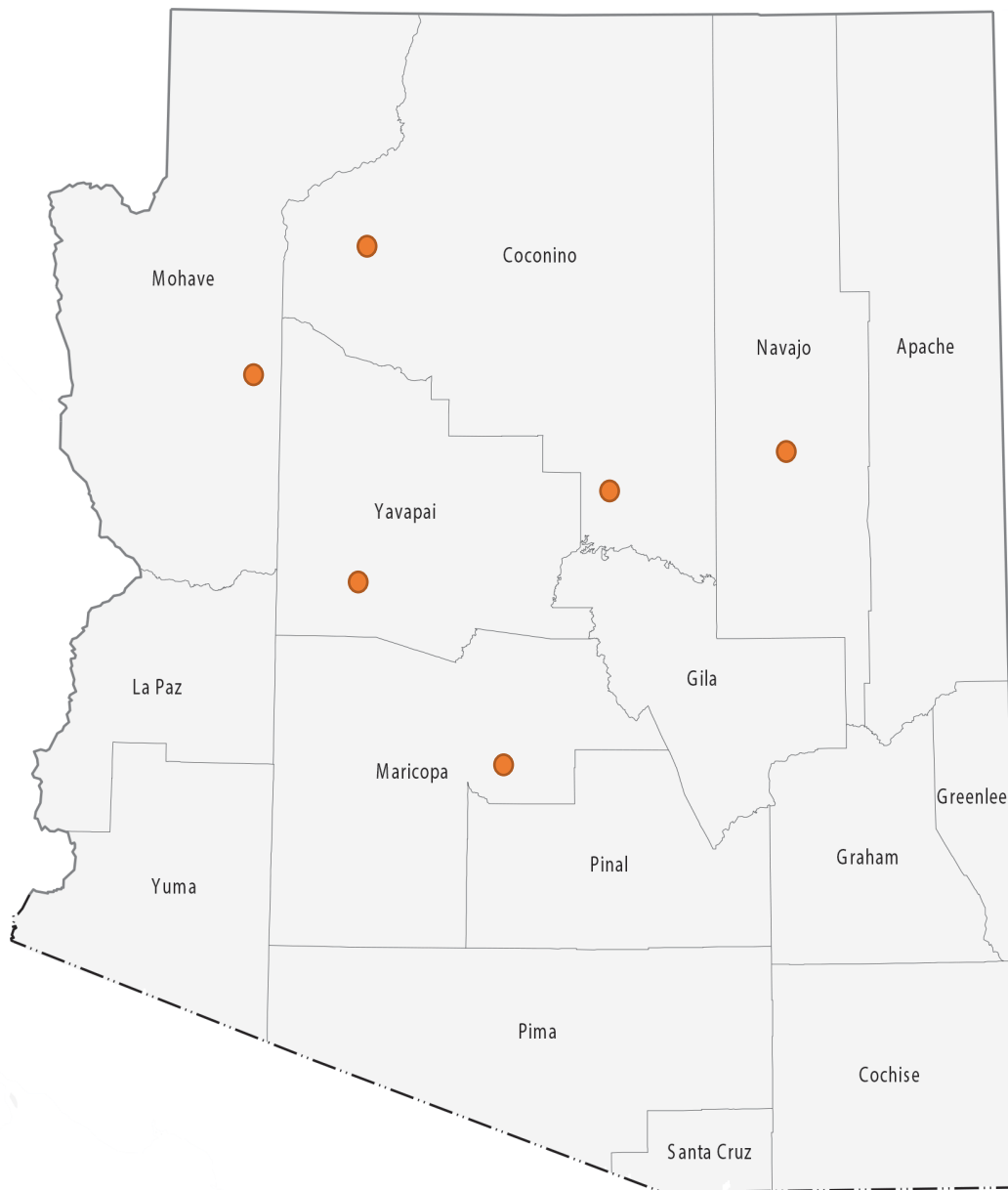
TotalSources

$$\begin{aligned} &= \beta_0 + \beta_1 \text{During} + \beta_2 \text{TotalDecisions} + \beta_3 \text{Agency} \\ &+ \beta_4 \text{Age} + \beta_5 \text{Experience} + \beta_6 \text{Role} \\ &+ \beta_7 \text{Education} + \beta_8 \text{Dispatch} + \text{error} \end{aligned}$$

TotalSource: how much sources they use when firing

During: during fire is 1, prior fire is 0

TotalDecisions: how to control fire



Results

Conclusion