

National Association of Home Builders

Housing Market Index: Special Questions on Labor and Subcontractors' Availability

June 2016

Economics and Housing Policy Group



Table of Contents

Introduction:	1
Q1. Availability of following types of labor - LABOR (<i>Directly employed by your firm</i>)	2
Q1. Availability of following types of labor – SUBCONTRACTORS’	3
Q1. Availability of following types of labor - LABOR (Directly employed by your firm) – HISTORY	4
Q1. Availability of following types of labor – SUBCONTRACTORS’ – HISTORY	7
Q2. Overall, how have total costs of Labor (directly employed by your firm) for the same house changed over the past 12 months?	13
Q3. How have total costs of Subcontractors for the same house changed over the past 6 months?	14
Q4. Indicate if labor shortages over the past 12 months have had any of the following effects on your business. .	15
Q5. Have you noticed the return of workers or contractors who had left the residential construction industry during the downturn?	16
Detailed Tables	17
Appendix I: Survey Questionnaire: BEC Special Questions for June 2016	24

Introduction:

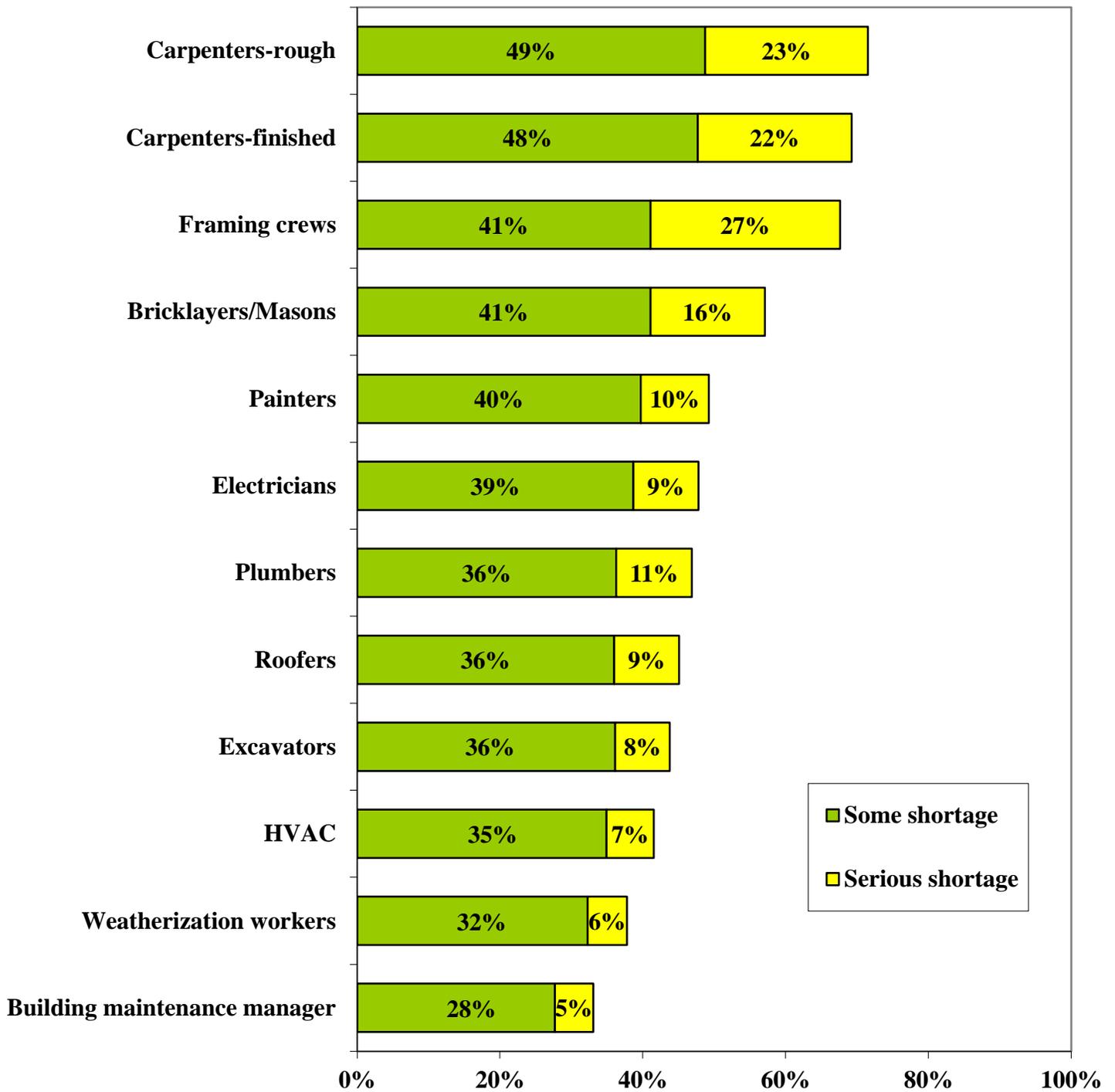
For more than 25 years, the National Association of Home Builders (NAHB) has conducted a monthly survey of its builder members that is used to generate the NAHB/Wells Fargo Housing Market Index (HMI). The main section of the HMI survey asks builders to rate market conditions for the sale of new homes at the present time and expected over the next 6 months, as well as the traffic of prospective buyers. The results are combined into a single composite index that measures the overall strength of the market for new single-family housing.

Throughout its history, the HMI has generally performed well as a leading indicator of single-family housing starts and is widely reported in business media and used by government and Wall Street analysts.

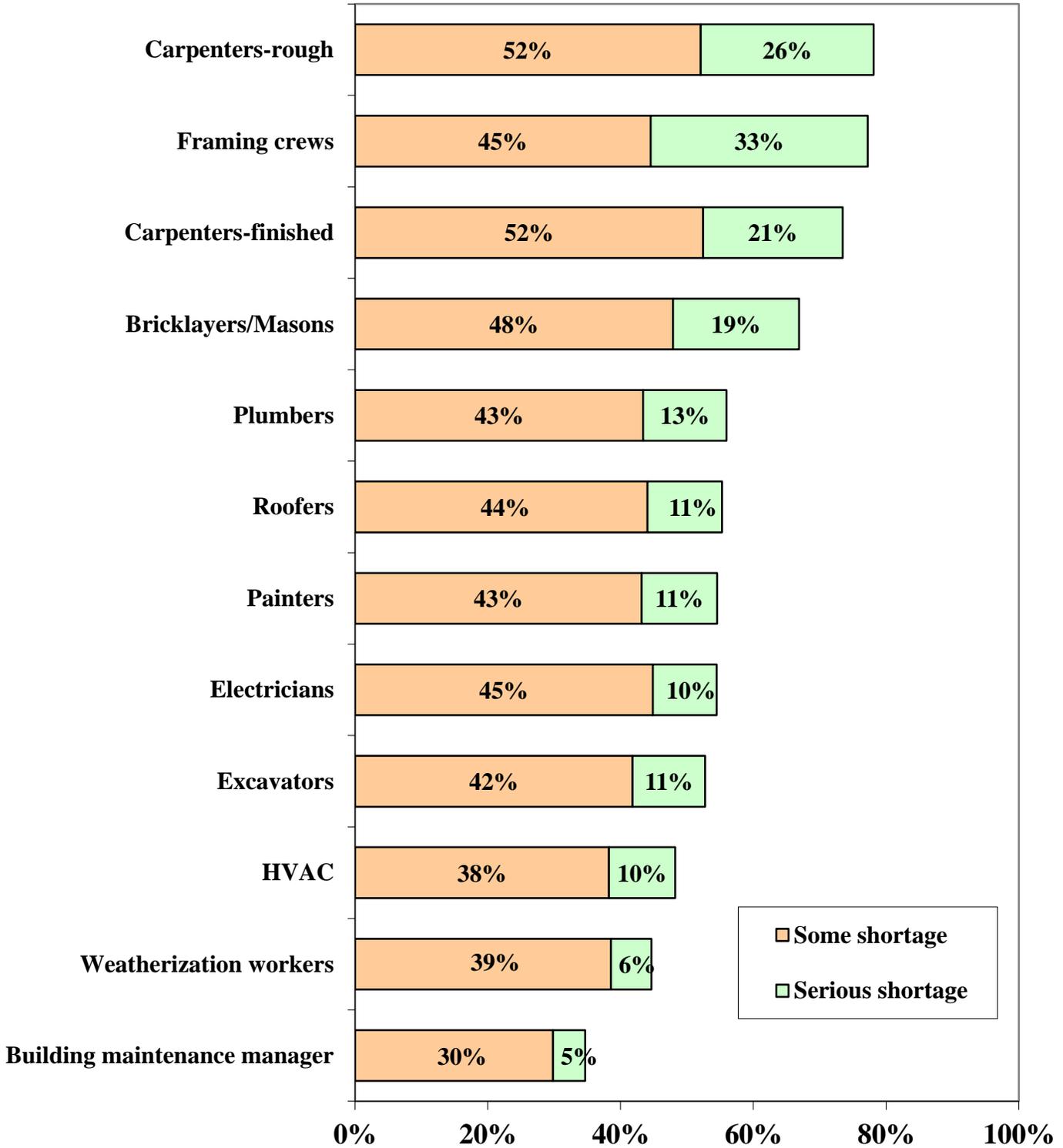
This month survey was sent electronically to a panel of roughly 2,100 builder members. Results are broken down by the four census regions, and by total number of units started in 2015. The survey sample is refreshed annually to keep the panel consistent overtime.

In addition to the questions that provide the data needed to compute the HMI, the survey often also includes a set of “special” questions on a topic of current interest to the housing industry. The June 2016 special questions relate to availability of labor and subcontractors for different trades e.g. carpenter, electrician etc. In addition, the survey asks about change in the cost of labor and subcontractors and the impact of labor shortages on business. The survey also asks if they noticed return of workers or contractors who left the residential construction industry during the downturn. The results in this report are based on 326 responses to these special questions.

**Q1. Availability of following types of labor - LABOR (Directly employed by your firm)
(Percent of Respondents)**



**Q1. Availability of following types of labor – SUBCONTRACTORS’
(Percent of Respondents)**



Q1. Availability of following types of labor - LABOR (Directly employed by your firm) – HISTORY
(Percent of Respondents)

	Jun. 2016	Jun. '15	Jun. '14	Mar. '13	Jun. '12	May '06	Nov. '05	Oct. '05	Jul. '05	Oct. '04	Jul. '04	Dec. '03	Apr. '02	Nov. '00	Jul. '00	Feb. '00	Dec. '98	Sep. '97	Sep. '96
CARPENTERS - ROUGH																			
Serious shortage	23%	14%	11%	4%	5%	9%	13%	16%	21%	13%	22%	9%	5%	26%	29%	34%	36%	24%	27%
Some shortage	49	55	52	38	24	32	35	38	45	47	44	42	48	48	47	51	51	49	49
No shortage	28	32	37	57	71	59	52	46	34	40	34	48	47	27	24	15	13	27	24
CARPENTERS - FINISHED																			
Serious shortage	22	16	12	4	4	10	13	15	18	18	18	12	5	21	22	33	29	24	21
Some shortage	48	50	46	34	22	30	36	35	40	39	43	39	44	50	47	46	50	47	51
No shortage	31	34	42	62	74	60	51	50	42	43	45	49	50	29	30	21	21	30	28
ELECTRICIANS																			
Serious shortage	9	6	4	2	2	5	7	9	7	5	7	4	4	11	8	15	10	7	7
Some shortage	39	40	31	24	14	19	29	29	29	30	31	24	25	41	43	44	45	38	34
No shortage	52	55	64	74	84	76	64	62	64	65	62	71	71	49	48	41	45	56	59
EXCAVATORS																			
Serious shortage	8	5	4	2	2	3	4	8	3	5	3	1	-	6	5	7	5	3	5
Some shortage	36	32	24	16	12	13	17	21	23	21	30	23	22	30	28	40	38	31	31
No shortage	56	62	72	82	86	84	80	72	75	74	67	76	77	65	67	53	57	66	64
FRAMING CREWS																			
Serious shortage	27	17	15	7	5	8	12	14	22	14	17	10	5	26	25	31	38	25	31
Some shortage	41	50	45	41	25	29	30	38	31	41	43	41	48	42	45	47	48	48	42
No shortage	32	33	41	52	70	63	58	49	47	45	41	49	47	33	30	22	14	27	27

Q1. Availability of following types of labor - LABOR (Directly employed by your firm) – HISTORY
(Percent of Respondents) – *continued*

	June 2016	Jun. '15	Jun. '14	Mar. '13	Jun. '12	May '06	Nov. '05	Oct. '05	Jul. '05	Oct. '04	Jul. '04	Dec. '03	Apr. '02	Nov. '00	Jul. '00	Feb. '00	Dec. '98	Sep. '97	Sep. '96
ROOFERS																			
Serious shortage	9%	6%	6%	3%	2%	6%	8%	11%	9%	7%	14%	5%	5%	13%	12%	20%	19%	18%	21%
Some shortage	36	34	31	23	14	21	26	32	33	34	26	36	33	47	50	45	47	42	40
No shortage	55	59	63	74	83	73	66	56	59	59	60	58	63	40	38	35	34	40	39
PLUMBERS																			
Serious shortage	11	9	5	2	3	6	11	9	6	5	7	5	5	13	11	17	15	11	9
Some shortage	36	36	33	21	13	19	24	26	28	35	23	26	28	38	41	45	42	30	33
No shortage	53	55	62	77	84	75	65	65	66	61	69	69	67	49	48	39	43	59	58
BRICKLAYERS/ MASONS																			
Serious shortage	16	13	10	6	5	8	8	9	15	11	15	9	10	21	24	26	24	22	19
Some shortage	41	40	39	26	21	19	25	31	24	32	27	40	37	45	38	46	42	41	41
No shortage	43	47	51	67	74	72	67	60	61	57	58	51	53	34	37	29	34	37	40
PAINTERS																			
Serious shortage	10	8	7	2	2	6	7	8	6	6	9	5	4	9	11	11	12	6	12
Some shortage	40	38	31	20	17	15	23	24	31	25	23	28	26	44	41	44	44	41	33
No shortage	51	54	62	78	80	79	70	68	63	69	67	67	70	47	49	46	44	53	55
WEATHERIZATION WORKERS																			
Serious shortage	6	3	3	1	3	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Some shortage	32	32	26	19	13	na	na	na	na	na	na	na	na	na	na	na	na	na	na
No shortage	62	65	71	79	84	na	na	na	na	na	na	na	na	na	na	na	na	na	na

Q1. Availability of following types of labor - LABOR (Directly employed by your firm) – HISTORY
(Percent of Respondents) - *continued*

	June 2016	Jun. '15	Jun. '14	Mar. '13	Jun. '12	May '06	Nov. '05	Oct. '05	Jul. '05	Oct. '04	Jul. '04	Dec. '03	Apr. '02	Nov. '00	Jul. '00	Feb. '00	Dec. '98	Sep. '97	Sep. '96
HVAC																			
Serious shortage	7%	6%	3%	1%	1%	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Some shortage	35	30	26	19	13	na	na	na	na	na	na	na	na	na	na	na	na	na	na
No shortage	58	64	72	80	86	na	na	na	na	na	na	na	na	na	na	na	na	na	na
BUILDING MAINTENANCE MANAGER																			
Serious shortage	5	4	2	2	2	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Some shortage	28	28	23	16	11	na	na	na	na	na	na	na	na	na	na	na	na	na	na
No shortage	67	68	75	82	87	na	na	na	na	na	na	na	na	na	na	na	na	na	na

Source: BEC Survey, NAHB EchP Group.

Note: "na" denotes Not Applicable

Q1. Availability of following types of labor – SUBCONTRACTORS’ – HISTORY
(Percent of Respondents)

	June 2016	June '15	Jun. '14	Mar. '13	Jun. '12	May '06	Nov. '05	Oct. '05	Jul. '05	Oct. '04	Jul. '04	Nov. '00	Jul. '00	Feb. '00	Dec. '98	Sep. '97	Sep. '96
CARPENTERS - ROUGH																	
Serious shortage	26%	16%	15%	8%	4%	9%	11%	10%	19%	11%	15%	22%	26%	22%	33%	23%	28%
Some shortage	52	58	53	41	27	32	35	38	41	44	42	47	43	62	51	52	48
No shortage	22	25	32	52	69	59	54	52	40	45	44	31	31	17	16	25	24
CARPENTERS - FINISHED																	
Serious shortage	21	16	12	4	3	7	8	8	15	12	6	17	17	17	21	14	15
Some shortage	52	53	51	38	27	30	29	32	36	32	40	49	43	51	54	53	53
No shortage	27	31	37	57	71	63	63	60	49	57	54	34	40	31	25	33	32
ELECTRICIANS																	
Serious shortage	10	8	4	2	2	4	6	6	11	6	7	10	10	11	10	6	7
Some shortage	45	40	38	23	18	22	23	25	28	26	29	40	37	46	43	35	32
No shortage	46	52	59	76	81	74	71	70	61	68	64	50	53	43	47	59	61
EXCAVATORS																	
Serious shortage	11	6	6	1	3	3	3	6	12	5	5	4	6	5	7	3	5
Some shortage	42	40	31	21	14	16	17	20	24	23	29	32	29	40	38	31	30
No shortage	47	54	63	78	83	81	80	74	64	72	66	64	65	55	55	66	65
FRAMING CREWS																	
Serious shortage	33	21	18	9	6	9	12	12	20	13	13	24	25	29	37	26	34
Some shortage	45	52	50	42	29	33	35	36	39	39	41	44	43	53	46	48	42
No shortage	23	27	32	49	65	58	52	52	41	48	46	32	32	18	17	26	24
ROOFERS																	
Serious shortage	11	8	5	3	3	5	7	8	17	9	8	11	11	15	21	14	17
Some shortage	44	36	39	26	19	25	27	28	26	32	37	43	46	50	46	43	43
No shortage	45	56	56	71	79	70	66	64	58	59	56	46	44	35	34	43	40

Q1. Availability of following types of labor – SUBCONTRACTORS’ – HISTORY
(Percent of Respondents) - continued

	June 2016	June '15	Jun. '14	Mar. '13	Jun. '12	May '06	Nov. '05	Oct. '05	Jul. '05	Oct. '04	Jul. '04	Nov. '00	Jul. '00	Feb. '00	Dec. '98	Sep. '97	Sep. '96
PLUMBERS																	
Serious shortage	13%	11%	6%	2%	3%	6%	8%	7%	15%	8%	6%	12%	11%	14%	12%	8%	8%
Some shortage	43	39	36	26	17	25	26	25	24	30	34	40	39	47	41	33	32
No shortage	44	50	57	73	80	69	65	69	61	62	60	48	51	40	46	58	60
BRICKLAYERS/ MASONS																	
Serious shortage	19	14	10	6	5	6	9	5	18	7	14	16	17	25	24	19	24
Some shortage	48	41	42	29	23	29	26	30	25	33	33	41	42	47	46	43	39
No shortage	33	44	48	65	72	65	66	65	57	60	53	43	41	28	30	39	37
PAINTERS																	
Serious shortage	11	8	7	3	2	5	4	5	12	5	4	9	11	7	10	8	9
Some shortage	43	42	39	22	20	17	24	20	24	25	29	39	37	50	46	38	39
No shortage	45	50	54	76	79	78	72	75	63	70	67	52	52	43	44	54	52
WEATHERIZATION WORKERS																	
Serious shortage	6	3	3	0	3	na	na	na	na	na	na	na	na	na	na	na	na
Some shortage	39	33	28	20	15	na	na	na	na	na	na	na	na	na	na	na	na
No shortage	55	63	68	79	82	na	na	na	na	na	na	na	na	na	na	na	na
HVAC																	
Serious shortage	10	7	3	1	1	na	na	na	na	na	na	na	na	na	na	na	na
Some shortage	38	36	30	21	14	na	na	na	na	na	na	na	na	na	na	na	na
No shortage	52	58	67	78	84	na	na	na	na	na	na	na	na	na	na	na	na
BUILDING MAINTENANCE MANAGER																	
Serious shortage	5	4	4	1	1	na	na	na	na	na	na	na	na	na	na	na	na
Some shortage	30	27	24	19	12	na	na	na	na	na	na	na	na	na	na	na	na
No shortage	65	69	73	80	87	na	na	na	na	na	na	na	na	na	na	na	na

Source: BEC Survey, NAHB Echp Group.

Note: "na" denotes Not Applicable

AVERAGE PERCENT

Availability of LABOR (Directly employed by your firm)

12 different types of trades*	Jun. 2016	<i>Jun. '15</i>	<i>Jun. '14</i>	<i>Mar. '13</i>	<i>Jun. '12</i>
Serious shortage	13	9	7	3	3
Some shortage	38	39	33	25	17
No shortage	49	52	60	72	80

9 different types of trades**	Jun. 2016	<i>Jun. '15</i>	<i>Jun. '14</i>	<i>Mar. '13</i>	<i>Jun. '12</i>	<i>May '06</i>	<i>Nov. '05</i>	<i>Oct. '05</i>	<i>Jul. '05</i>	<i>Oct. '04</i>	<i>Jul. '04</i>	<i>Dec. '03</i>	<i>Apr. '02</i>	<i>Nov. '00</i>	<i>Jul. '00</i>	<i>Feb. '00</i>	<i>Dec. '98</i>	<i>Sep. '97</i>	<i>Sep. '96</i>
Serious shortage	15	10	8	4	3	7	9	11	12	9	12	7	5	16	16	22	21	16	17
Some shortage	41	42	36	27	17	22	27	30	32	34	32	33	35	43	42	45	45	41	39
No shortage	45	48	56	69	80	71	64	59	57	57	55	60	61	41	41	33	34	44	44

Availability of SUBCONTRACTORS'

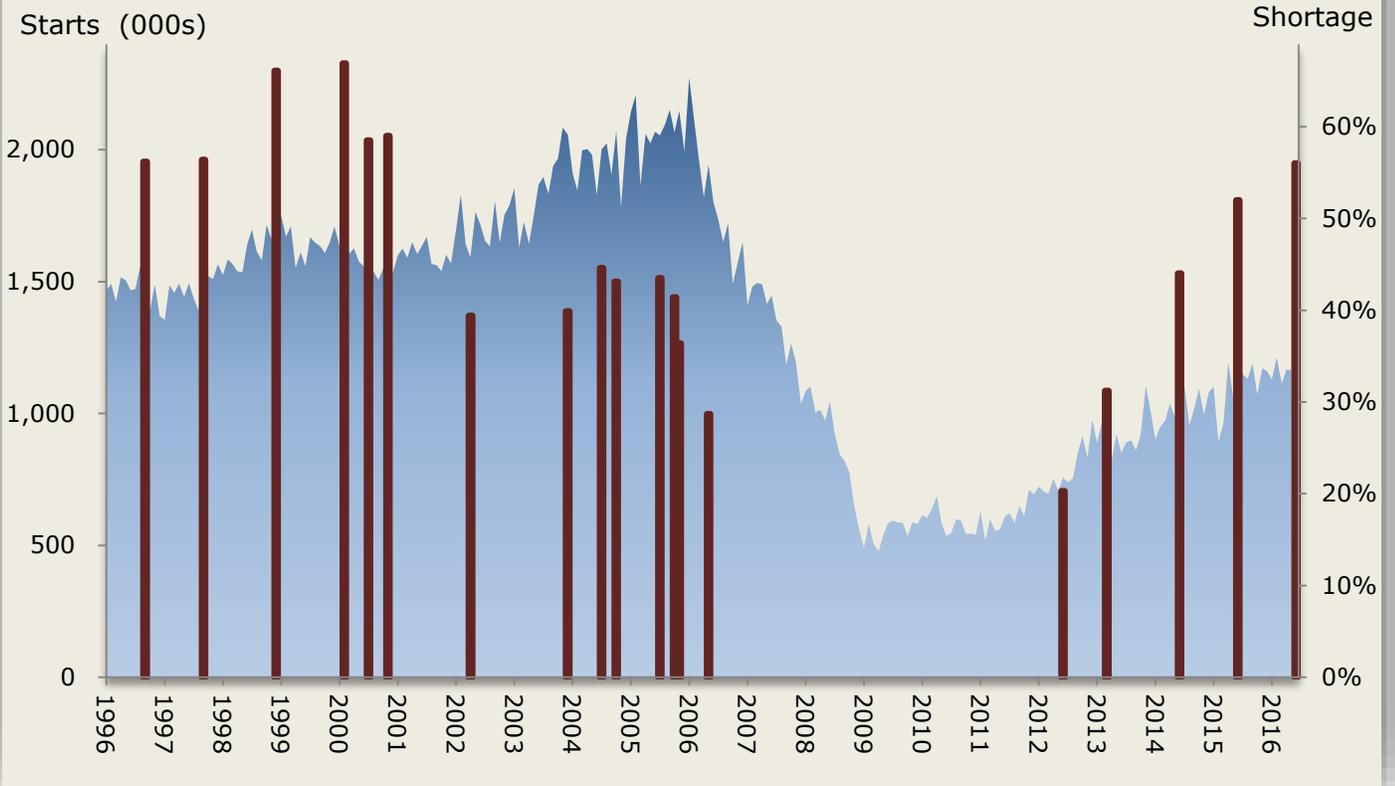
12 different types of trades*	Jun. 2016	<i>Jun. '15</i>	<i>Jun. '14</i>	<i>Mar. '13</i>	<i>Jun. '12</i>
Serious shortage	15	10	8	3	3
Some shortage	43	42	38	27	20
No shortage	42	48	54	69	77

9 different types of trades**	Jun. 2016	<i>June '15</i>	<i>Jun. '14</i>	<i>Mar. '13</i>	<i>Jun. '12</i>	<i>May '06</i>	<i>Nov. '05</i>	<i>Oct. '05</i>	<i>Jul. '05</i>	<i>Oct. '04</i>	<i>Jul. '04</i>	<i>Nov. '00</i>	<i>Jul. '00</i>	<i>Feb. '00</i>	<i>Dec. '98</i>	<i>Sep. '97</i>	<i>Sep. '96</i>
Serious shortage	17	12	9	4	3	6	8	7	15	8	9	14	15	16	19	13	16
Some shortage	46	45	42	30	22	25	27	28	30	32	35	42	40	50	46	42	40
No shortage	37	43	49	66	75	69	66	64	55	60	56	44	45	34	35	45	44

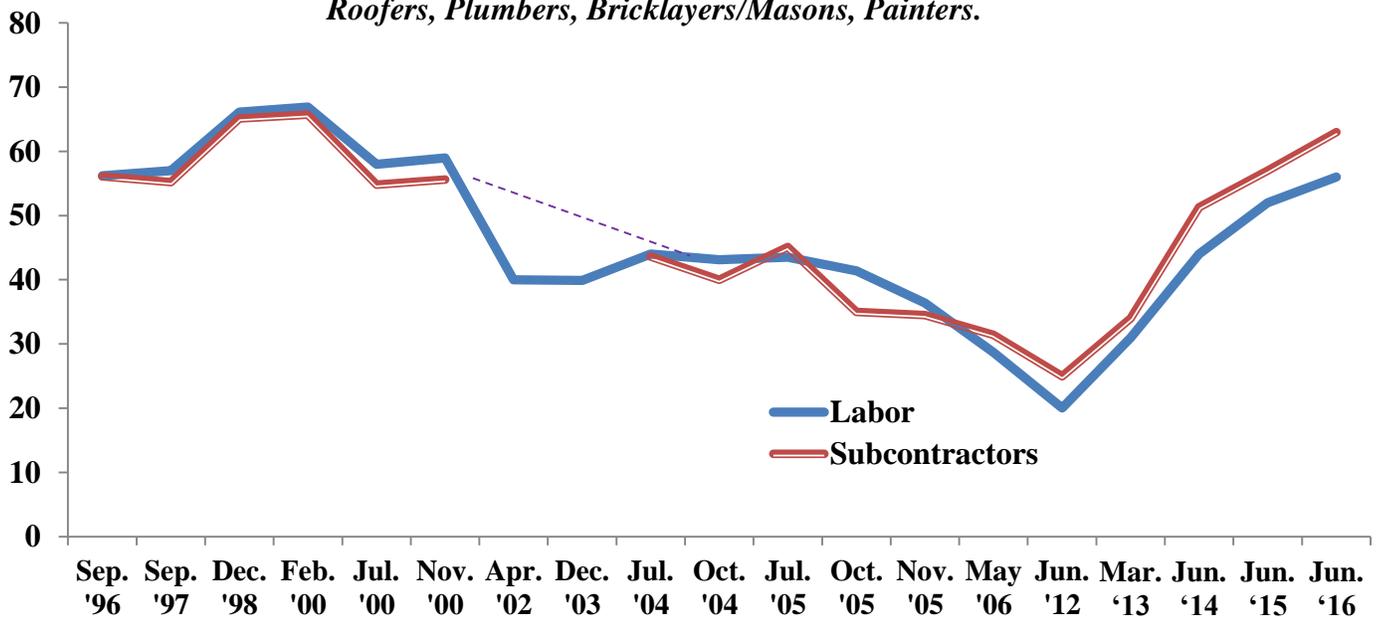
(*) *Carpenter-Rough, Carpenter-Finished, Electricians, Excavators, Framing Crews, Roofers, Plumbers, Bricklayers/Masons, Painters, Weatherization Workers, HVAC, Building Maintenance Manager.*

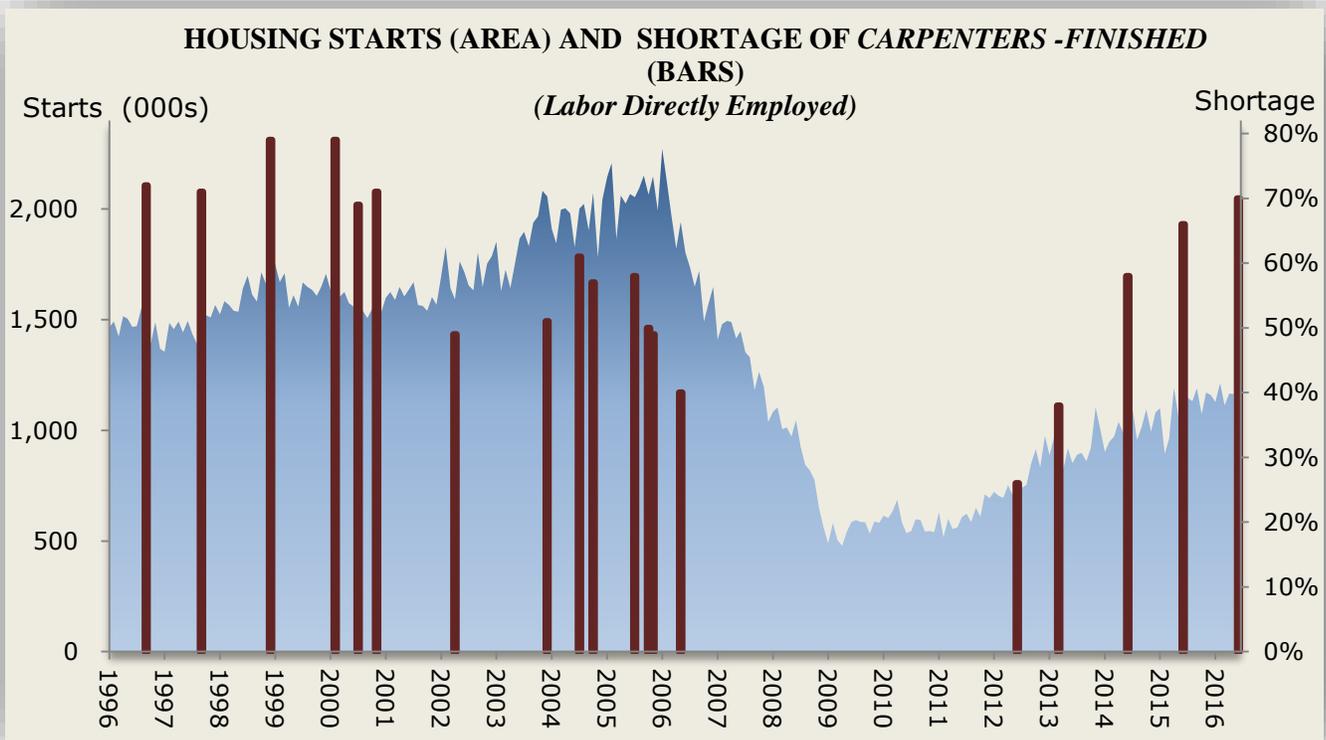
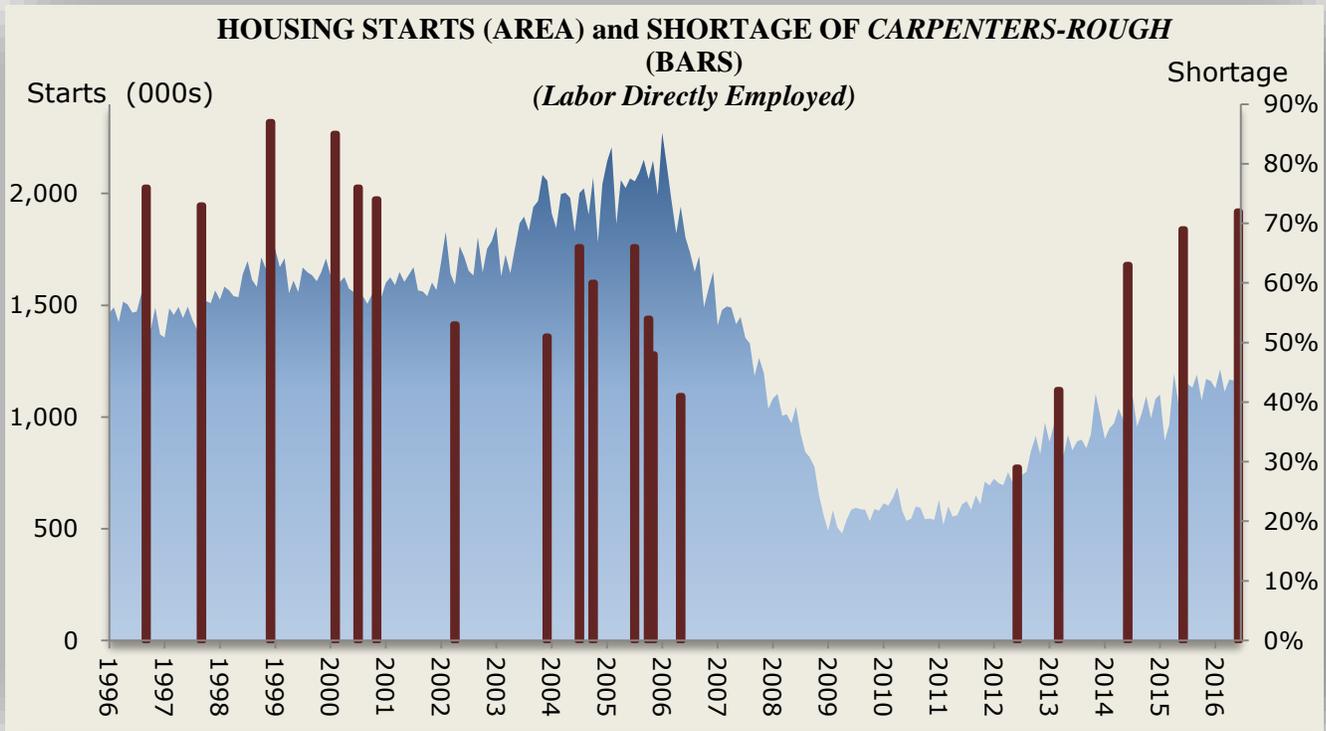
(**) *Carpenter-Rough, Carpenter-Finished, Electricians, Excavators, Framing crews, Roofers, Plumbers, Bricklayers/Masons, Painters.*

**HOUSING STARTS (AREA) AND LABOR SHORTAGE (Directly employed):
AVERAGE PERCENTAGE FOR 9 TRADES * (BARS)**

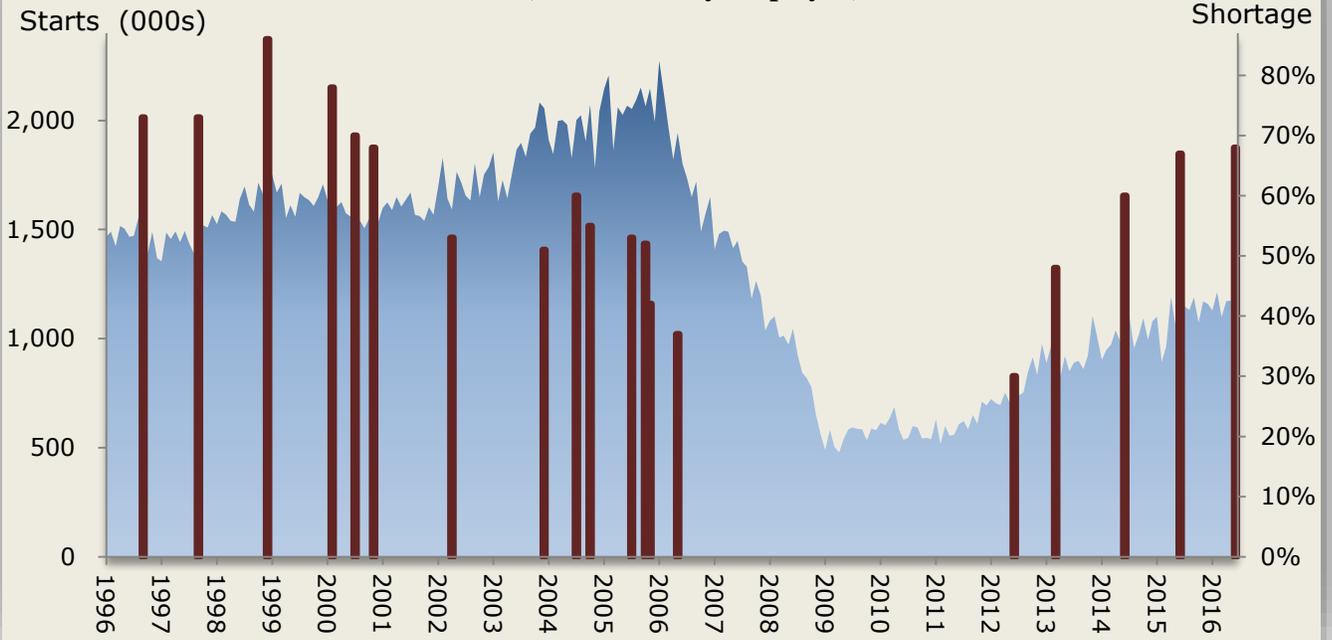


**Labor (directly employed) and Subcontractors' Serious to Some Shortage:
Average Percent for 9 different trades
Carpenter-Rough, Carpenter-Finished, Electricians, Excavators, Framing crews,
Roofers, Plumbers, Bricklayers/Masons, Painters.**

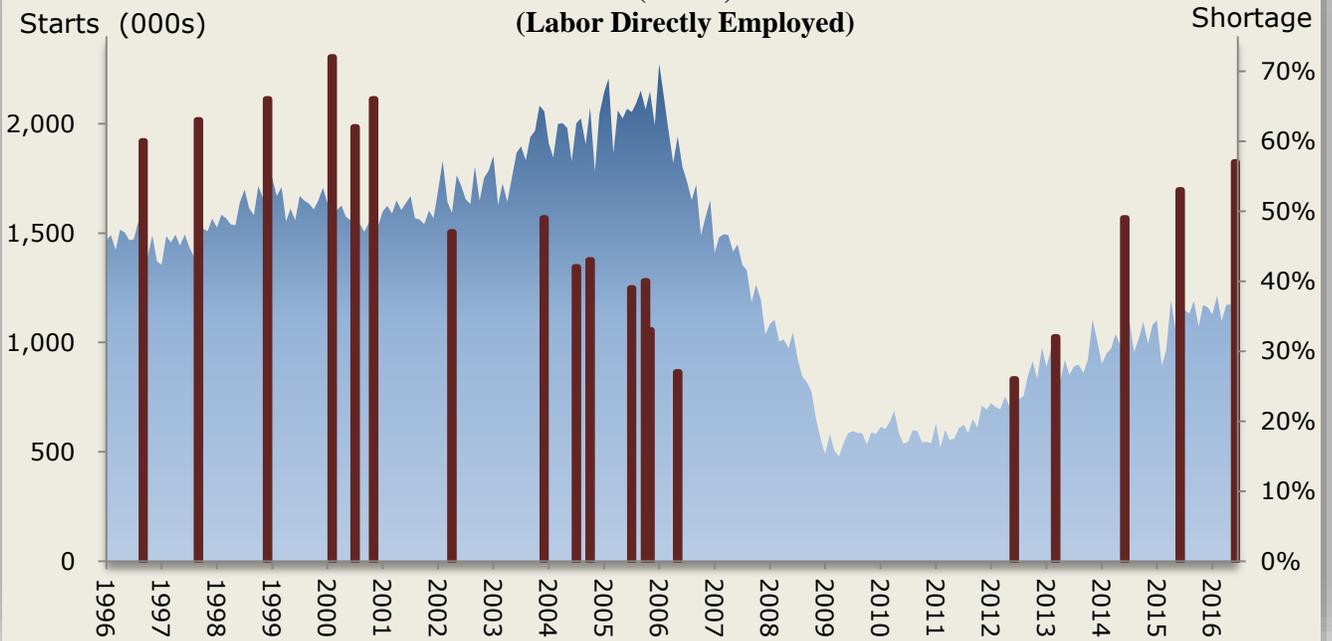




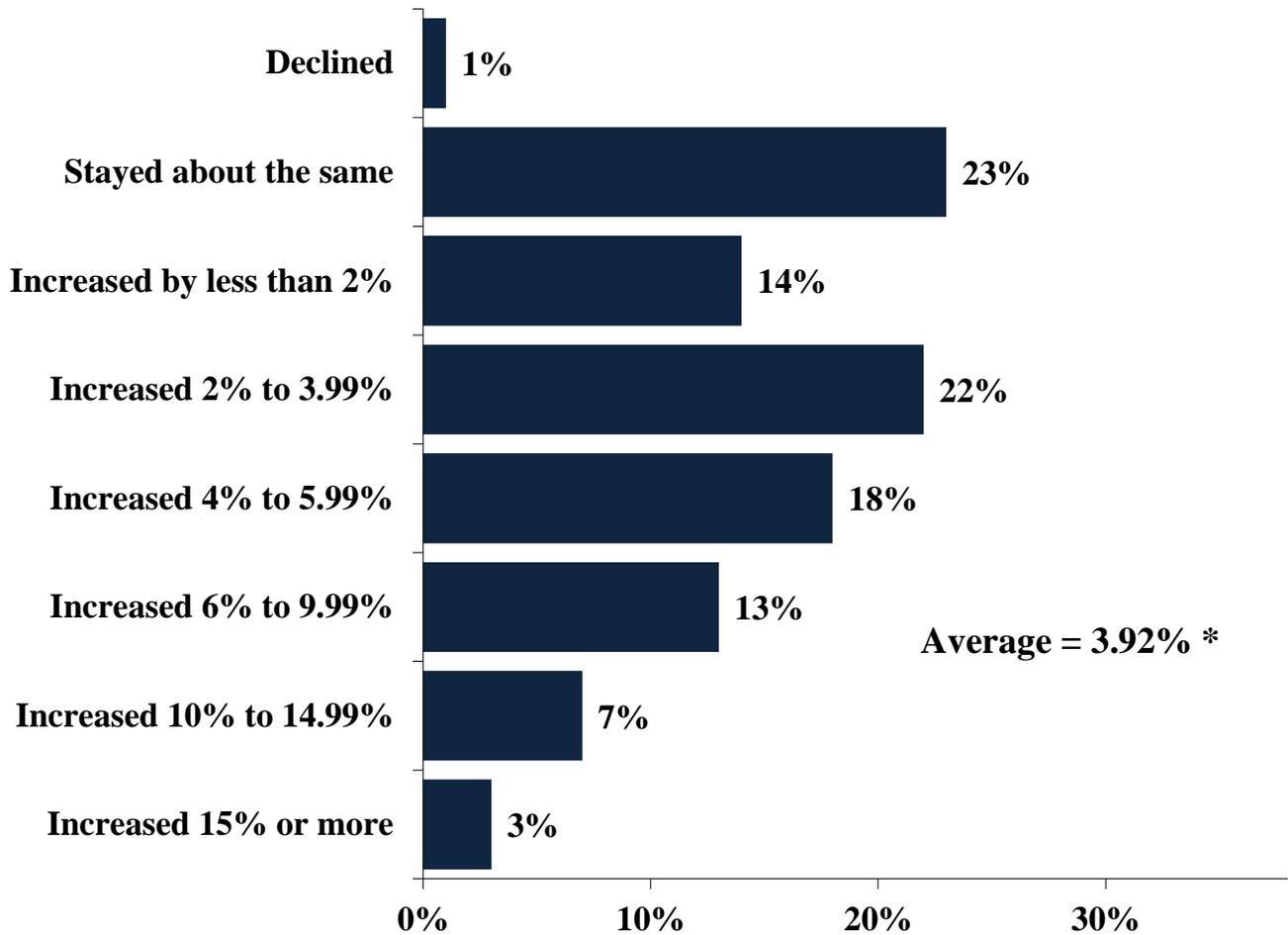
**HOUSING STARTS (AREA) AND SHORTAGE OF *FRAMING CREWS* (BARS)
(Labor Directly Employed)**



**HOUSING STARTS (AREA) AND SHORTAGE OF *BRICK LAYERS/MASONS* (BARS)
(Labor Directly Employed)**



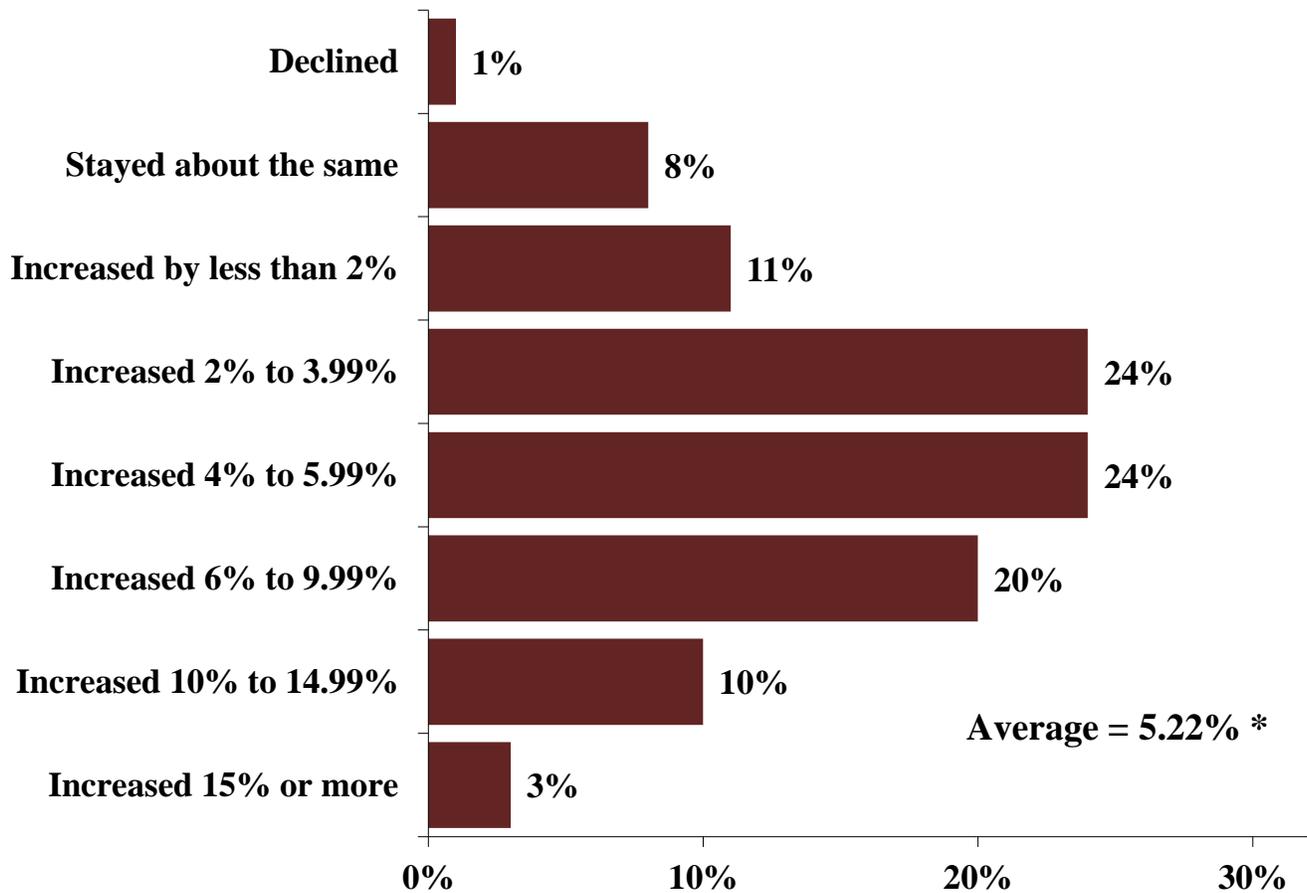
**Q2. Overall, how have total costs of Labor (directly employed by your firm) for the same house changed over the past 12 months?
(Percent of Respondents)**



	June 2016 <i>(over the past 12 months)</i>	June 2015 <i>(over the past 12 months)</i>	June 2014 <i>(over the past 6 months)</i>	March 2013 <i>(over the past 6 months)</i>
Declined	1%	1%	2%	3%
Stayed about the same	23	27	29	49
Increased by less than 2%	14	13	13	18
Increased 2% to 3.99%	22	26	25	13
Increased 4% to 5.99%	18	17	15	9
Increased 6% to 9.99%	13	11	10	5
Increased 10% or more	-	-	6	3
Increased 10% to 14.99%	7	3	-	-
Increased 15% or more	3	2	-	-
Average	3.92%*	3.31%	2.90%	1.42%

* Average is calculated assuming the midpoint of the ranges, with the values bounded at the 5th and 95th percentile of the distribution to eliminate the open-ended ranges (a technique usually called "Winsorising")

**Q3. How have total costs of Subcontractors for the same house changed over the past 6 months?
(Percent of Respondents)**

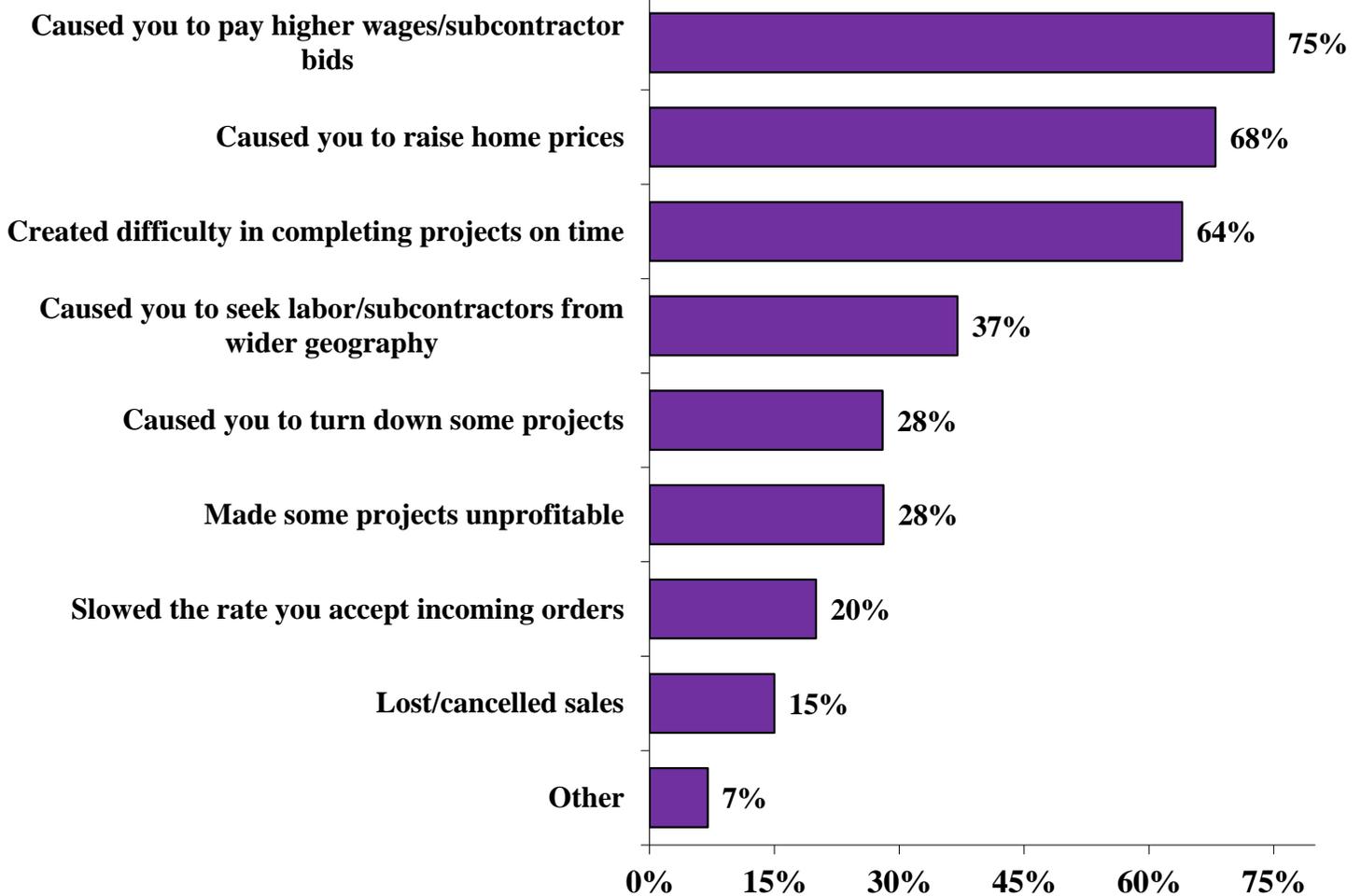


	June 2016 (over the past 12 months)	June 2015 (over the past 12 months)	June 2014 (over the past 6 months)	March 2013 (over the past 6 months)
Declined	1%	1%	1%	1%
Stayed about the same	8	9	14	26
Increased by less than 2%	11	10	15	19
Increased 2% to 3.99%	24	25	25	22
Increased 4% to 5.99%	24	25	23	20
Increased 6% to 9.99%	20	19	14	7
Increased 10% or more	-	-	9	5
Increased 10% to 14.99%	10	8	-	-
Increased 15% or more	3	4	-	-
Average	5.22%*	5.03%	3.80%	2.81%

** Average is calculated assuming the midpoint of the ranges, with the values bounded at the 5th and 95th percentile of the distribution to eliminate the open-ended ranges (a technique usually called "Winsorising")*

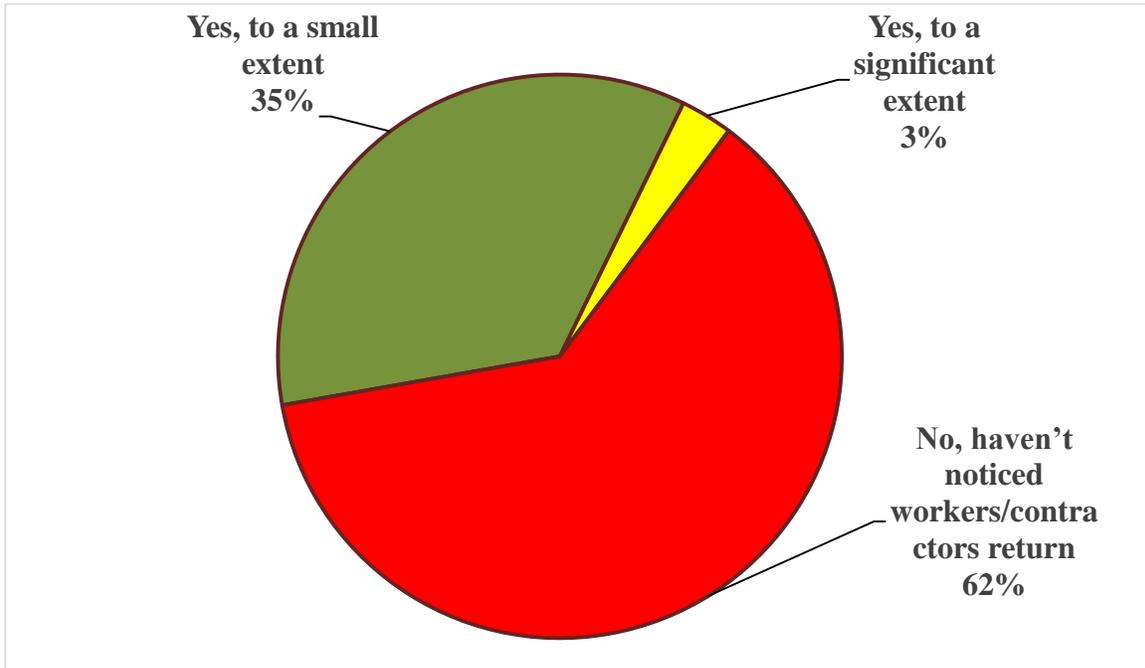
Q4. Indicate if labor shortages over the past 12 months have had any of the following effects on your business.

(Percent of Respondents)



	June 2016 (over the past 12 months)	June 2015 (over the past 12 months)	June 2014 (over the past 6 months)	March 2013 (over the past 6 months)
Caused you to pay higher wages/subcontractor bids	75%	66%	65%	54%
Caused you to raise home prices	68	61	62	54
Created difficulty in completing projects on time	64	58	60	46
Caused you to seek labor/subcontractors from wider geography	37	31	36	35
Caused you to turn down some projects	28	23	18	15
Made some projects unprofitable	28	26	24	28
Slowed the rate you accept incoming orders	20	16	13	10
Lost/cancelled sales	15	15	9	9
Other	7	7	7	na

**Q5. Have you noticed the return of workers or contractors who had left the residential construction industry during the downturn?
(Percent of Respondents)**



	Jun 2016	Jun 2015	Feb 2015
Yes, to a small extent	35%	35%	41%
Yes, to a significant extent	3	3	3
No, haven't noticed workers/ contractors return	62	62	55

Detailed Tables

Q1. LABOR AVAILABILITY (Directly employed by your firm)
(Percent of Respondents)

	Total	Region				Total No. of Units Started in 2015			
		NE	MW	S	W	Less than 6	6-24	25-99	100+
Carpenter-Rough									
Serious shortage	23	15	31	16	33	24	27	13	14
Some shortage	49	50	51	49	44	50	46	46	52
No shortage	28	35	18	35	22	26	26	40	33
Responses	281	26	65	136	54	116	84	52	21
Carpenter-Finished									
Serious shortage	22	19	29	16	28	23	24	19	10
Some shortage	48	38	45	50	48	50	44	45	57
No shortage	31	42	26	34	24	27	32	36	33
Responses	283	26	66	137	54	117	84	53	21
Electricians									
Serious shortage	9	9	6	10	12	8	11	10	10
Some shortage	39	13	44	39	42	34	40	41	38
No shortage	52	78	49	51	46	58	49	49	52
Responses	274	23	63	136	52	112	82	51	21
Excavators									
Serious shortage	8	13	6	6	12	5	7	6	24
Some shortage	36	21	27	41	40	31	42	40	24
No shortage	56	67	67	53	48	63	51	54	52
Responses	274	24	63	135	52	112	81	52	21
Framing Crews									
Serious shortage	27	21	30	19	45	28	30	19	19
Some shortage	41	42	44	42	34	38	42	40	48
No shortage	32	38	25	39	21	34	28	40	33
Responses	275	24	63	135	53	113	81	52	21
Roofers									
Serious shortage	9	8	13	8	8	12	6	4	10
Some shortage	36	25	38	35	42	30	43	35	43
No shortage	55	67	50	57	51	58	51	61	48
Responses	275	24	64	134	53	114	81	51	21

**Q1. LABOR AVAILABILITY Directly employed by your firm
(Percent of Respondents) - continued**

	Total	Region				Total No. of Units Started in 2015			
		NE	MW	S	W	Less than 6	6-24	25-99	100+
Plumbers									
Serious shortage	11	13	14	10	8	10	6	16	24
Some shortage	36	17	32	37	49	30	43	35	29
No shortage	53	70	54	54	43	60	51	49	48
Responses	273	23	63	134	53	112	81	51	21
Bricklayers/Masons									
Serious shortage	16	17	17	15	17	12	19	18	19
Some shortage	41	30	36	45	42	39	44	37	43
No shortage	43	52	47	40	42	49	37	45	38
Responses	275	23	64	135	53	114	81	51	21
Painters									
Serious shortage	10	9	15	7	10	7	13	10	10
Some shortage	40	22	45	39	42	38	40	37	45
No shortage	51	70	40	53	48	55	48	53	45
Responses	272	23	62	135	52	113	80	51	20
Weatherization Workers									
Serious shortage	6	9	7	3	8	7	5	4	5
Some shortage	32	13	36	34	33	32	30	33	42
No shortage	62	78	57	63	59	62	64	63	53
Responses	254	23	58	124	49	107	73	48	19
HVAC									
Serious shortage	7	9	5	5	11	4	6	10	14
Some shortage	35	26	39	33	40	32	37	35	33
No shortage	58	65	56	62	49	64	57	55	52
Responses	272	23	62	134	53	113	79	51	21
Building Maintenance Manager									
Serious shortage	5	9	7	3	8	8	4	2	5
Some shortage	28	13	35	28	24	22	27	33	42
No shortage	67	78	58	69	67	70	69	65	53
Responses	242	23	57	113	49	97	71	48	19

Q1. SUBCONTRACTORS' AVAILABILITY
(Percent of Respondents)

	Total	Region				Total No. of Units Started in 2015			
		NE	MW	S	W	Less than 6	6-24	25-99	100+
Carpenter-Rough									
Serious shortage	26	7	27	20	48	26	29	22	16
Some shortage	52	60	55	54	39	50	51	53	68
No shortage	22	33	18	25	13	24	20	24	16
Responses	311	30	73	147	61	123	95	58	25
Carpenter-Finished									
Serious shortage	21	7	22	19	32	24	21	18	12
Some shortage	52	45	54	54	50	51	46	57	72
No shortage	27	48	24	27	18	24	33	25	16
Responses	309	29	72	148	60	123	95	56	25
Electricians									
Serious shortage	10		7	10	17	6	13	9	12
Some shortage	45	31	46	46	48	43	42	53	44
No shortage	46	69	47	44	35	51	44	38	44
Responses	312	29	74	149	60	122	97	58	25
Excavators									
Serious shortage	11	3	11	9	18	6	10	14	25
Some shortage	42	28	33	45	51	40	42	46	46
No shortage	47	69	56	45	31	54	47	40	29
Responses	311	29	73	148	61	123	97	57	24
Framing Crews									
Serious shortage	33	20	30	26	57	32	36	29	24
Some shortage	45	47	47	49	31	42	40	52	60
No shortage	23	33	23	25	11	26	24	19	16
Responses	312	30	73	148	61	123	96	58	25
Roofers									
Serious shortage	11		11	12	15	12	13	5	8
Some shortage	44	37	45	42	51	38	45	49	68
No shortage	45	63	44	46	34	50	43	46	24
Responses	311	30	73	147	61	123	96	57	25

Q1. SUBCONTRACTORS' AVAILABILITY
(Percent of Respondents) - continued

	Total	Region				Total No. of Units Started in 2015			
		NE	MW	S	W	Less than 6	6-24	25-99	100+
Plumbers									
Serious shortage	13	3	12	11	21	9	13	16	21
Some shortage	43	28	38	48	46	41	43	48	46
No shortage	44	69	49	41	33	50	45	36	33
Responses	311	29	73	148	61	123	96	58	24
Bricklayers/Masons									
Serious shortage	19	14	17	19	23	17	16	21	24
Some shortage	48	48	39	54	44	43	51	48	68
No shortage	33	38	44	27	33	40	33	30	8
Responses	311	29	72	149	61	123	97	56	25
Painters									
Serious shortage	11	3	12	10	17	10	13	9	12
Some shortage	43	24	45	45	45	34	46	52	60
No shortage	45	72	42	45	38	56	42	39	28
Responses	308	29	73	146	60	122	96	56	25
Weatherization Workers									
Serious shortage	6	4	9	4	9	5	7	4	4
Some shortage	39	14	39	42	42	36	34	46	61
No shortage	55	82	52	54	49	59	59	50	35
Responses	280	28	66	131	55	115	82	52	23
HVAC									
Serious shortage	10	7	6	9	20	7	11	12	12
Some shortage	38	27	44	38	39	37	34	44	48
No shortage	52	67	51	54	41	57	55	44	40
Responses	311	30	71	149	61	122	97	57	25
Building Maintenance Manager									
Serious shortage	5	4	6	4	6	5	4	6	
Some shortage	30	16	33	32	27	22	25	41	61
No shortage	65	80	61	64	67	72	71	53	39
Responses	248	25	64	111	48	98	76	49	18

**Q2. How have total costs of labor (directly employed by your firm) for the same house changed over the past 12 months?
(Percent of Respondents)**

	Total	Region				Total No. of Units Started in 2015			
		NE	MW	S	W	Less than 6	6-24	25-99	100+
Declined	1		3	1		3	1		
Stayed about the same	23	21	14	30	18	23	24	18	24
Increased by less than 2%	14	21	11	13	14	17	9	13	14
Increased 2% to 3.99%	22	24	20	26	14	20	19	31	29
Increased 4% to 5.99%	18	14	30	11	21	16	19	22	5
Increased 6% to 9.99%	13	14	18	11	12	13	15	11	14
Increased 10% to 14.99%	7	7	1	5	18	6	9	5	10
Increased 15% or more	3		3	3	4	3	4		5
Average (Winsorized)	3.92	3.28	3.99	3.32	5.23	3.66	4.45	3.45	4.17
Responses	295	29	71	138	57	116	93	55	21

**Q3. How have total costs of subcontractors for the same house changed over the past 12 months?
(Percent of Respondents)**

	Total	Region				Total No. of Units Started in 2015			
		NE	MW	S	W	Less than 6	6-24	25-99	100+
Declined	1		1	1		1	1	2	
Stayed about the same	8	13	7	10	3	13	6	3	8
Increased by less than 2%	11	17	5	12	11	13	10	7	8
Increased 2% to 3.99%	24	27	20	28	16	21	21	30	32
Increased 4% to 5.99%	24	30	29	23	16	19	29	28	16
Increased 6% to 9.99%	20	13	27	15	26	18	20	22	16
Increased 10% to 14.99%	10		8	8	21	12	8	8	12
Increased by 15% or more	3		3	4	5	4	4		8
Average (Winsorized)	5.22	3.53	5.59	4.75	6.84	5.14	5.33	5.21	5.70
Responses	320	30	75	154	61	126	99	60	25

Q4. Indicate if labor shortages over the past 12 months have had any of the following effects on your business
(Percent of Respondents)

	Total	Region				Total No. of Units Started in 2015			
		NE	MW	S	W	Less than 6	6-24	25-99	100+
Caused you to pay higher wages/subcontractor bids	75	80	66	74	87	68	74	80	100
Caused you to seek labor/subcontractors from wider geography	37	60	31	37	33	34	34	41	50
Caused you to raise home prices	68	56	69	67	73	52	69	89	83
Created difficulty in completing projects on time	64	56	59	63	75	60	62	70	71
Slowed the rate you accept incoming orders	20	8	25	17	23	19	23	21	13
Lost/cancelled sales	15	0	18	14	18	16	14	14	17
Made some projects unprofitable	28	28	21	31	32	32	29	25	21
Caused you to turn down some projects	28	32	35	24	30	39	23	21	17
Other	7	8	4	9	5	7	11	4	0
Responses	295	25	71	139	60	115	90	56	24

Q5. Have you noticed the return of workers or contractors who had left the residential construction industry during the downturn?
(Percent of Respondents)

	Total	Region				Total No. of Units Started in 2015			
		NE	MW	S	W	Less than 6	6-24	25-99	100+
Yes, to a small extent	35	38	21	43	32	29	38	36	44
Yes, to a significant extent	3		3	2	6	3	3	2	4
No, haven't noticed workers/ contractors return	62	62	76	55	61	67	59	62	52
Responses	321	29	76	154	62	129	99	58	25

Appendix I: Survey Questionnaire: BEC Special Questions for June 2016

1. How would you rate the availability of the following trades in your area?

Type of labor	<u>Labor Availability</u> <i>Directly employed by your firm</i>			<u>Subcontractors' Availability</u>		
	Serious shortage	Some shortage	No shortage	Serious shortage	Some shortage	No shortage
Carpenters-rough	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Carpenters-finished	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electricians	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Excavators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Framing crews	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Roofers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plumbers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bricklayers/Masons	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Painters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Weatherization workers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Building maintenance manager	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Overall, how have total costs of labor (directly employed by your firm) for the same house changed over the past 12 months?

- | | |
|--|--|
| <input type="checkbox"/> Declined | <input type="checkbox"/> Increased 4% to 5.99% |
| <input type="checkbox"/> Stayed about the same | <input type="checkbox"/> Increased 6% to 9.99% |
| <input type="checkbox"/> Increased by less than 2% | <input type="checkbox"/> Increased 10% to 14.99% |
| <input type="checkbox"/> Increased 2% to 3.99% | <input type="checkbox"/> Increased 15% or more |

3. How have total costs of subcontractors for the same house changed over the past 12 months?

- | | |
|--|--|
| <input type="checkbox"/> Declined | <input type="checkbox"/> Increased 4% to 5.99% |
| <input type="checkbox"/> Stayed about the same | <input type="checkbox"/> Increased 6% to 9.99% |
| <input type="checkbox"/> Increased by less than 2% | <input type="checkbox"/> Increased 10% to 14.99% |
| <input type="checkbox"/> Increased 2% to 3.99% | <input type="checkbox"/> Increased 15% or more |

7. Please indicate if labor shortages over the past 12 months have had any of the following effects on your business. (Check all that apply).

- Caused you to pay higher wages/subcontractor bids
- Caused you to seek labor/subcontractors from wider geography
- Caused you to raise home prices
- Created difficulty in completing projects on time
- Slowed the rate you accept incoming orders
- Lost/cancelled sales
- Made some projects unprofitable
- Caused you to turn down some projects
- Other: (Please specify): _____

4. Have you noticed the return of workers or contractors who had left the residential construction industry during the downturn?

- Yes, to a small extent Yes, to a significant extent No, haven't noticed workers/contractors return

THANK YOU