

Subcontracting: Three-Fourths of Construction Cost in the Typical Home

Special Study for Housing Economics

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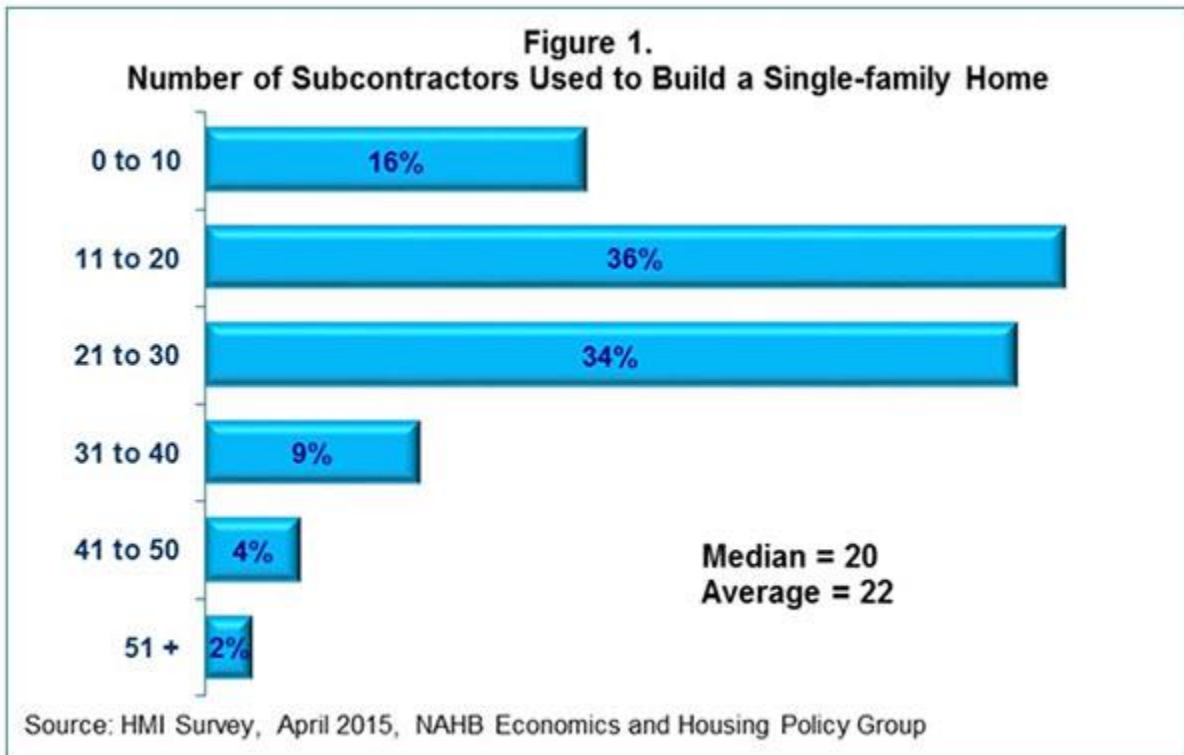
Subcontracting has long been a fact of life in the residential construction industry. Yet sometimes the role of subcontracting, so well-known inside the industry, seems misunderstood or conveniently overlooked outside it. In its [preliminary analysis](#) of a recently proposed regulation, for example, the Department of Labor ignores all costs of subcontractors to home builders when calculating what increased labor costs mean to home builders' bottom lines.

It has therefore proven worthwhile, periodically, for NAHB to remind the public of how much the construction of a typical home relies on subcontracting. Traditionally, NAHB has collected this type of information through surveys of its builder members. The latest survey, from April of this year, shows that use of subcontractors remains as strong as ever, with builders often employing 20 or more different subcontractors on a single-family project and subcontracting out over 75 percent of their construction costs.

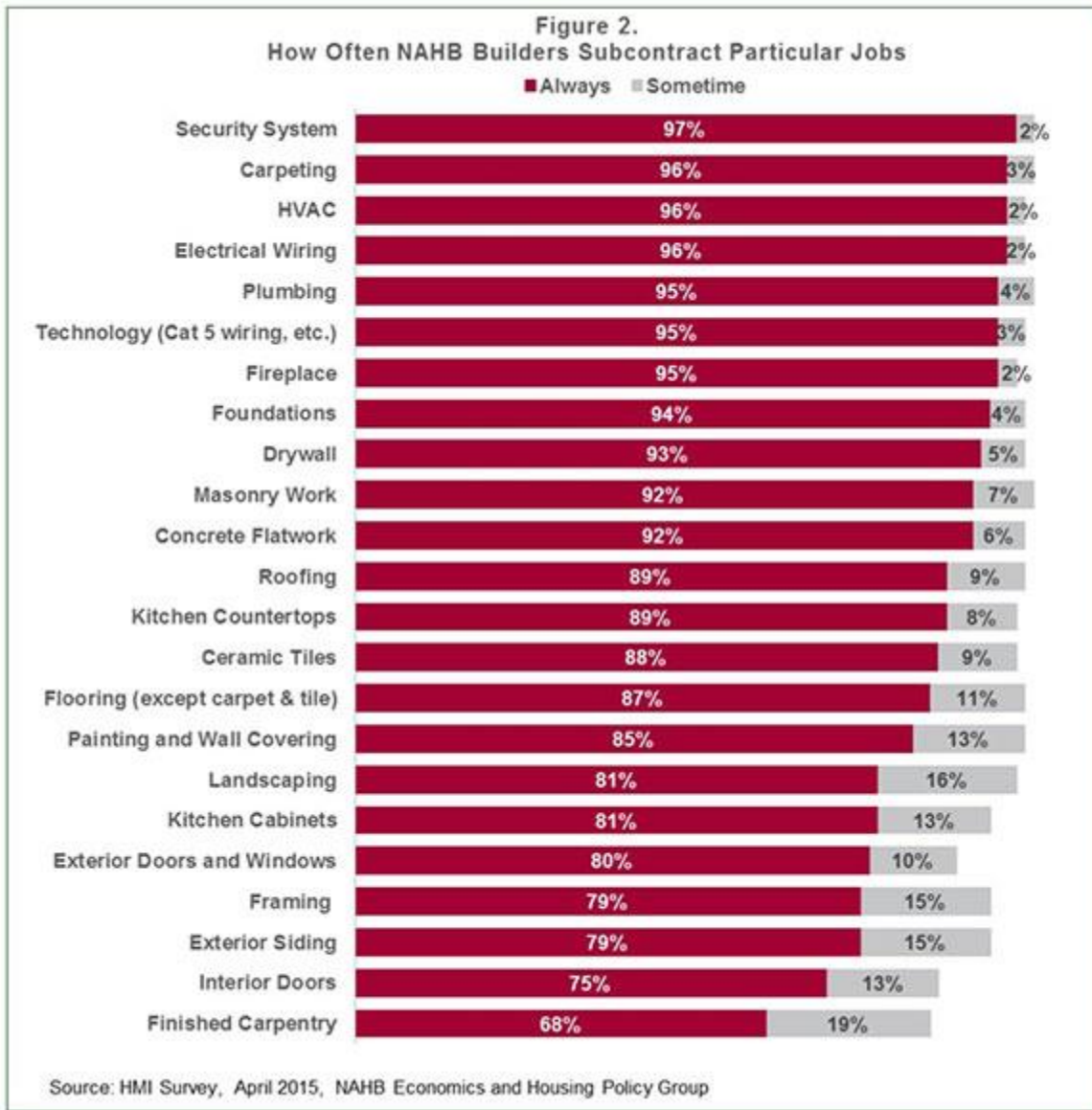
Different Jobs=Many Subcontractors

The NAHB survey on subcontracting took the form of special questions on the April 2015 installment of the survey for the [NAHB/Wells Fargo Housing Market Index](#) (HMI). The HMI survey is based on a national sample of NAHB members whose main activity is building single-family homes. The sample is stratified by region of the country and size of builder. A total of 289 builders responded to the special questions on subcontracting.

Results show that 70 percent of builders use somewhere between 11 and 30 subcontractors to build the average single-family home. The median is 20, and the average 22 different subcontractors per home (Figure 1).



The survey also asked builders how often they subcontract 23 different jobs. In every case, the job was always subcontracted by at least two-thirds of the builders. At the low end of the scale, “only” 68 percent of builders said they always subcontract finished carpentry. At the other extreme, subcontracting is nearly ubiquitous for some jobs. Over 90 percent of builders said they always subcontracted concrete flatwork, masonry, drywall, foundations fireplaces, technology, plumbing, electrical wiring, HVAC, carpeting and security systems. Even when builders don’t always subcontract these jobs all they time, it’s common to subcontract them out at least part of the time (Figure 2).



About two-thirds of the builders in the survey reported subcontracting out 75 percent of the construction cost in the average single-family home they build. The average share of construction costs subcontracted was 77 percent (Table 1).

Table 1. Subcontracting by NAHB Single-family Builders: History

	1977	1987	1993	1999	2003	2005	2012	2015			
								All	By Number of Starts		
									<5	5-24	25+
A. Number of subcontractors used per home											
Median					22	21	20	20	16	22	25
Average					25	24	24	22	19	24	25
B. Share of construction costs subcontracted											
None	1%	3%	0%	1%	2%	0%	2%	2%	4%	0%	1%
1% to 24%	9	11	6	5	2	4	5	5	2	1	1
25% to 49%	15	13	15	13	15	6	11	11	12	9	1
50% to 74%	16	18	16	16	15	9	15	15	15	15	10
75% to 99%	36	34	38	39	37	39	38	38	31	45	43
100%	24	21	25	26	29	41	30	30	36	29	42
Average	72%	68%	75%	76%	77%	84%	77%	77%	77%	81%	87%

Source: HMI Survey, NAHB Economics and Housing Policy Group.

History

Previous NAHB surveys show that subcontracting has increased over the past three to four decades, but only to a modest extent. The share of costs subcontracted in the average single-family home hovered around 70 percent in the 70s and 80s, then increased to 75 percent in 1993 before drifting upward ever so slowly over the next decade to 77 percent, where it's remained in three of the last four surveys.

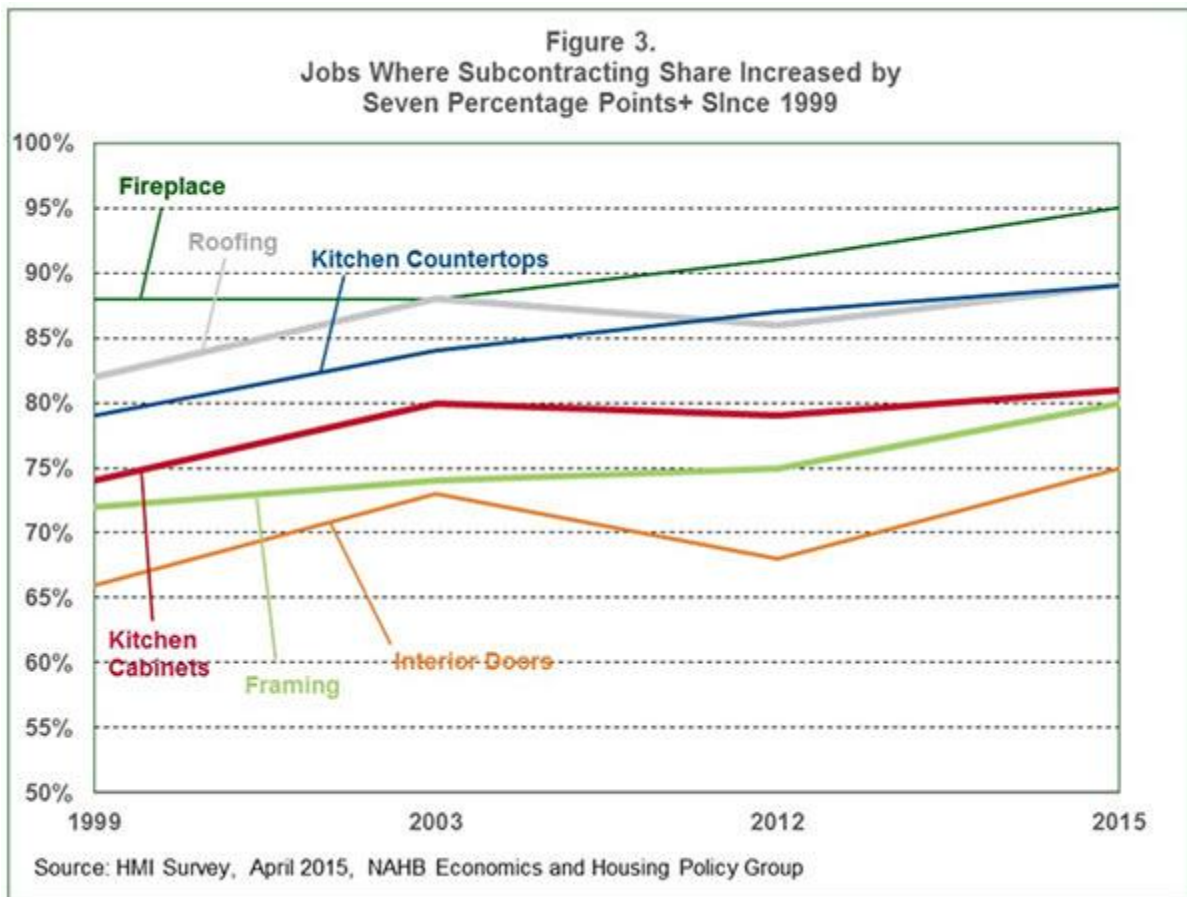
The average share subcontracted spiked to 84 percent at the peak of the housing boom in 2005. A recent [Department of Labor working paper](#) gave a tendency of subcontractors working increasingly in housing during a boom as one of the reasons labor productivity in residential construction spiked during the housing boom. In smaller subcontracting firms, it's not unusual for the owner of the business to perform actual construction work. Because business owners aren't counted as labor in official government statistics, this is technically construction work done without labor.

And there are many small construction trade contracting firms in the U.S. Indeed, the latest [statistics from the Census Bureau](#) show that there are about 1.7 million of them without any employees at all on their payroll, and there's obviously no one in these firms other than the owners to perform the work.

While (except for the 2005 blip) the share of construction costs subcontracted has been stable in the average single-family home, the number of different subcontractors used has edged down—from a median of 22 subcontractors per house in 2003 to 20 in 2015. Fewer builders are now reporting the use of very large numbers of subcontractors on the average single-family project. The decline in the share reporting

over 30 subcontractors on the average was fairly consistent, falling from 23 percent in 2003 to 15 percent in 2015.

Few of the 23 individual jobs showed a systematic trend over time, but for six of them, the share of builders always subcontracting the job increased by at least seven percentage points between 1999 and 2015 (Figure 3).



The details of the trends differed, however. For roofing, kitchen cabinets and interior doors, all or nearly all of the increased tendency to subcontract occurred between 1999 and 2003. For fireplaces, all of the increased happened after 2003; while kitchen countertops and framing showed a gradual but consistent tendency to drift upward over the entire 1999-2015 period.

Builder Size

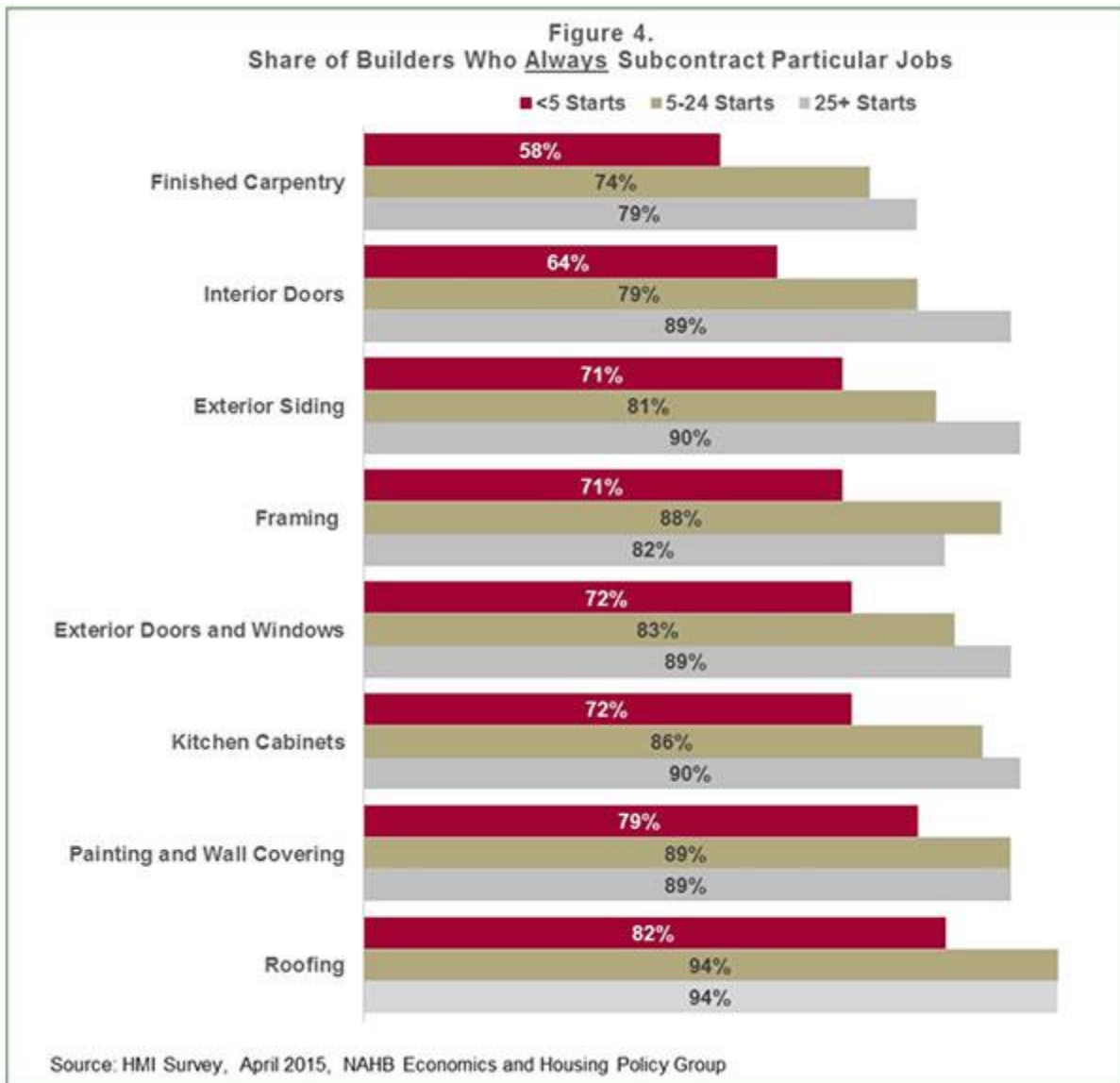
As reported in a [previous article](#), half of NAHB's builder members build 5 or fewer homes a year. Subcontracting is perhaps easiest for the uninitiated to understand at the level of these smaller companies, as it seems intuitively obvious one to five homes a year won't generate enough work to justify carrying a full-time electrician or carpet installer on payroll.

However, in home building, increasing the size of construction companies doesn't lead to vertical integration of the construction process. As Table 1 showed, larger builders tend to use subcontracting to an even greater extent. Builders with at least 25 starts on average subcontract 87 percent of the construction work, compared to 81 percent for builders with 5-24 starts, and 77 percent for builders with fewer than 5 starts.

So the conventional thinking on subcontracting is that it's a function not of a fragmented industry with many small companies, but of the varied and complex nature of the amenities that go into a new home. Construction workers therefore need extensive expertise and great sophistication on a large number of very specialized techniques. Acquiring the expertise and keeping up to date on some of these techniques may be best accomplished by companies devoted to a particular specialization.

The tendency of larger home builders to use more subcontracting is not due to the jobs most commonly subcontracted. Security systems, carpeting, electrical wiring and HVAC are subcontracted all the time by nearly all builders, regardless of their size.

Rather, the difference in subcontracting between small and large builders is due to jobs that tend to be performed more often in-house, with workers carried on a home builder's payroll. Figure 4 shows the eight jobs for which there is at least a 10 percentage point gap between builders with fewer than 5 starts and larger builders in the share who always subcontract the job. For example, 79 percent of builders with fewer than 5 starts always subcontract painting and wall covering, compared to 89 percent of larger builders. The eight jobs in Figure 4 include the 6 least often subcontracted, and 7 of the 8 least often subcontracted, jobs at the bottom of Figure 2.



Even finished carpentry (the job least likely to be subcontracted) is always subcontracted by over half of the smallest builders (the ones least likely to subcontract). This, perhaps more clearly than anything else, demonstrates how pervasive and economically significant subcontracting is to the home building industry. Working with subcontractors, maintaining relationships with them, and being able to schedule a relatively large number of them to complete projects on time while maintaining control over quality takes time to master and is an important part of being a successful home builder.