

## Default Question Block

**Informed Consent to Participate in  
“Describing local community acceptance with discrete choice experiments”**

**Introduction**

This study seeks to understand what kind of mining project people prefer in their community, if a new mining project is to start in their community. The overarching goal is to use discrete choice modeling to provide better community consultation during mine design and planning and project execution. Overall, this research should lead to more sustainable mines where quantitative community feedback is included in mine planning choices. Understanding this is important to develop good community acceptance models that engineers can use to estimate how the local community will react to mine designs alternatives.

**Procedures**

You will be asked to complete a two part online survey. In Part 1, you will be asked to answer some basic demographic questions about yourself. In the second part, you are required to make a choice, about a hypothetical new mine opening in your community. The questionnaire consists of 22 questions and will take approximately 15 minutes or less. This questionnaire will be conducted with an online Qualtrics-created survey.

**Risks/Discomforts**

Risks are minimal for involvement in this study. However, you may feel uncomfortable when asked to disclose certain information about yourself. Since we are not collecting personal information, risk of breaching your confidentiality is low.

**Benefits**

There are no direct benefits for participants. However, it is hoped that through your participation, researchers will learn more about which factors are important in making a choice of preferred mine development alternatives. This knowledge will help engineers design more acceptable mines to produce the products we all use.

**Confidentiality**

All data obtained from participants will be kept confidential and will only be reported in an aggregate format (by reporting only combined results and never reporting individual ones). All questionnaires will be concealed, and no one other than the primary investigator and research assistants listed below will have access to them. The data collected will be stored in the HIPPA-compliant, Qualtrics-secure database until it has been deleted by the primary investigator.

**Compensation**

Each respondent will then be paid by the survey service (e.g. Qualtrics) for participation.

**Participation**

Participation in this research study is completely voluntary. You have the right to withdraw at anytime or refuse to participate entirely without repercussions. If you desire to withdraw, please close your internet browser or navigate away from this page.

**Questions about the Research**

If you should have any questions about this research project, please feel free to contact Ms. Sisi Que at 573-341-6051 (sq3g3@mst.edu) or her faculty advisor, Dr. Kwame Awuah-Offei at 573-341-6438 (kwamea@mst.edu)

**Questions about your Rights as Research Participants**

For additional information regarding human participation in research, please feel free to contact the Missouri University of Science & Technology Campus IRB Office at (573) 341-4305.

I have read, understood, and printed a copy of, the above consent form and desire, of my own free will, to participate in this study.

- Yes
- No

## Demographic block

**Q1. What is your zip code?****Q2. What is your gender?**

- Male
- Female
- Prefer not to answer

**Have you ever used a computer?**

- Yes
- No

**Q3. How old are you?**

- 18-24
- 25-34
- 35-54
- 55-64
- 65 or over
- Prefer not to answer

**Q4. What is the highest level of education you have completed?**

- Less than High School
- High School / GED
- Some College, vocational, or 2 year college degree
- Bachelor's degree and higher
- Prefer not to answer

**Q5. What is your combined annual household income?**

- Below \$20,000
- \$20,000 - \$39,999
- \$40,000 - \$59,999
- \$60,000 or more
- Prefer not to answer

**Q6. Do you have any children (under the age of 18) ?**

- Yes
- No

☾ Prefer not to answer

## Introduction Block



**Instructions:** If a new mining project was to start near Salt Lake City, it would likely affect you and the community in many different ways.

The objective of this survey is **to understand what kind of mining project you prefer** by varying the impacts (better or worse) of all project characteristics.

In the survey, you will be presented with several possible combinations of impacts and mine characteristics. You will then be asked to **choose your preferred alternative from the three options available**. Impacts will be color coded to help you quickly understand how they might affect the community. Impacts **colored yellow represent current conditions** in Salt Lake **or the impact of a similar mine in the area**. Impacts **colored red are worse than the current conditions** and those **colored green are better than current conditions**.

Shown below are 16 project impacts or mine characteristics classified into four major categories. **For each set of options, assume all the other characteristics have the same impacts for all choices. This activity will involve making choices such as whether an increase in one dimension (e.g: jobs) is worth an increase in another (e.g: crime).**

### Economic:

1. Job opportunities
2. Income increase (for all local residents)
3. Increase in housing costs
4. Labor shortage for other business

### Environmental:

1. Noise pollution
2. Water pollution
3. Air pollution
4. Land pollution

### Social:

1. **Population increase**
2. **Infrastructure improvement (transportation, education, human serves, internet)**
3. **Traffic increase**
4. **Crime increase**

**Management and other:**

1. **Permit approval decision making mechanism**
2. **Availability of independent and transparent information on potential impacts of mine**
3. **Mine buffer (distance of your home from mine)**
4. **Mine life**



**This page contains a sample problem.**

The following pages will contain questions regarding a hypothetical mining project coming to Salt Lake City. Each page will contain a table with several different options you can choose for this hypothetical mine. For example, look at this table:

**Column Definitions:**

- **Job Opportunities** - New full time jobs created in Salt Lake as a result of the mine
- **Water Pollution** - Water pollution from mining operations
- **Permit Approval Decision Making Mechanism** – The process used by local, state, and federal government employees to approve the mine’s permit application
- **Population Increase** – Annual population growth

**A new mine will be opened near Salt Lake. Carefully consider each of the following options. Suppose all other unknown conditions/characteristics are the same, which option would you choose?**

	Job Opportunities	Water Pollution	Permit Approval Decision Making Mechanism	Population Increase

<b>Option A</b>	<b>600 people employed directly by the mine</b>	<b>Same as similar mine in the area</b>	<b>Final decision by Government agency after significant public input</b>	<b>4% annually</b>
<b>Option B</b>	<b>300 people employed directly by the mine</b>	<b>Same as similar mine in the area</b>	<b>Final decision by Government agency after negotiating with local representatives</b>	<b>2% annually</b>
<b>Option C</b>	<b>900 people employed directly by the mine</b>	<b>Less than similar mine in the area</b>	<b>Final decision by Government agency after significant public input</b>	<b>6% annually</b>

So, for this example, you are asked to consider that a hypothetical mine is coming to your community. There are three options listed above that describe possible changes to your community when the mining project begins. For example, "Option A" in the table above would offer 600 jobs for the community, same water pollution as a similar mine in the area, the mine permit will approved by government agency after significant public input, and increase the population of the community by 4%, annually. You are being asked to read through all three options and select which option you would prefer.

Please set aside a block of time (approximately 15 minutes) to complete this task without disruption or distraction. Please also take this survey in an area where you will not be distracted.

Click the arrow >> below to begin the survey.

#### Block 1

**In this section, you will be asked to choose which option you most prefer out of the three options provided. Each option will vary based on four factors and each of the factors can take on one of three different levels.**

#### **Factor Definitions:**

- **Job Opportunities** - New full time jobs created in Salt Lake as a result of the mine
- **Water Pollution** - Water pollution from mining operations
- **Permit Approval Decision Making Mechanism** – The process used by local, state, and federal government employees to approve the mine's permit application
- **Population Increase** – Annual population growth

#### **Factor 1: Job opportunities**

- 300 people employed directly by the mine**
- 600 people employed directly by the mine**
- 900 people employed directly by the mine**

#### **Factor 2: Water pollution**

- Less than similar mine in the area**
- Same as similar mine in the area**
- More than similar mine in the area**

#### **Factor 3: Permit approval decision making mechanism**

- Final decision solely by Government agency**
- Final decision by Government agency after significant public input**
- Final decision by Government agency after negotiating with local representatives**

#### **Factor 4: Population increase**

- 2% annually**
- 4% annually**
- 6% annually**

**A new mine will be opened near Salt Lake. Carefully consider each of the following options. Suppose all other unknown conditions/characteristics are the same, which option would you choose?**

Block 1 Question 1	Job opportunities	Water pollution	Permit approval decision making mechanism	Population increase
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<b>Option A</b>	<b>600 people employed directly by the mine</b>	<b>Same as similar mine in the area</b>	<b>Final decision by Government agency after significant public input</b>	<b>4% annually</b>
<b>Option B</b>	<b>300 people employed directly by the mine</b>	<b>Same as similar mine in the area</b>	<b>Final decision by Government agency after negotiating with local representatives</b>	<b>2% annually</b>
<b>Option C</b>	<b>900 people employed directly by the mine</b>	<b>Less than similar mine in the area</b>	<b>Final decision by Government agency after significant public input</b>	<b>6% annually</b>

- Option A
- Option B
- Option C

**A new mine will be opened near Salt Lake. Carefully consider each of the following options. Suppose all other unknown conditions/characteristics are the same, which option would you choose?**

Block 1 Question 2	Job opportunities	Water pollution	Permit approval decision making mechanism	Population increase
<b>Option A</b>	<b>600 people employed directly by the mine</b>	<b>Same as similar mine in the area</b>	<b>Final decision by Government agency after significant public input</b>	<b>4% annually</b>
<b>Option B</b>	<b>600 people employed directly by the mine</b>	<b>Less than similar mine in the area</b>	<b>Final decision by Government agency after negotiating with local representatives</b>	<b>2% annually</b>
<b>Option C</b>	<b>900 people employed directly by the mine</b>	<b>Same as similar mine in the area</b>	<b>Final decision solely by Government agency</b>	<b>4% annually</b>

- Option A
- Option B
- Option C

**A new mine will be opened near Salt Lake. Carefully consider each of the following options. Suppose all other unknown conditions/characteristics are the same, which option would you choose?**

Block 1 Question 3	Job opportunities	Water pollution	Permit approval decision making mechanism	Population increase
<b>Option A</b>	<b>600 people employed directly by the mine</b>	<b>Same as similar mine in the area</b>	<b>Final decision by Government agency after significant public input</b>	<b>4% annually</b>
<b>Option B</b>	<b>300 people employed directly by the mine</b>	<b>Same as similar mine in the area</b>	<b>Final decision solely by Government agency</b>	<b>2% annually</b>
<b>Option C</b>	<b>900 people employed directly by the mine</b>	<b>More than similar mine in the area</b>	<b>Final decision by Government agency after negotiating with local representatives</b>	<b>6% annually</b>

- Option A
- Option B
- Option C

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## Block 2

In this section, you will be asked to choose which option you most prefer out of the three options provided. Each option will vary based on four factors and each of the factors can take on one of three different levels.

### Factor Definitions:

- **Income increase** – Income increases in Salt Lake as a result of the mining jobs
- **Air pollution** – Air pollution from mining operations
- **Availability of independent and transparent information on potential impacts of mine** – Whether there is independent and transparent information on potential impacts of the mine or not
- **Crime increase** – Increase in Salt Lake crime rate

#### Factor 1: Income increase

(1) + \$100 per month

(2) + \$300 per month

(3) + \$500 per month

#### Factor 2: Air pollution

(1) Less than similar mine in the area

(2) Same as similar mine in the area

(3) More than similar mine in the area

#### Factor 3: Availability of independent and transparent information on potential impacts of mine

(1) Information reported by mining company only

(2) Information reported/verified by government agency

(3) Information reported/verified by third party (e.g. non-profit or independent expert)

#### Factor 4: Crime increase

(1) Lower than current rate

(2) Same as current rate

(3) Higher than current rate

A new mine will be opened near Salt Lake. Carefully consider each of the following options. Suppose all other unknown conditions/characteristics are the same, which option would you choose?

Block 2 Question 1	Income increase (for all local residents)	Air pollution	Independent and transparent information	Crime increase
<b>Option A</b>	<b>+\$300 per month</b>	<b>Same as similar mine in the area</b>	<b>Information reported/verified by government agency</b>	<b>Same as current rate</b>

<b>Option B</b>	<b>+100 per month</b>	<b>Same as similar mine in the area</b>	<b>Information reported/verified by third party (e.g. non-profit or independent expert)</b>	<b>Lower than current rate</b>
<b>Option C</b>	<b>+500 per month</b>	<b>Less than similar mine in the area</b>	<b>Information reported/verified by government agency</b>	<b>Higher than current rate</b>

- Option A
- Option B
- Option C

**A new mine will be opened near Salt Lake. Carefully consider each of the following options. Suppose all other unknown conditions/characteristics are the same, which option would you choose?**

Block 2 Question 2	Income increase (for all local residents)	Air pollution	Independent and transparent information	Crime increase
<b>Option A</b>	<b>+\$300 per month</b>	<b>Same as similar mine in the area</b>	<b>Information reported/verified by government agency</b>	<b>Same as current rate</b>
<b>Option B</b>	<b>+\$300 per month</b>	<b>Less than similar mine in the area</b>	<b>Information reported/verified by third party (e.g. non-profit or independent expert)</b>	<b>Lower than current rate</b>
<b>Option C</b>	<b>+500 per month</b>	<b>Same as similar mine in the area</b>	<b>Information reported by mining company only</b>	<b>Same as current rate</b>

- Option A
- Option B
- Option C

**A new mine will be opened near Salt Lake. Carefully consider each of the following options. Suppose all other unknown conditions/characteristics are the same, which option would you choose?**

Block 2 Question 3	Income increase (for all local residents)	Air pollution	Independent and transparent information	Crime increase
<b>Option A</b>	<b>+\$300 per month</b>	<b>Same as similar mine in the area</b>	<b>Information reported/verified by government agency</b>	<b>Same as current rate</b>
<b>Option B</b>	<b>+\$100 per month</b>	<b>Same as similar mine in the area</b>	<b>Information reported/verified by government agency</b>	<b>Lower than current rate</b>
<b>Option C</b>	<b>+500 per month</b>	<b>More than similar mine in the area</b>	<b>Information reported/verified by third party (e.g. non-profit or independent expert)</b>	<b>Higher than current rate</b>

- Option A
- Option B
- Option C



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### Block 3

In this section, you will be asked to choose which option you most prefer out of the three options provided. Each option will vary based on four factors and each of the factors can take on one of three different levels.

#### Factor Definitions:

- **Increase in housing costs** – Increase in housing costs as a result of influx of mine workers
- **Noise pollution** - Water pollution from mining operations
- **Infrastructure improvement** (transportation, education, human serves, internet) – Improvement in infrastructure due to mining activity (directly contributed by mine or through taxes paid to local government)
- **Mine buffer** (Home distance from mine) – The distance between mine and your home

#### Factor 1: Increase in housing costs

(1) 3% increase every year for 10 years

(2) 5% increase every year for 10 years

(3) 7% increase every year for 10 years

#### Factor 2: Noise pollution

(1) Less than similar mine in the area

(2) Same as similar mine in the area

(3) More than similar mine in the area

#### Factor 3: Infrastructure improvement (transportation, education, human serves, internet)

(1) Slight improvement

(2) Moderate improvement

(3) Considerable improvement

#### Factor 4: Mine buffer (Home distance from mine)

(1) 5 miles

(2) 10 miles

(3) >20 miles

A new mine will be opened near Salt Lake. Carefully consider each of the following options. Suppose all other unknown conditions/characteristics are the same, which option would you choose?

Block 3 Question	Increase in housing costs	Noise pollution	Infrastructure improvement (transportation, education, human serves, internet)	Mine buffer (home distance from mine)
Option A	7% increase every year for 10 year	More than similar mine in the area	Slight improvement	5 mile
Option B	3% increase every year for 10 year	Less than similar mine in the area	Considerable improvement	>20 mile
Option C	7% increase every year for 10 years	More than similar mine in the area	Slight improvement	5 mile

Option A

- Option B
- Option C

**A new mine will be opened near Salt Lake. Carefully consider each of the following options. Suppose all other unknown conditions/characteristics are the same, which option would you choose?**

Block 3 Question 1	Increase in housing costs	Noise pollution	Infrastructure improvement (transportation, education, human serves, internet)	Mine buffer (home distance from mine)
<b>Option A</b>	5% increase every year for 10 years	Same as similar mine in the area	Moderate improvement	10 mile
<b>Option B</b>	3% increase every year for 10 years	Same as similar mine in the area	Considerable improvement	5 mile
<b>Option C</b>	7% increase every year for 10 years	Less than similar mine in the area	Moderate improvement	>20 mile

- Option A
- Option B
- Option C

**A new mine will be opened near Salt Lake. Carefully consider each of the following options. Suppose all other unknown conditions/characteristics are the same, which option would you choose?**

Block 3 Question 2	Increase in housing costs	Noise pollution	Infrastructure improvement (transportation, education, human serves, internet)	Mine buffer (home distance from mine)
<b>Option A</b>	5% increase every year for 10 years	Same as similar mine in the area	Moderate improvement	10 mile
<b>Option B</b>	3% increase every year for 10 years	Less than similar mine in the area	Considerable improvement	5 mile
<b>Option C</b>	5% increase every year for 10 years	Same as similar mine in the area	Slightly improvement	10 mile

- Option A
- Option B
- Option C

**A new mine will be opened near Salt Lake. Carefully consider each of the following options. Suppose all other unknown conditions/characteristics are the same, which option would you choose?**

Block 3 Question 3	Increase in housing costs	Noise pollution	Infrastructure improvement (transportation, education, human serves, internet)	Mine buffer (home distance from mine)
<b>Option A</b>	5% increase every year for 10 years	Same as similar mine in the area	Moderate improvement	10 mile

<b>Option B</b>	<b>3% increase every year for 10 years</b>	<b>Same as similar mine in the area</b>	<b>Slightly improvement</b>	<b>5 mile</b>
<b>Option C</b>	<b>7% increase every year for 10 years</b>	<b>More than similar mine in the area</b>	<b>Considerable improvement</b>	<b>&gt;20 mile</b>

- Option A
- Option B
- Option C

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#### Block 4

In this section, you will be asked to choose which option you most prefer out of the three options provided. Each option will vary based on four factors and each of the factors can take on one of three different levels.

#### Factor Definitions:

- **Labor shortage for other business** – Labor shortage for other business since mining will provide additional job opportunities
- **Land pollution** - Land pollution from mining operations
- **Traffic increase** – Traffic increase as a result of mining operation (due to increased population and heavy equipment transportation to and from mine)
- **Mine life** – How long will the mine last

#### Factor 1: Labor shortage for other business

- (1) Negligible** (no noticeable effect on other businesses)
- (2) Slight** (other businesses take longer to fill vacancies but don't have to pay more)
- (3) Moderate** (other businesses take longer to fill vacancies and have to offer higher wages)

#### Factor 2: Land pollution

- (1) Less than similar mine in the area**
- (2) Same as similar mine in the area**
- (3) More than similar mine in the area**

#### Factor 3: Traffic increase

- (1) Lower than current rate**
- (2) Same as current rate**
- (3) Higher than current rate**

#### Factor 4: Mine life

- (1) 20 years**
- (2) 30 years**
- (3) 40 years**

A new mine will be opened near Salt Lake. Carefully consider each of the following options. Suppose all other unknown conditions/characteristics are the same, which option would you choose?

Block 4				
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Question 1	Labor shortage for other business	Land pollution	Traffic increase	Mine life
<b>Option A</b>	<b>Slight</b> (other businesses take longer to fill vacancies but don't have to pay more)	<b>Same as similar mine in the area</b>	<b>Same as current rate</b>	<b>30 years</b>
<b>Option B</b>	<b>Negligible</b> (no noticeable effect on other businesses)	<b>Same as similar mine in the area</b>	<b>Higher than current rate</b>	<b>20 years</b>
<b>Option C</b>	<b>Moderate</b> (other businesses take longer to fill vacancies and have to offer higher wages)	<b>Less than similar mine in the area</b>	<b>Same as current rate</b>	<b>40 years</b>

- Option A
- Option B
- Option C

**A new mine will be opened near Salt Lake. Carefully consider each of the following options. Suppose all other unknown conditions/characteristics are the same, which option would you choose?**

Block 4 Question 2	Labor shortage for other business	Land pollution	Traffic increase	Mine life
<b>Option A</b>	<b>Slight</b> (other businesses take longer to fill vacancies but don't have to pay more)	<b>Same as similar mine in the area</b>	<b>Same as current rate</b>	<b>30 years</b>
<b>Option B</b>	<b>Slight</b> (other businesses take longer to fill vacancies but don't have to pay more)	<b>Less than similar mine in the area</b>	<b>Higher than current rate</b>	<b>20 years</b>
<b>Option C</b>	<b>Moderate</b> (other businesses take longer to fill vacancies and have to offer higher wages)	<b>Same as similar mine in the area</b>	<b>Lower than current rate</b>	<b>30 years</b>

- Option A
- Option B
- Option C

**A new mine will be opened near Salt Lake. Carefully consider each of the following options. Suppose all other unknown conditions/characteristics are the same, which option would you choose?**

Block 4 Question 3	Labor shortage for other business	Land pollution	Traffic increase	Mine life
<b>Option A</b>	<b>Slight</b> (other businesses take longer to fill vacancies but don't have to pay more)	<b>Same as similar mine in the area</b>	<b>Same as current rate</b>	<b>30 years</b>
<b>Option B</b>	<b>Negligible</b> (no noticeable effect on other businesses)	<b>Same as similar mine in the area</b>	<b>Lower than current rate</b>	<b>20 years</b>
<b>Option</b>	<b>Moderate</b> (other businesses take longer to	<b>More</b>	<b>Higher</b>	

<b>C</b>	fill vacancies and have to offer higher wages)	than similar mine in the area	than current rate	40 years
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- Option A
- Option B
- Option C

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