

GTAC Mine Public Opinion Survey

Aleksei Bogdanov and Zamira Simkins, Ph.D.

University of Wisconsin-Superior

A GTAC company proposed to develop an iron ore mine along the Penokee Range in Ashland and Iron counties in northwestern Wisconsin. The proposal sparked heated debates over the potential social, economic, and environmental impacts of the mine. The company hired consultants to conduct economic and environmental impact studies of the mine, which will be reviewed by the Wisconsin Department of Natural Resources before a mining permit can be issued. Local residents and organizations continue to be apprehensive, however, and actively voice their individual concerns. Yet, no formal public opinion studies have been conducted. The primary objective of this survey was to discover and provide unbiased information about public views on the mine.

The survey was designed and carried out by an independent team of researchers at the University of Wisconsin-Superior, including Dr. Zamira Simkins, an Assistant Professor of Economics, and Aleksei Bogdanov, an undergraduate student. The survey consisted of twenty questions, five of which were mandatory, multi-part, target research questions; while the remaining questions primarily collected demographic data. The same 20 questions were given to two study groups: (1) a self-selected group of people who completed an open-to-the-public online survey, and (2) a random sample of households from Ashland and Iron counties in Wisconsin. The purpose of creating and surveying a random sample of households was to control for the selection error of the self-reported group and to collect as unbiased results as possible. Between July 16, 2013 and August 19, 2013, a total of 893 self-reported surveys were initiated, out of which 862 contained responses to all mandatory questions. In the random sample, a total of 200 households were contacted over the phone and 102 provided responses to all mandatory questions. A summary of results for each group of respondents and questions pertaining to the mine is presented below.

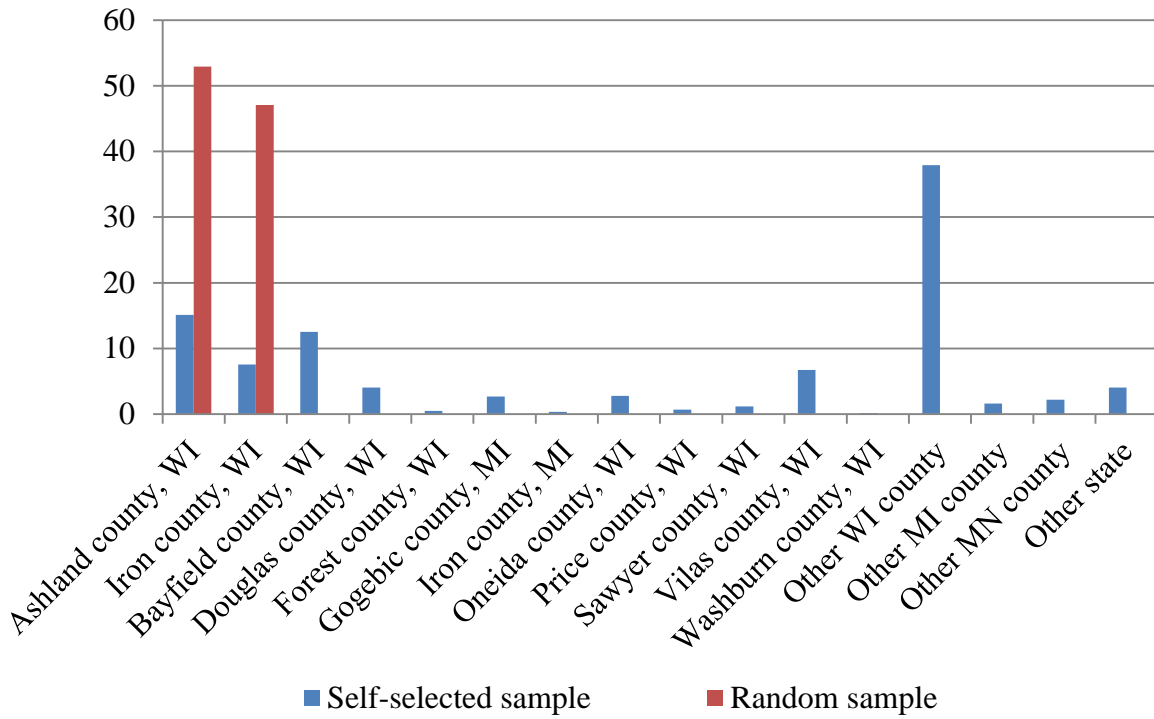
Random sample selection - methodological notes: www.infofree.com database was used to obtain a complete list of households with telephone numbers residing in Ashland and Iron counties in Wisconsin. Then a simple random sample was drawn from this list. Compared to the self-selected group, the random sample results are unbiased. However, they are subject to a sample-frame error (only households with phone numbers were surveyed), non-response error (51% response rate), and a small sample-size error. Hence, these results may not be

representative of the entire population of these counties but nevertheless are a good proxy for the public views on the mine.

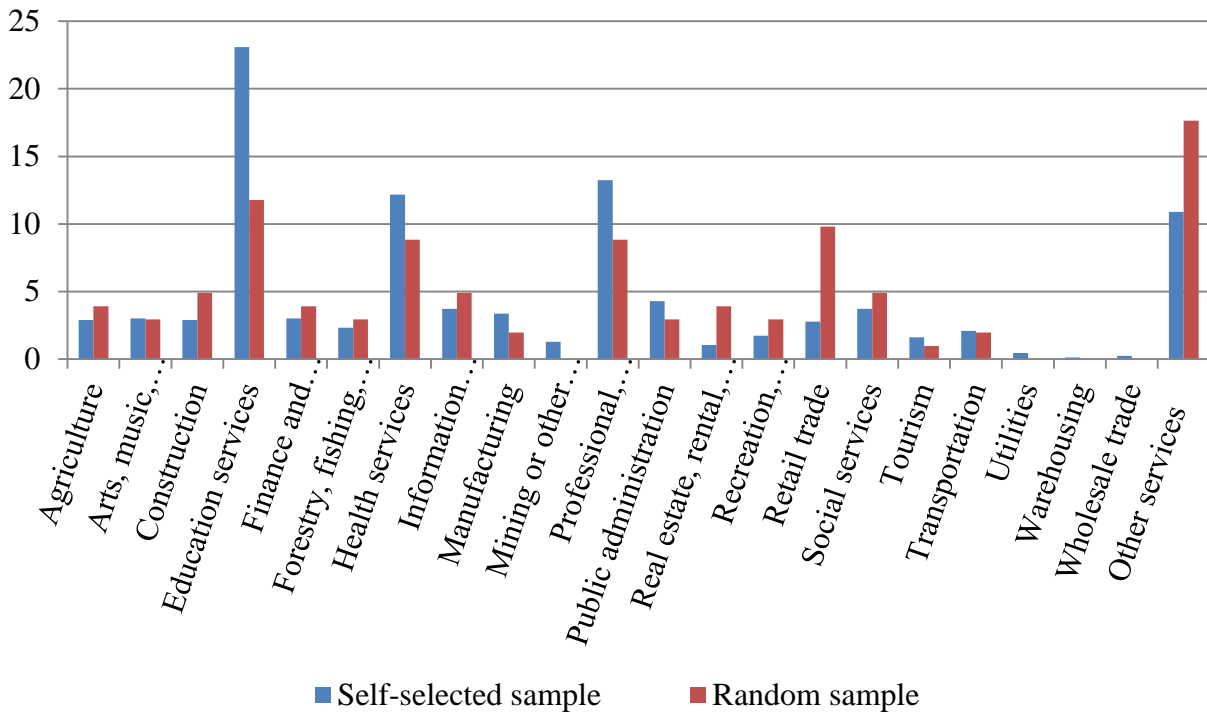
Key results:

- Respondents in both samples report that they are fairly knowledgeable about the mine: mean score of 7/10 and 7.7/10 in random and self-reported sample respectively.
- Most respondents are against the mine. According to the relatively unbiased, random sample results, 44.12% of the sample respondents “absolutely oppose” it and 17.65% “generally oppose it.”
- According to the random sample results, most respondents believe that the mine will have a “mostly negative” impact on the region’s transportation infrastructure and “only negative” impacts on the environment in general and more specifically on outdoor recreation, air quality, soil quality, surface and underground water quality, forestry and wetlands, and fish and wildlife.
- According to the random sample results, most respondents believe that the mine will have a “somewhat positive” impact on the local economy, businesses, and employment opportunities.
- When asked if they would be interested in working at the mine, 66.34% of the random sample respondents reported that they are “absolutely not” interested in working there.
- Distribution of survey respondents by industry suggests that there are very few mining workers residing in the region. This poses a question of whether the local labor supply can meet the mine’s potential demand for labor, or whether workers would need to be hired from outside the region.

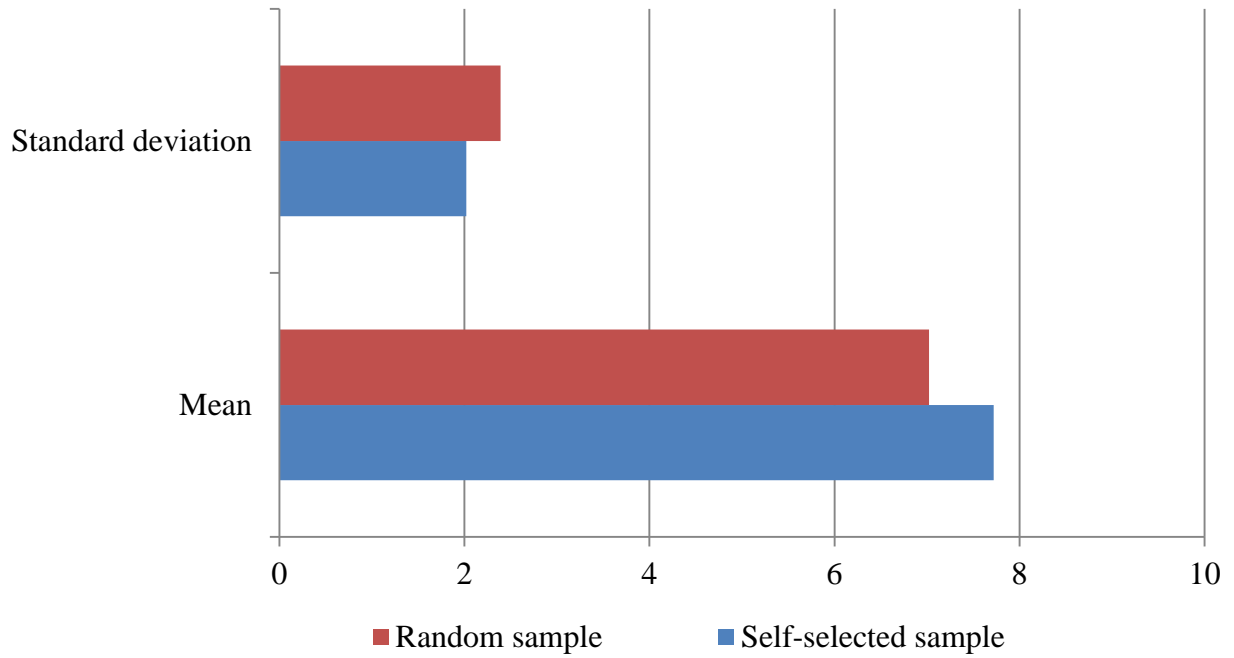
Percent of respondents by county and state



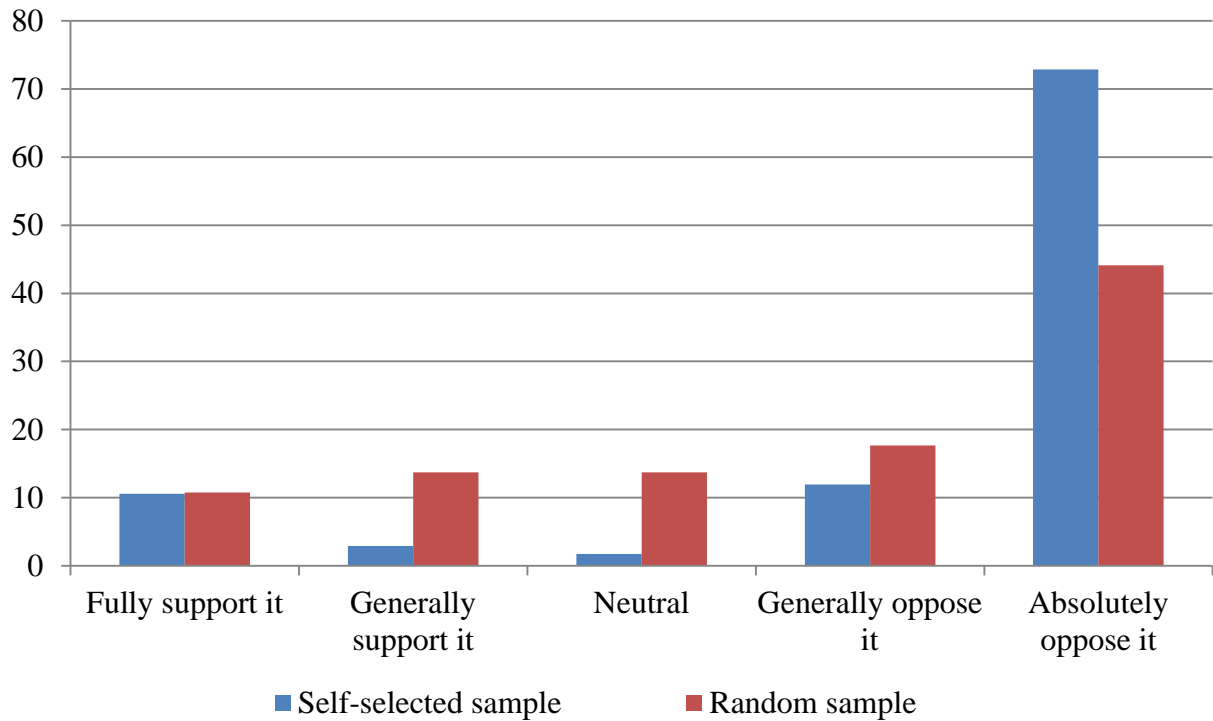
Percent of respondents by industry of employment



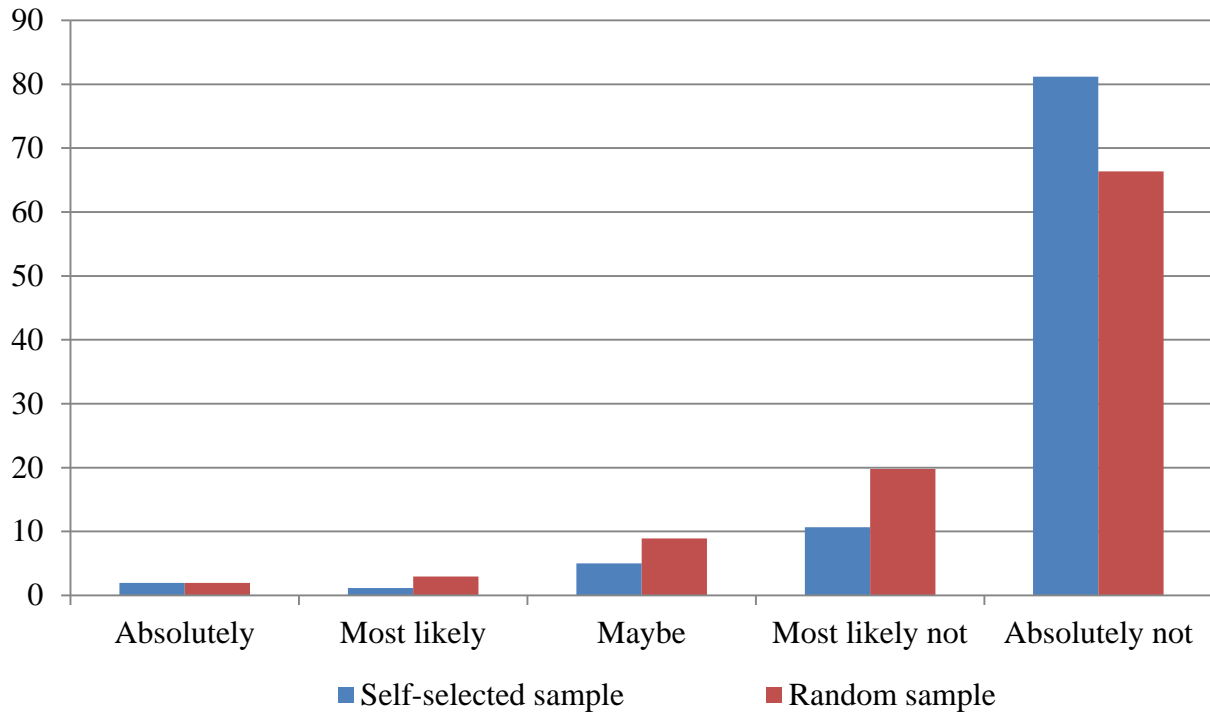
Self-rated knowledge of the mine (0 if no idea, 10 if excellent)



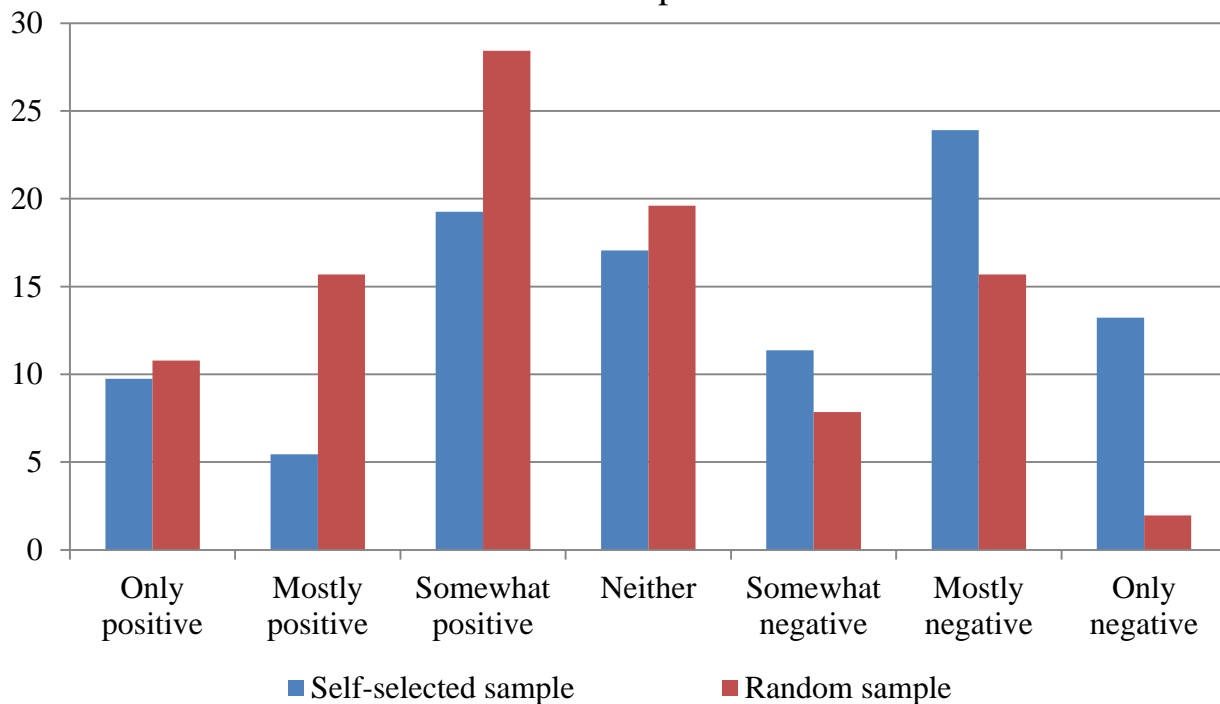
Percent of respondents by their position on the mine



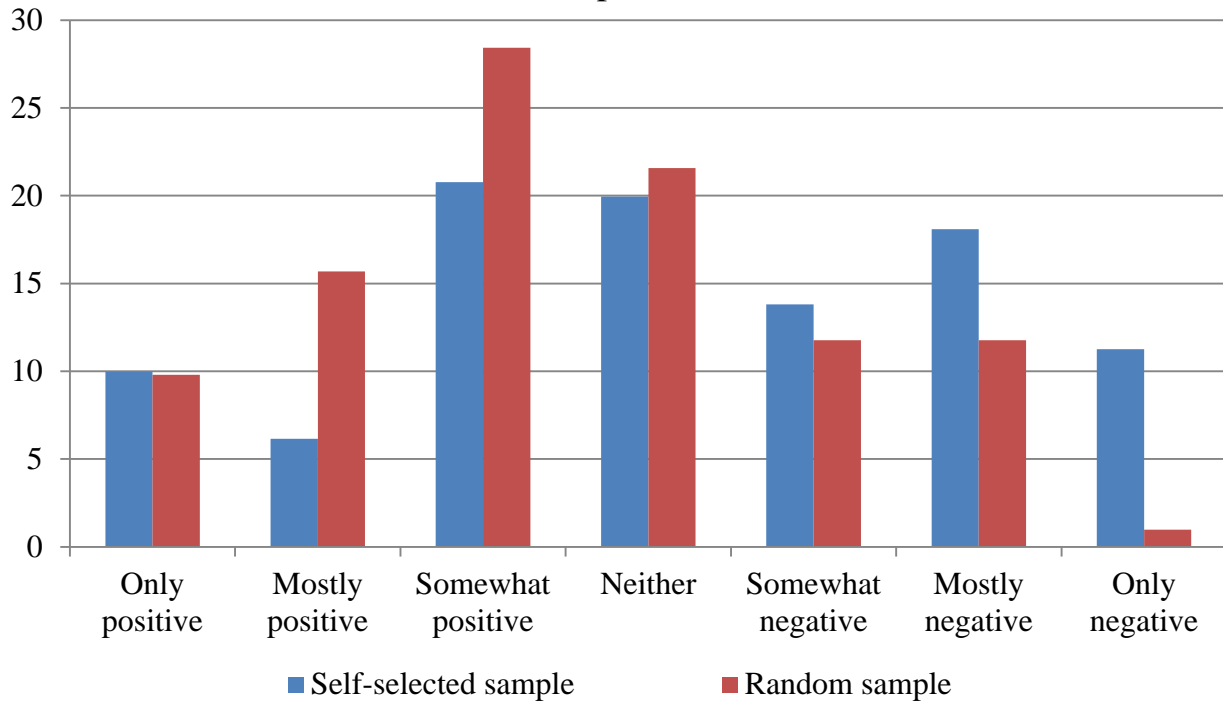
Percent of respondents rating their interest of working at the mine



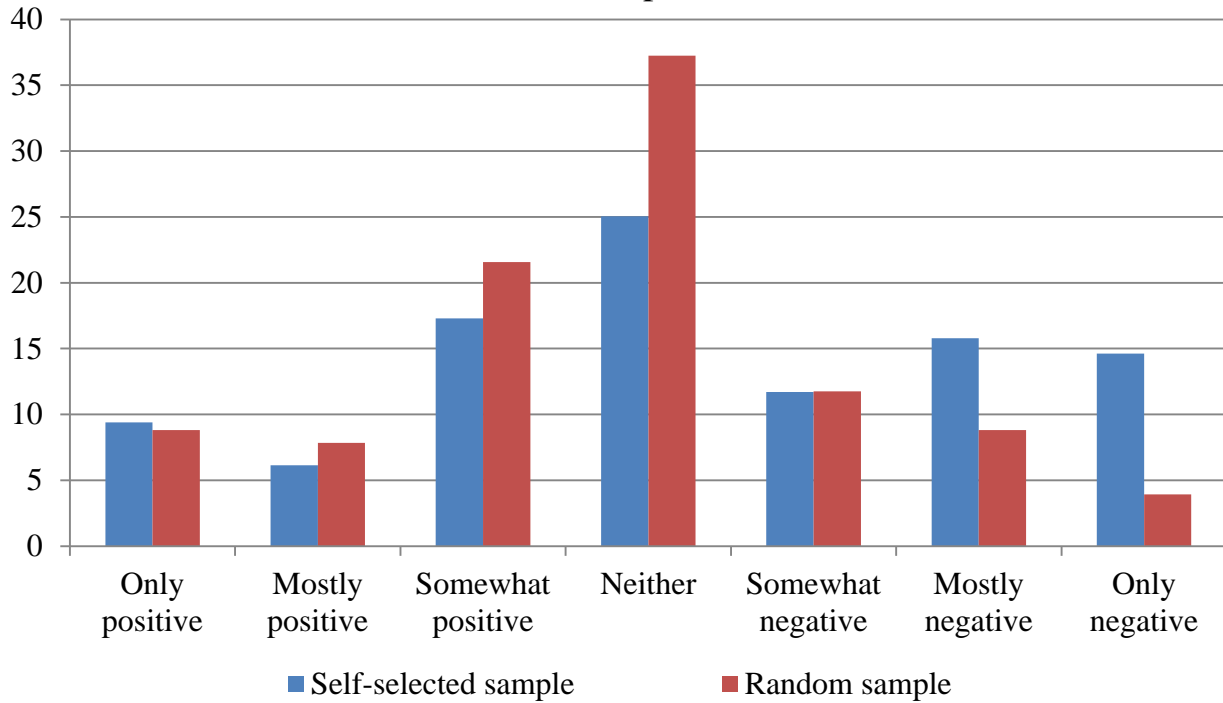
Public views on the economic impact of the mine, % of respondents



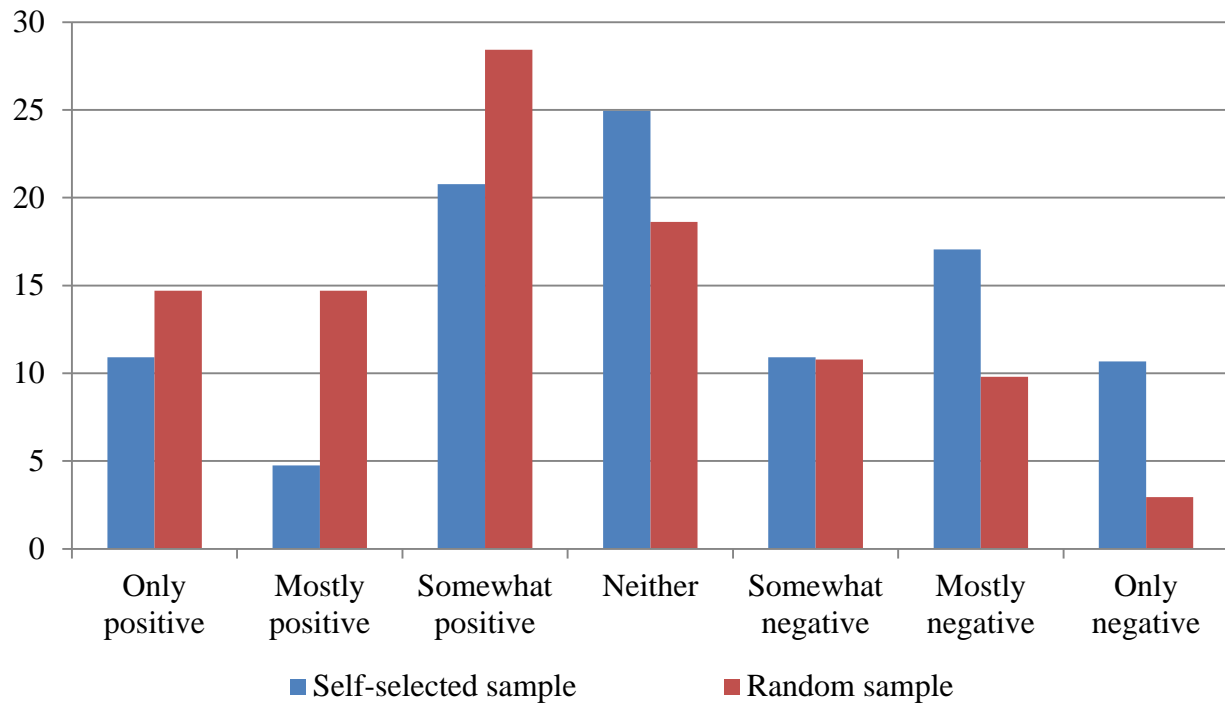
Public views on the local business impact of the mine,
% of respondents



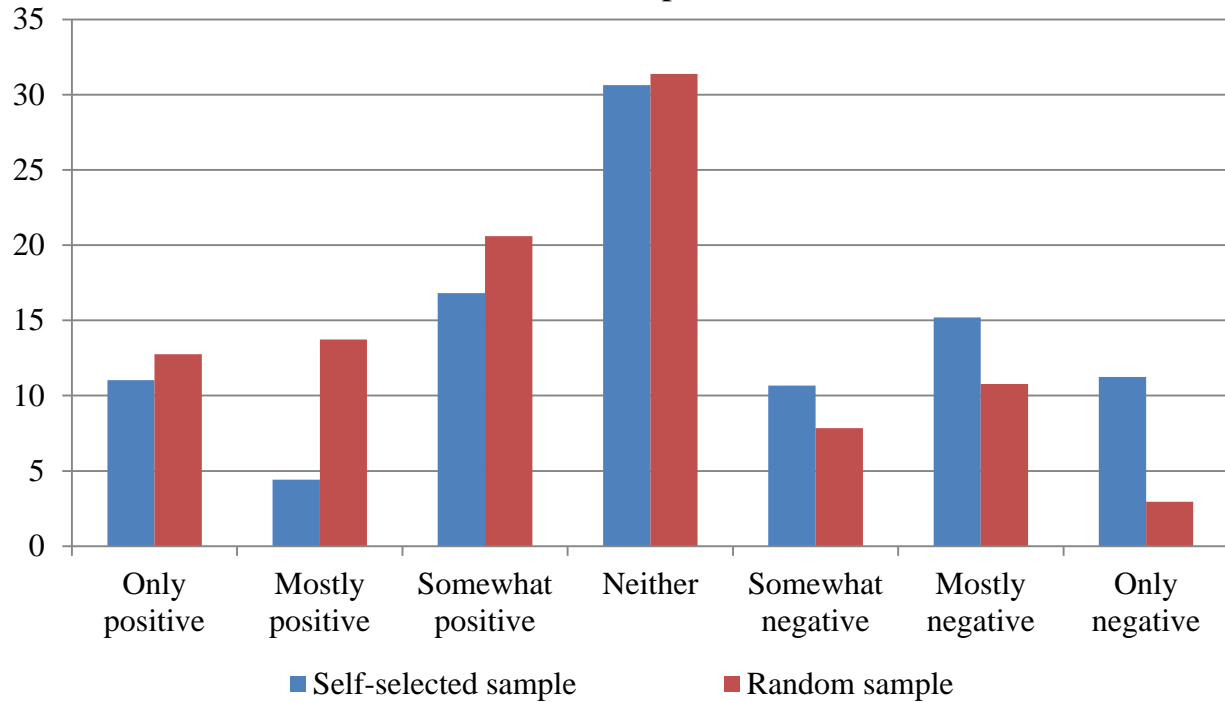
Public views on the population impact of the mine,
% of respondents



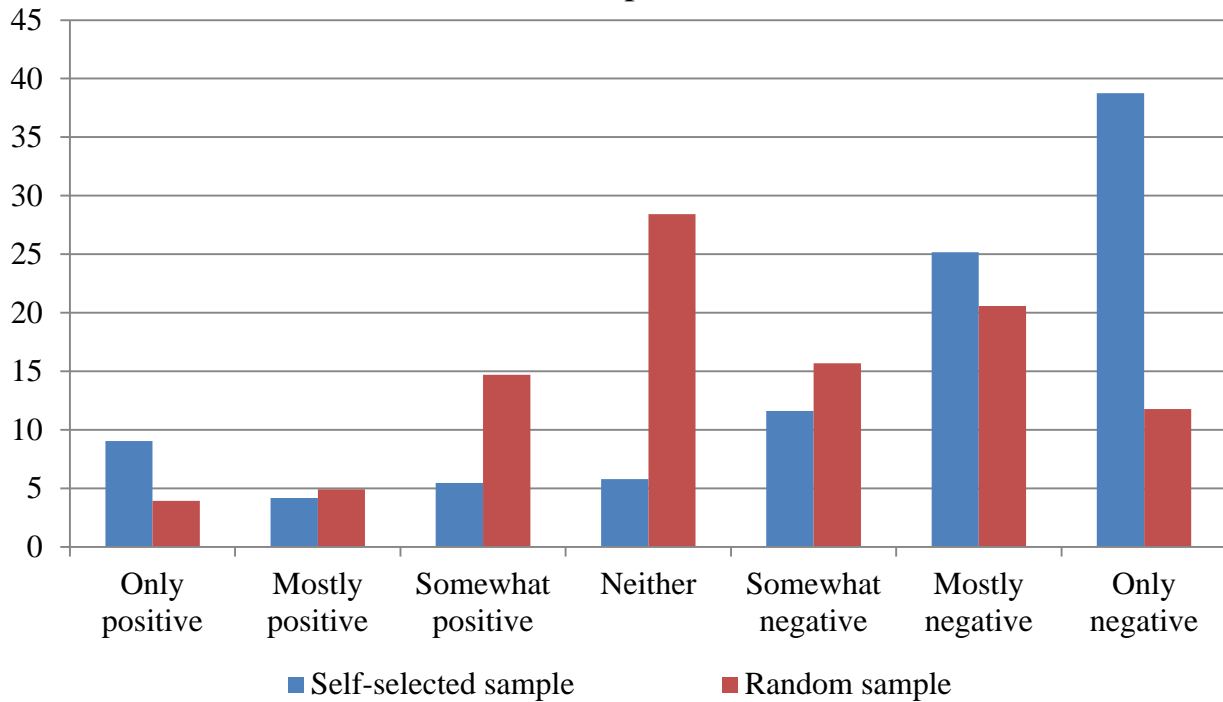
Public views on the employment impact of the mine,
% of respondents



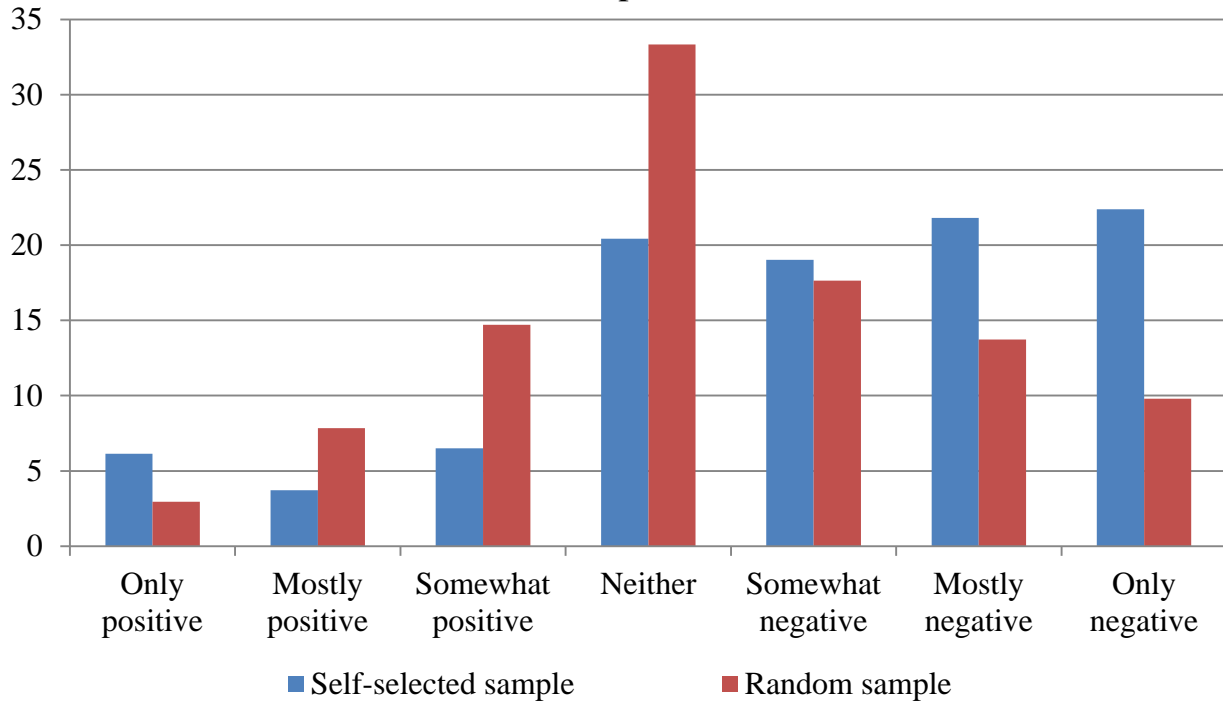
Public views on the labor earnings impact of the mine,
% of respondents



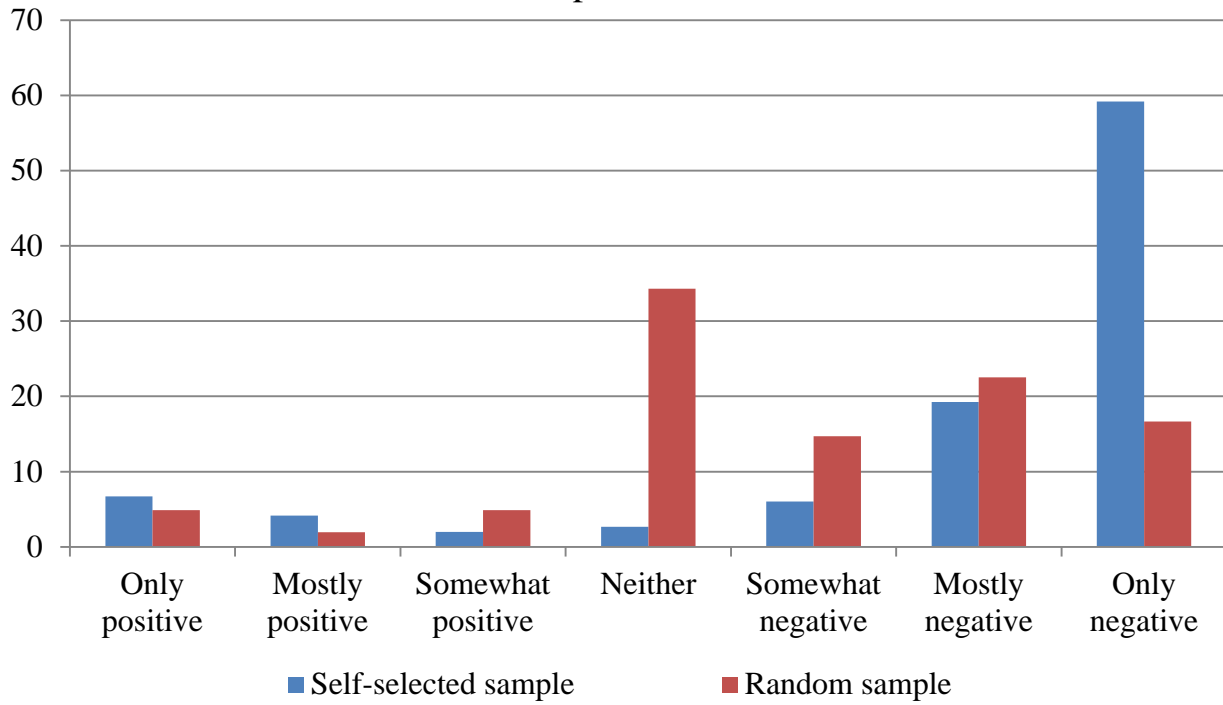
**Public views on the real estate impact of the mine,
% of respondents**



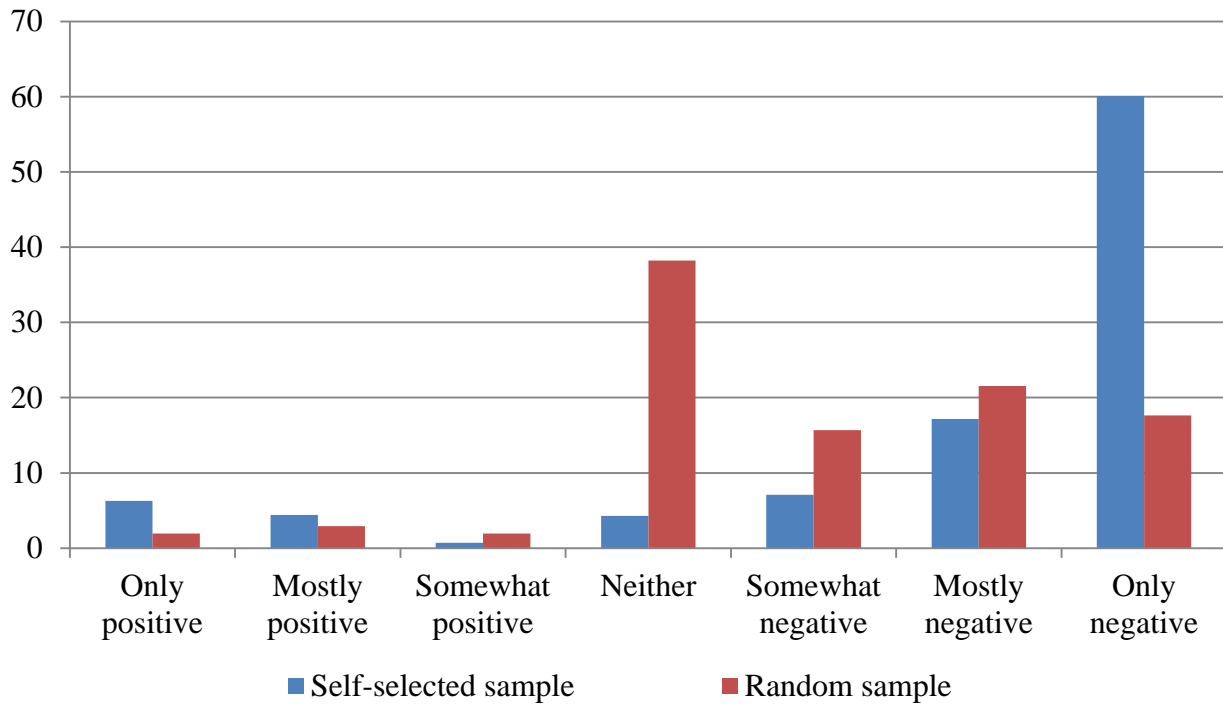
**Public views on the housing impact of the mine,
% of respondents**



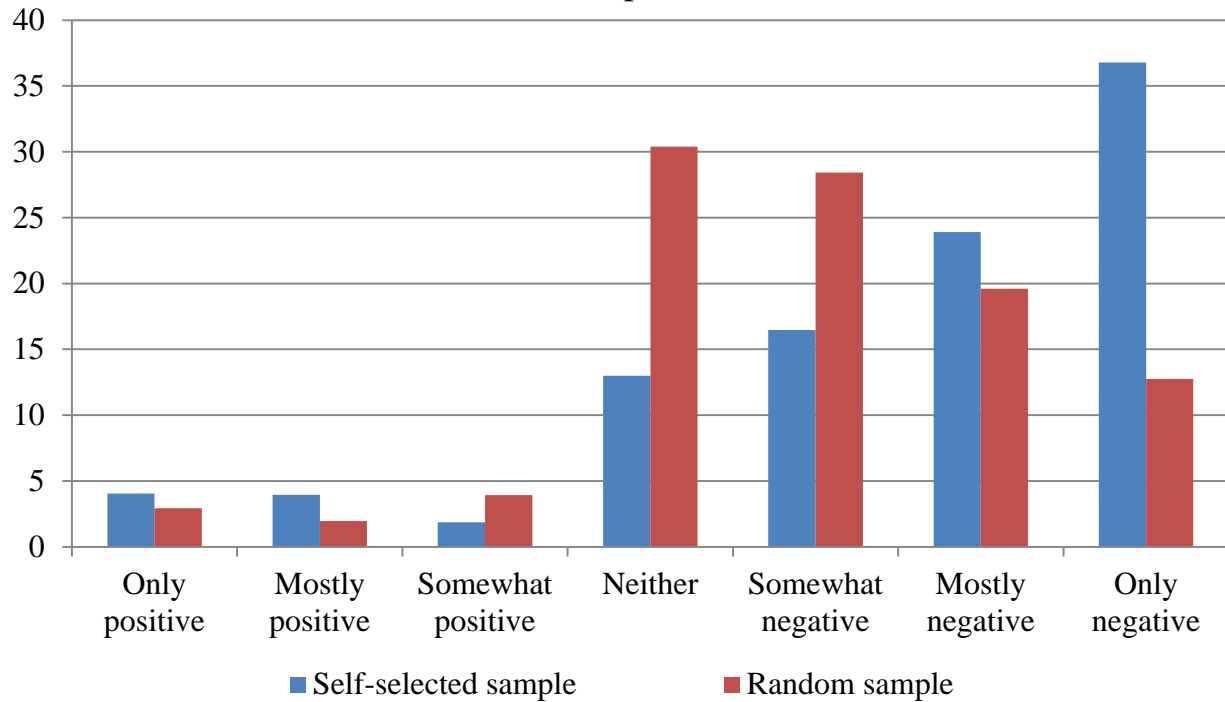
Public views on the community impact of the mine, % of respondents



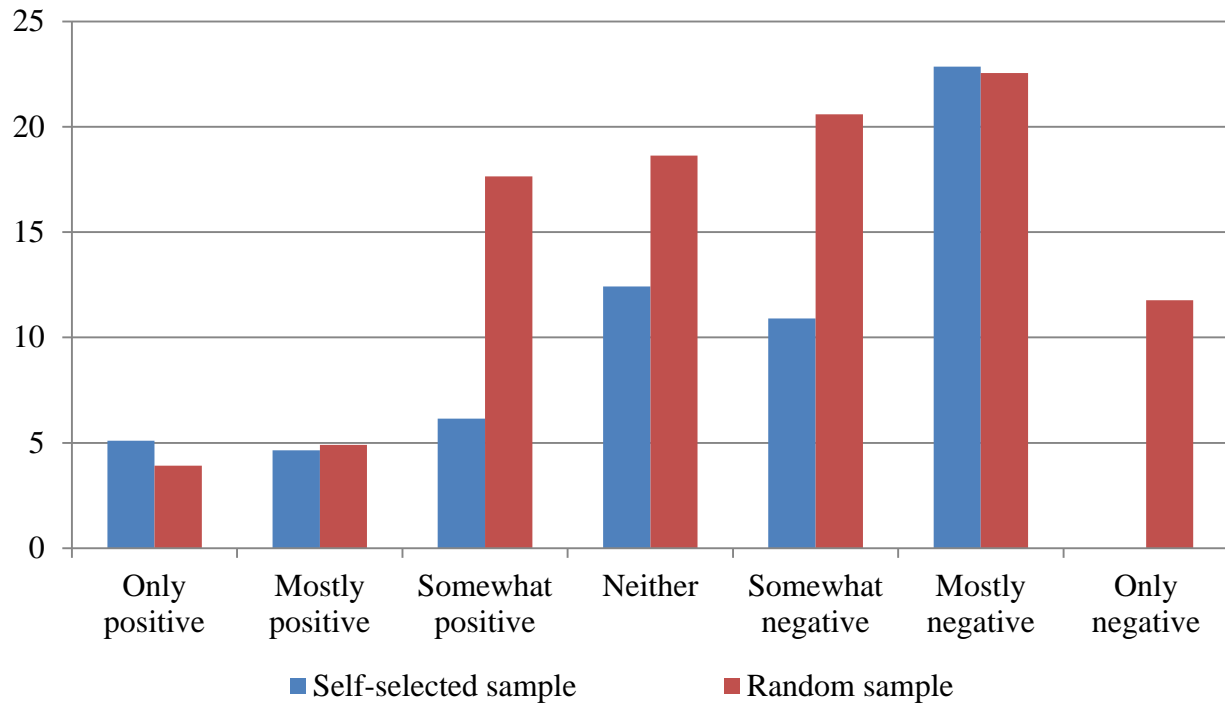
Public views on the population health impact of the mine, % of respondents



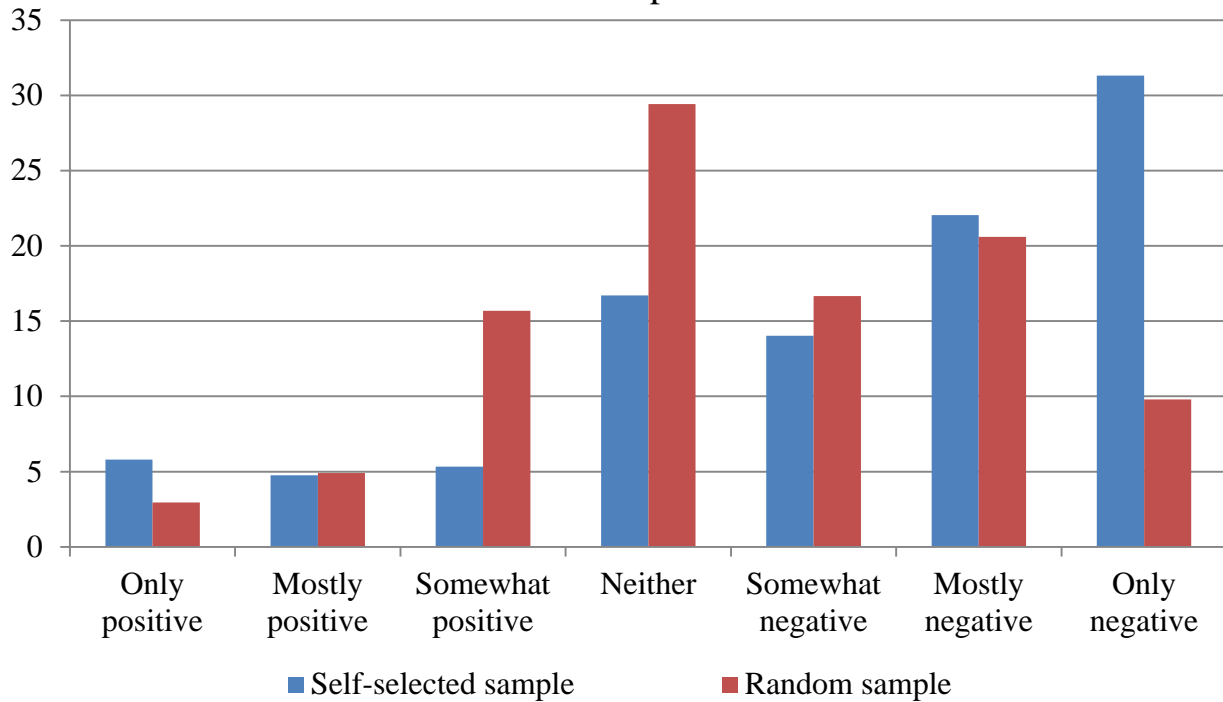
**Public views on the traffic impact of the mine,
% of respondents**



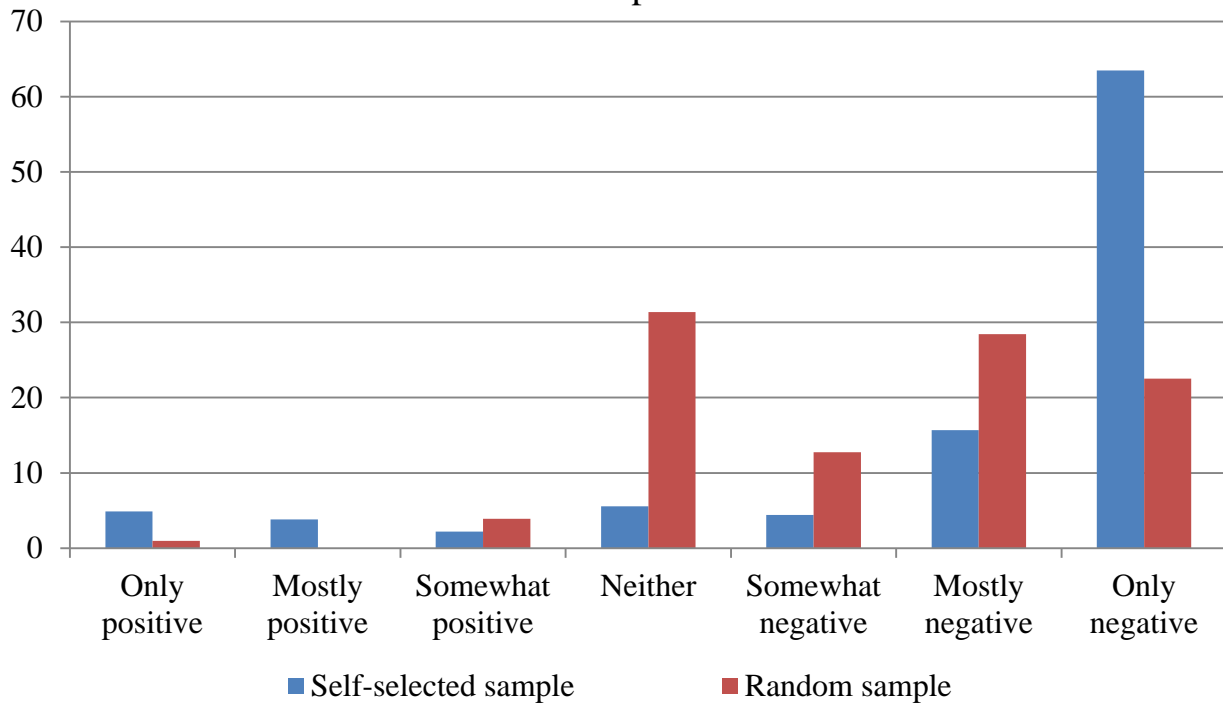
**Public views on the transport infrastructure impact
of the mine, % of respondents**



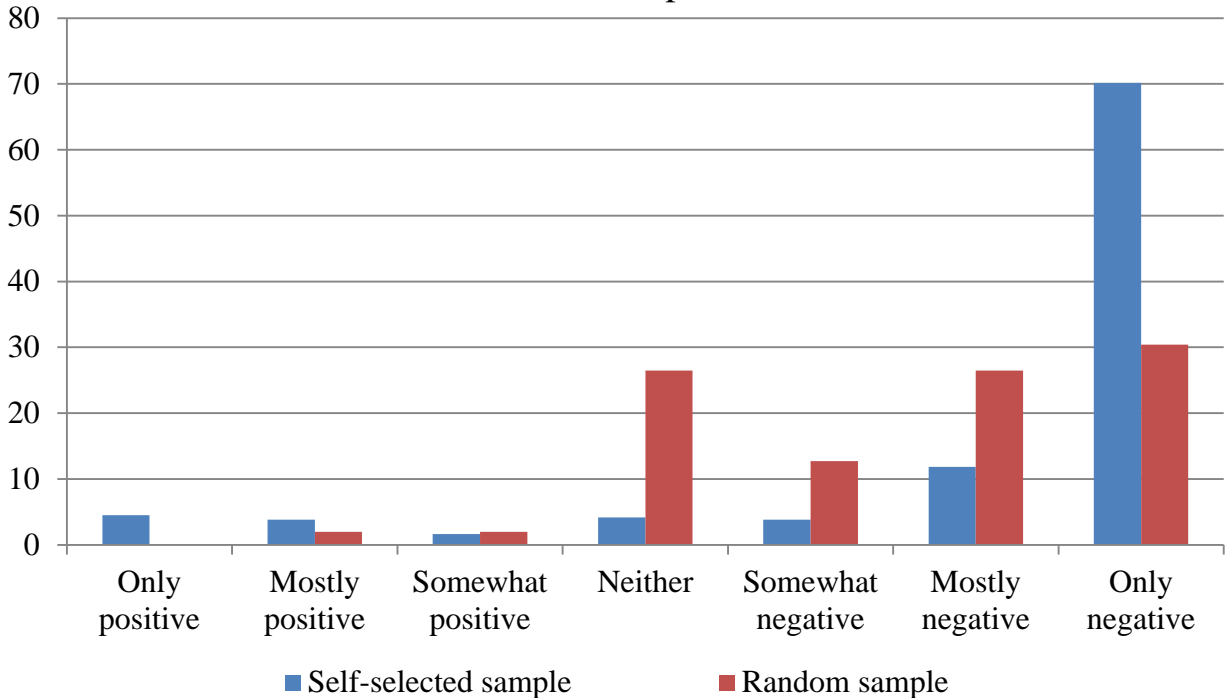
Public views on the utilities impact of the mine,
% of respondents



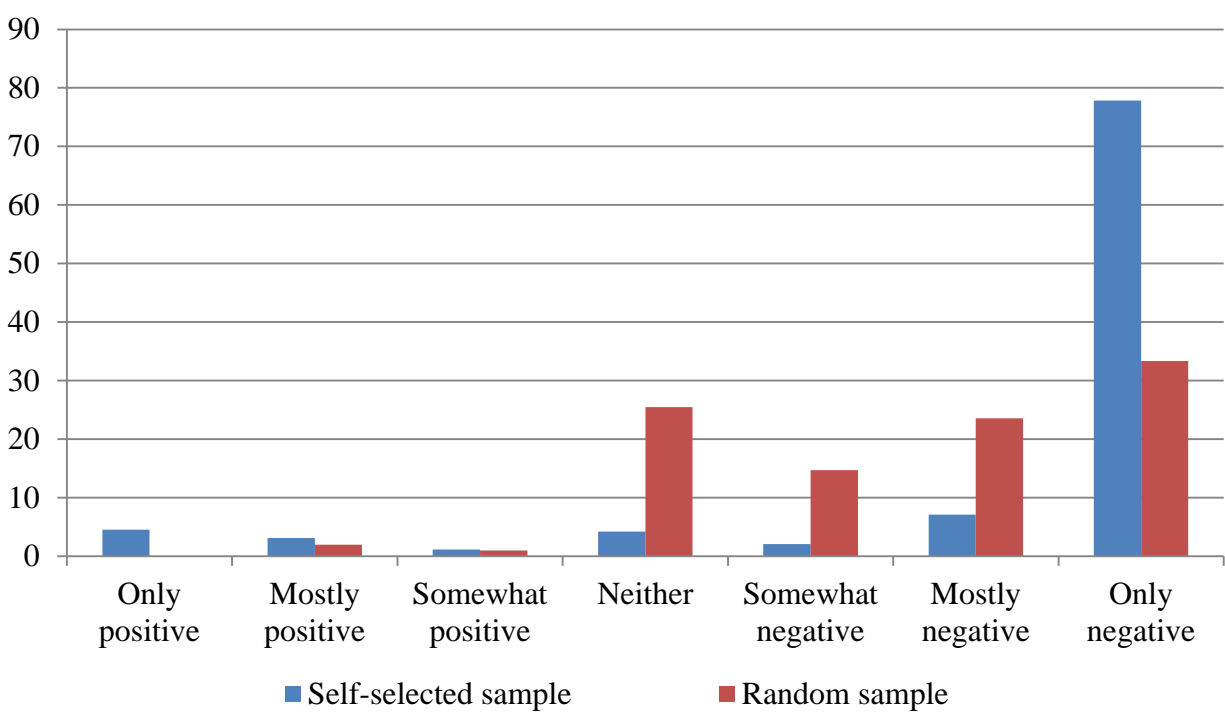
Public views on the tourism impact of the mine,
% of respondents



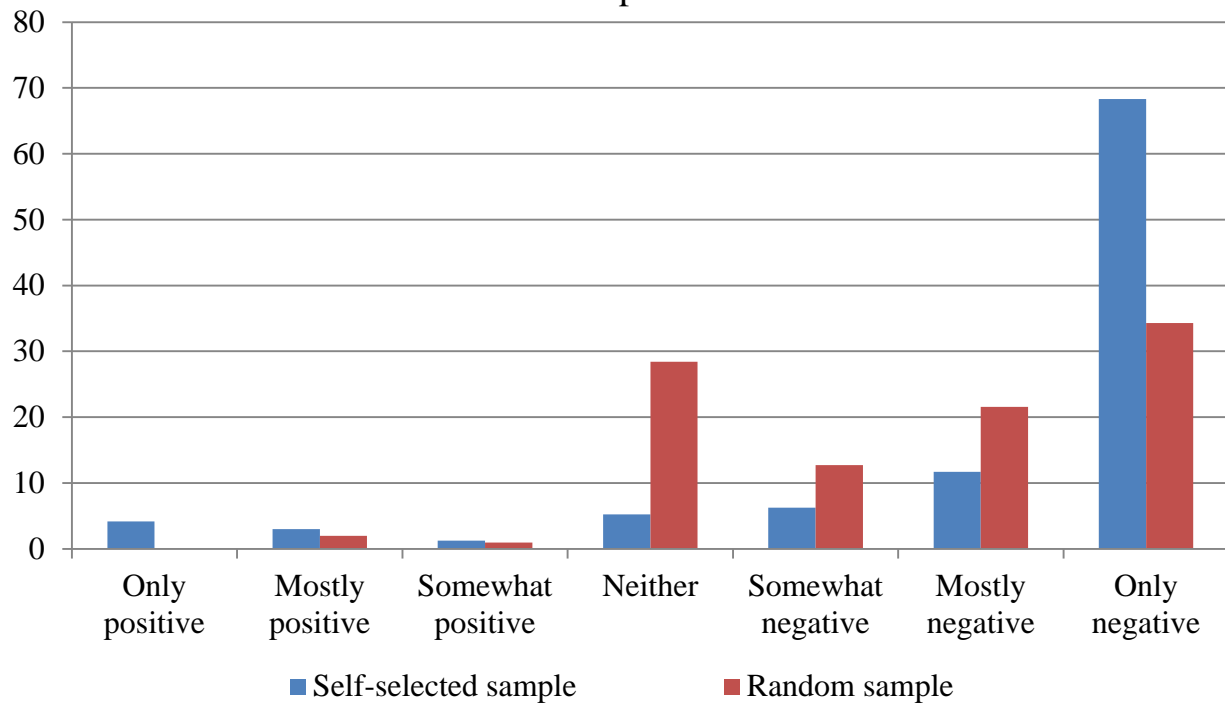
**Public views on the outdoor recreation impact of the mine,
% of respondents**



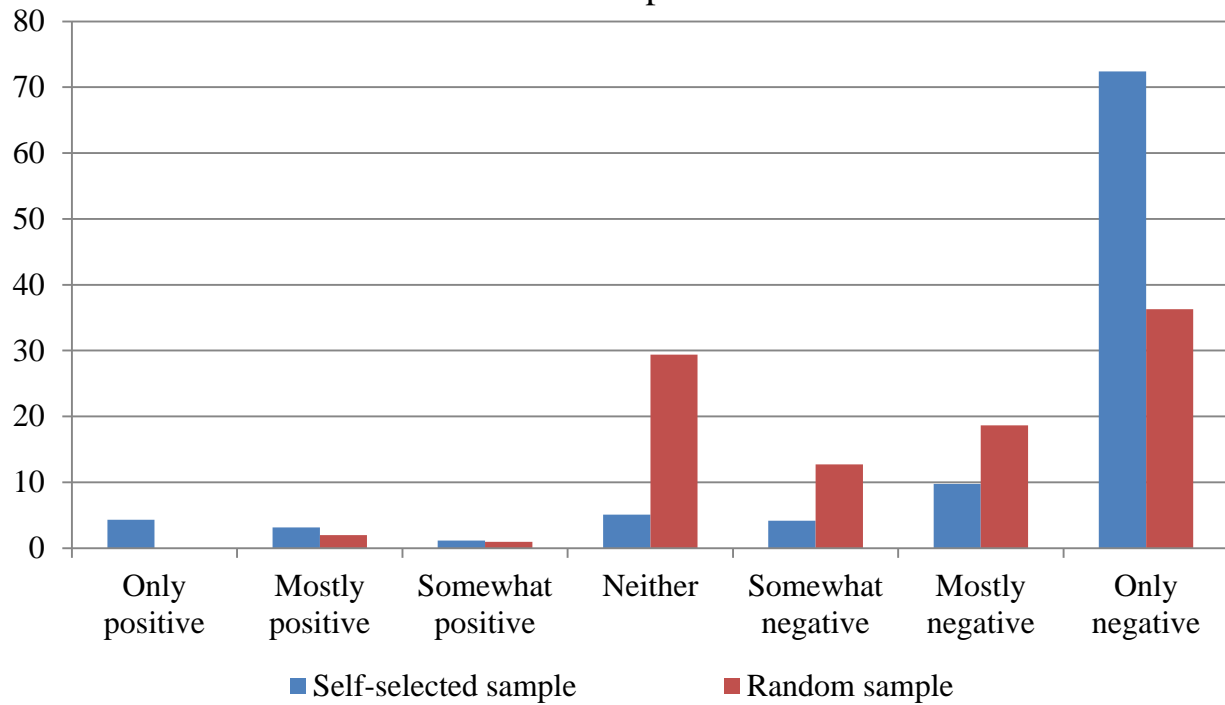
**Public views on the general environment impact of the
mine, % of respondents**



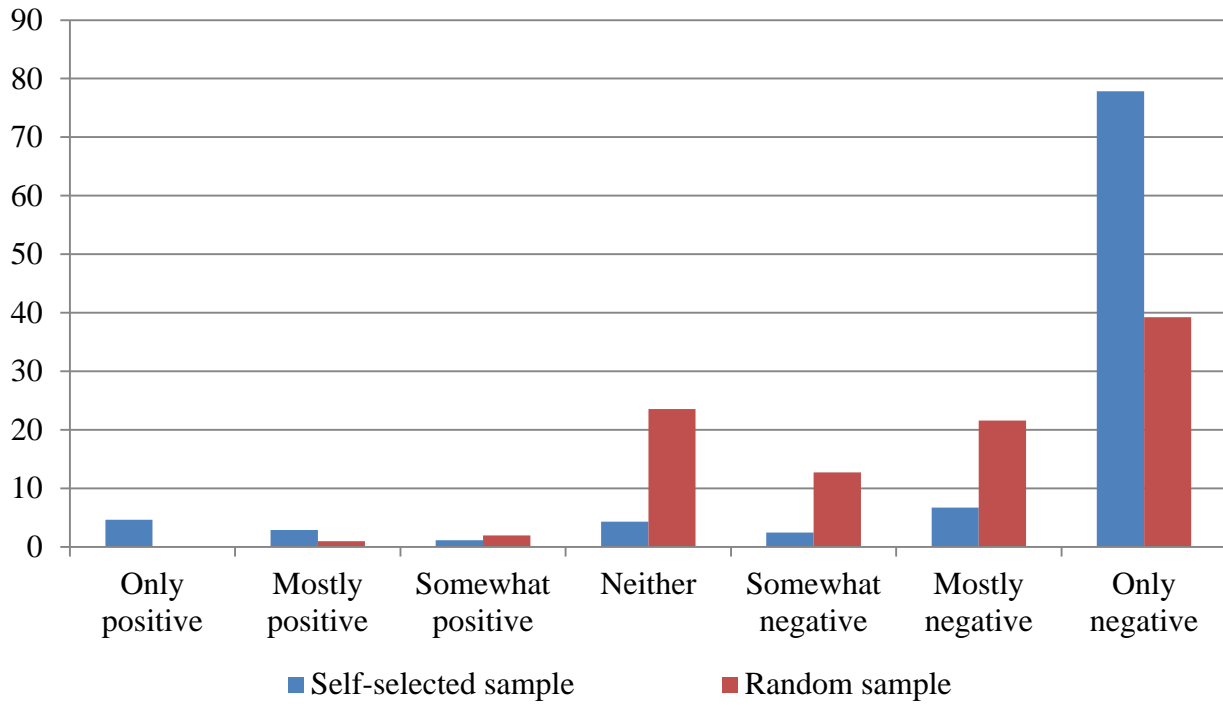
Public views on the air quality impact of the mine, % of respondents



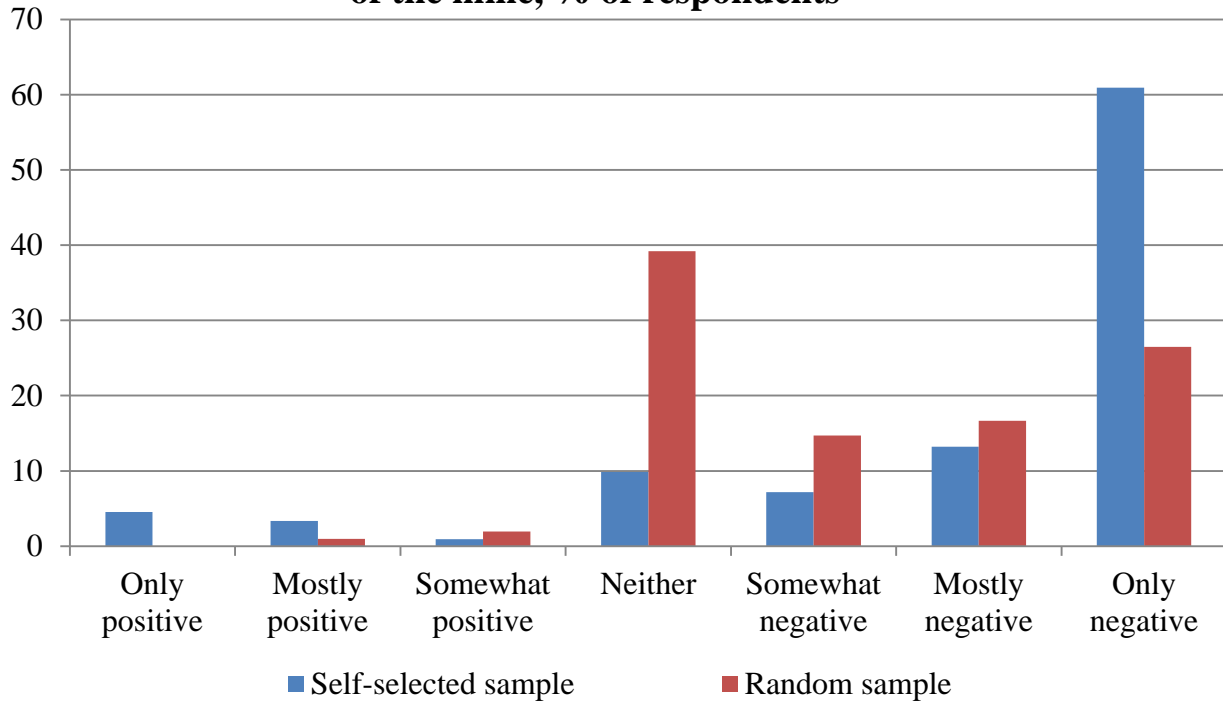
Public views on the soil quality impact of the mine, % of respondents



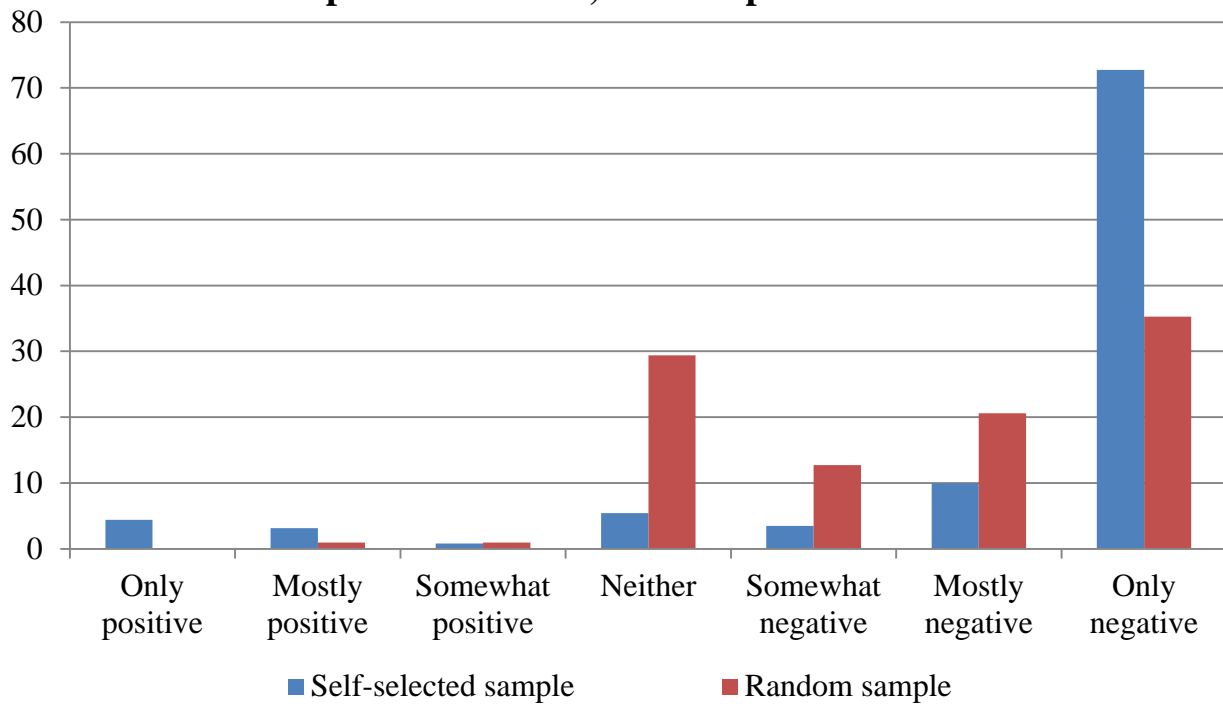
Public views on the surface water quality impact of the mine, % of respondents



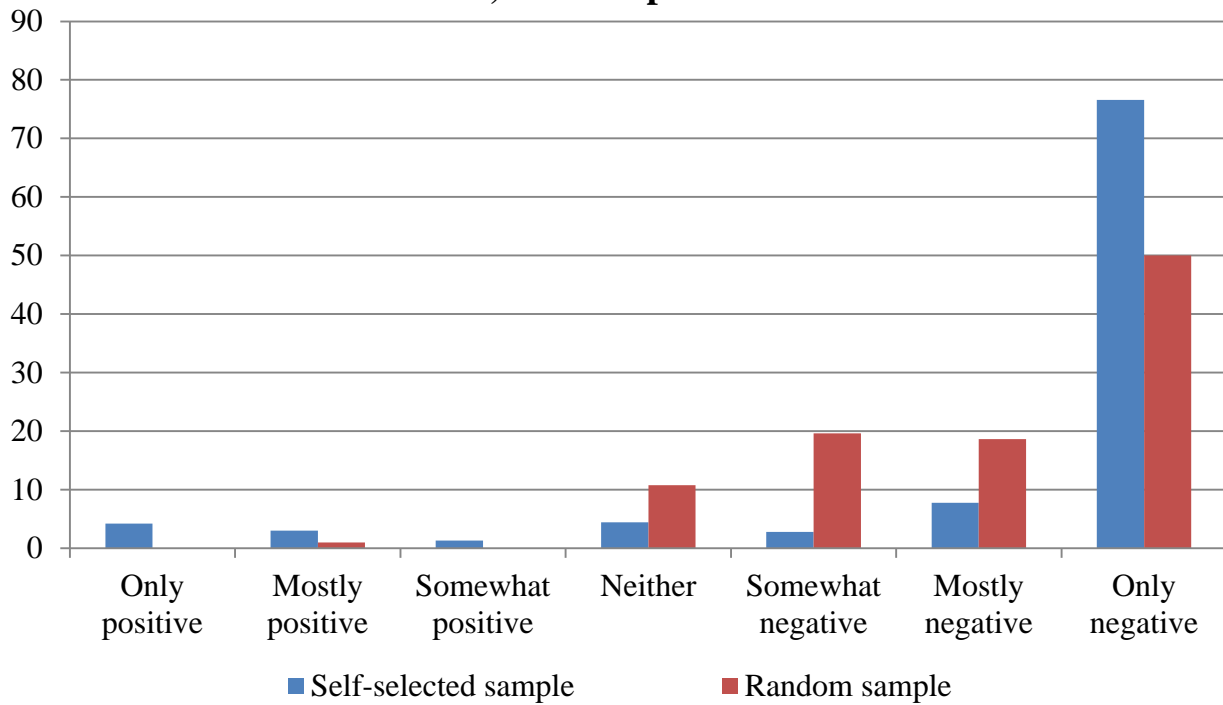
Public views on the municipal water quality impact of the mine, % of respondents



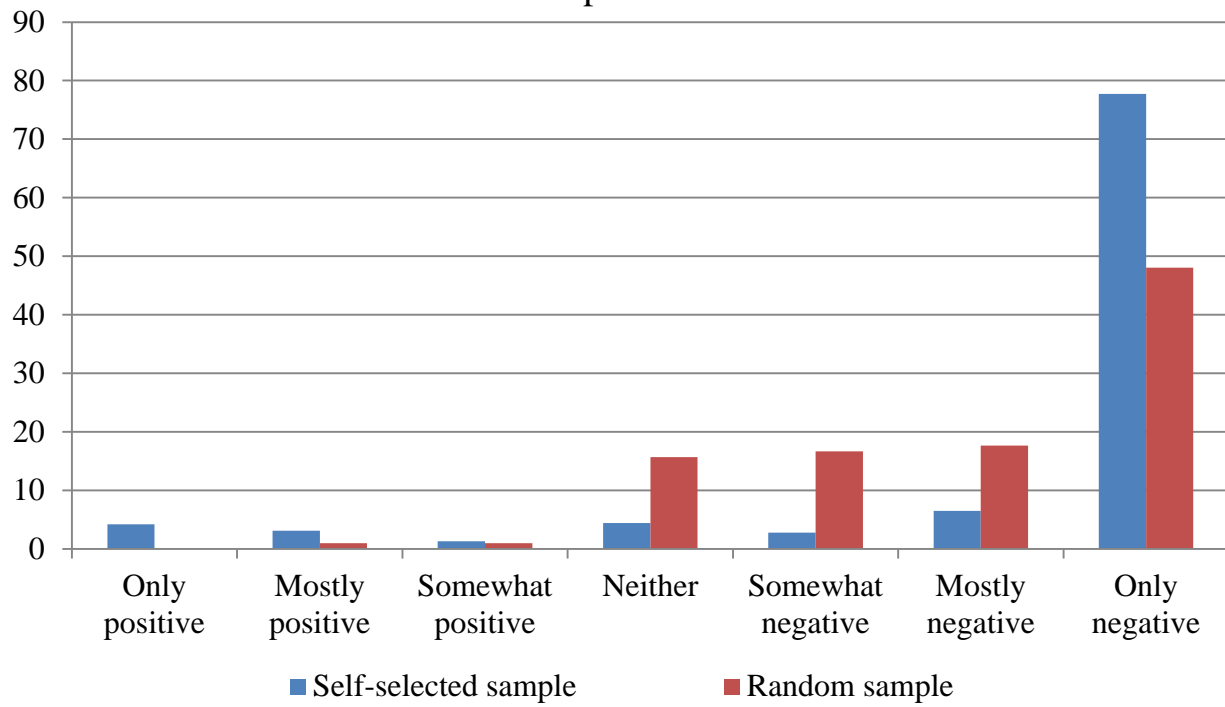
Public views on the underground and well water quality impact of the mine, % of respondents



Public views on the forestry and wetlands impact of the mine, % of respondents



**Public views on the fish and wildlife impact of the mine,
% of respondents**



Question # and description	Self-selected sample, N = 862	Random sample, N = 102
<i>1. Percent of respondents by county and state</i>	%	%
Ashland county, WI	15.08	52.94
Iron county, WI	7.54	47.06
Bayfield county, WI	12.53	
Douglas county, WI	4.06	
Forest county, WI	0.46	
Gogebic county, MI	2.67	
Iron county, MI	0.35	
Oneida county, WI	2.78	
Price county, WI	0.70	
Sawyer county, WI	1.16	
Vilas county, WI	6.73	
Washburn county, WI	0.12	
Other WI county	37.94	
Other MI county	1.62	
Other MN county	2.20	
Other state	4.06	
<i>2. Percent of respondents by industry of employment</i>	%	%
Agriculture	2.9	3.9
Arts, music, other entertainment	3.0	2.9
Construction	2.9	4.9
Education services	23.1	11.8
Finance and insurance services	3.0	3.9
Forestry, fishing, hunting	2.3	2.9
Health services	12.2	8.8
Information technology (IT)	3.7	4.9
Manufacturing	3.4	2.0
Mining or other natural resources extraction	1.3	0.0
Professional, scientific, management, administrative services	13.2	8.8
Public administration	4.3	2.9
Real estate, rental, leasing services	1.0	3.9
Recreation, accommodation, food services	1.7	2.9
Retail trade	2.8	9.8
Social services	3.7	4.9
Tourism	1.6	1.0
Transportation	2.1	2.0
Utilities	0.5	0.0
Warehousing	0.1	0.0
Wholesale trade	0.2	0.0
Other services	10.9	17.6

Question # and description	Self-selected sample, N = 862	Random sample, N = 102
<i>3. Self-rated knowledge of the mine</i>	<i>0 if no idea to 10 if excellent</i>	
Mean	7.72	7.02
Standard deviation	2.02	2.39
Minimum value	0.00	0.00
Maximum value	10.00	10.00
<i>4. Percent of respondents by their position on the mine</i>	<i>%</i>	<i>%</i>
Fully support it	10.56	10.78
Generally support it	2.90	13.73
Neutral	1.74	13.73
Generally oppose it	11.95	17.65
Absolutely oppose it	72.85	44.12

Question # and description	Self-selected sample, N = 862						
5. Percent of respondents by expected mine impact	Only positive	Mostly positive	Somewhat positive	Neither	Somewhat negative	Mostly negative	Only negative
Economy	9.74	5.45	19.26	17.05	11.37	23.90	13.23
Businesses	9.98	6.15	20.77	19.95	13.81	18.10	11.25
Population (+ if growth, - if decline)	9.40	6.15	17.29	25.06	11.72	15.78	14.62
Employment opportunities	10.90	4.76	20.77	24.94	10.90	17.05	10.67
Labor earnings (wages, etc)	11.02	4.41	16.82	30.63	10.67	15.20	11.25
Real estate or property values	9.05	4.18	5.45	5.80	11.60	25.17	38.75
Availability and affordability of housing	6.15	3.71	6.50	20.42	19.03	21.81	22.39
Community (livability, safety, etc)	6.73	4.18	1.97	2.67	6.03	19.26	59.16
Population health	6.26	4.41	0.70	4.29	7.08	17.17	60.09
Traffic conditions	4.06	3.94	1.86	12.99	16.47	23.90	36.77
Transport infrastructure (roads, bridges, etc)	5.10	4.64	6.15	12.41	10.90	22.85	37.94
Utilities and other infrastructure	5.80	4.76	5.34	16.71	14.04	22.04	31.32
Tourism	4.87	3.83	2.20	5.57	4.41	15.66	63.46
Outdoor recreation (hiking, fishing, etc)	4.52	3.83	1.62	4.18	3.83	11.83	70.19
Environment in general	4.52	3.13	1.16	4.18	2.09	7.08	77.84
Quality of air	4.18	3.02	1.28	5.22	6.26	11.72	68.33
Quality of soil	4.29	3.13	1.16	5.10	4.18	9.74	72.39
Quality of surface water	4.64	2.90	1.16	4.29	2.44	6.73	77.84
Quality of municipal or tap water	4.52	3.36	0.93	9.86	7.19	13.23	60.90
Quality of underground or well water	4.41	3.13	0.81	5.45	3.48	9.98	72.74
Forestry and wetlands	4.18	3.02	1.28	4.41	2.78	7.77	76.57
Fish and wildlife	4.18	3.13	1.28	4.41	2.78	6.50	77.73

Question # and description	Random sample, N = 102						
<i>5. Percent of respondents by expected mine impact</i>	<i>Only positive</i>	<i>Mostly positive</i>	<i>Somewhat positive</i>	<i>Neither</i>	<i>Somewhat negative</i>	<i>Mostly negative</i>	<i>Only negative</i>
Economy	10.78	15.69	28.43	19.61	7.84	15.69	1.96
Businesses	9.80	15.69	28.43	21.57	11.76	11.76	0.98
Population (+ if growth, - if decline)	8.82	7.84	21.57	37.25	11.76	8.82	3.92
Employment opportunities	14.71	14.71	28.43	18.63	10.78	9.80	2.94
Labor earnings (wages, etc)	12.75	13.73	20.59	31.37	7.84	10.78	2.94
Real estate or property values	3.92	4.90	14.71	28.43	15.69	20.59	11.76
Availability and affordability of housing	2.94	7.84	14.71	33.33	17.65	13.73	9.80
Community (livability, safety, etc)	4.90	1.96	4.90	34.31	14.71	22.55	16.67
Population health	1.96	2.94	1.96	38.24	15.69	21.57	17.65
Traffic conditions	2.94	1.96	3.92	30.39	28.43	19.61	12.75
Transport infrastructure (roads, bridges, etc)	3.92	4.90	17.65	18.63	20.59	22.55	11.76
Utilities and other infrastructure	2.94	4.90	15.69	29.41	16.67	20.59	9.80
Tourism	0.98	0.00	3.92	31.37	12.75	28.43	22.55
Outdoor recreation (hiking, fishing, etc)	0.00	1.96	1.96	26.47	12.75	26.47	30.39
Environment in general	0.00	1.96	0.98	25.49	14.71	23.53	33.33
Quality of air	0.00	1.96	0.98	28.43	12.75	21.57	34.31
Quality of soil	0.00	1.96	0.98	29.41	12.75	18.63	36.27
Quality of surface water	0.00	0.98	1.96	23.53	12.75	21.57	39.22
Quality of municipal or tap water	0.00	0.98	1.96	39.22	14.71	16.67	26.47
Quality of underground or well water	0.00	0.98	0.98	29.41	12.75	20.59	35.29
Forestry and wetlands	0.00	0.98	0.00	10.78	19.61	18.63	50.00
Fish and wildlife	0.00	0.98	0.98	15.69	16.67	17.65	48.04

Non-mandatory question: Summary of results

Question # and description	Self-selected sample	Random sample
<i>19. Percent of respondents rating their interest of working at the mine</i>	<i>N = 860</i>	<i>N = 101</i>
Absolutely	1.98	1.98
Most likely	1.16	2.97
Maybe	5.00	8.91
Most likely not	10.70	19.80
Absolutely not	81.16	66.34