Manufacturing Barometer

Business outlook report
July 2016

Special topic:
Diversity and inclusion

pwc

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Quarterly highlights

Key findings

Chief quarterly findings

In the face of US economic and global uncertainty, US industrial manufacturers report their own companies are expecting a rebound in revenue growth over the next 12 months, through the second quarter of 2017. Nearly four in five (78 percent) are planning for positive revenue growth (up 6 points), with an average forecast of 4.2 percent own company growth, up a half point from forecasts in the prior quarter, but below the pace a year ago (4.9 percent).

However, a number of headwinds exist, and spending and hiring pullbacks are planned for the next 12 months.

The majority of US industrial manufacturers (53 percent) were uncertain about prospects for the US economy over the next 12 months; only 35 percent were optimistic (lower than last quarter) but few are pessimistic. Similarly, 46 percent of those selling abroad view the world economy as uncertain; only 29 percent were optimistic (above the prior quarter) and a comparable segment was pessimistic (25 percent).

Despite concern globally, international sales were off for the quarter but expected to resume at a 32 percent contribution to total revenues by the end of this 12-month cycle. Gross margins in 2Q 2016 were only slightly positive (net +3 percent), while concern about decreasing profitability over the next 12 months rose to 32 percent. Costs and prices were both higher in the second quarter.

CapEx continued at a lower 43 percent level (off 10 points), but operational spending held up in most areas (80 percent), led by increased spending for new product or service introductions (52 percent), research and development (40 percent and information technology (30 percent). Business acquisitions were off sharply (18 percent, off 15 points). Overall, M&A activities were lower than their recent highs (off 13 points to 27 percent). On the bright side, expansion to new markets abroad rose 5 percent to 15 percent, with new facilities continuing at 7 percent, and fewer reducing activity abroad (8 percent overall). Overall, there was a net 17 percent expanding abroad, while a net 8 percent were reducing.

On the debit side, new hiring moved into the negative, with a net workforce reduction of 0.4 percent expected in the year ahead – a recent panel low point. Only 32 percent were net hiring and 10 percent reducing their workforces, while 58 percent remained about the same. The two chief barriers to growth over the next 12 months remained the monetary exchange rate of the US dollar and lack of demand. Rising in concern were oil/energy prices (32 percent, up 20 points – with crude oil rising to $47/barrel), competition from foreign markets (28 percent, up 15 points), and decreasing profitability (32 percent, up 5 points). Lack of skilled workers continued for a segment of manufacturers (20 percent, up 5 points).

Notable uncertainties in 2Q 2016 included US GDP (2+ percent), low inflation, rising oil prices, Brexit, and the European Union and growth in Asian markets (especially China), as well as political uncertainty.

Own-company rebound in revenue growth

A solid rebound was reported in own-company revenue forecasts over the next 12 months for US industrial manufacturers – forecasting a pace of 4.2 percent, up a half-point from the last two quarters but below the pace of a year ago (4.9 percent). Moreover, 78 percent expect a positive growth rate: 8 percent forecasting double-digit growth and 70 percent single-digit growth. Ten percent expect zero growth, and a high number, 12 percent, were not reported due to prevailing market uncertainties.

International revenues on pace despite quarterly drop

US industrial manufacturers selling abroad (nearly all) project a continued contribution of 32 percent of total revenues from international sales – consistent with the past three quarters, and slightly ahead of a year ago (27 percent). However, a dropoff took place in 2Q 2016, as only 17 percent reported international sales rising, while nearly half (48 percent) reported them down, or a net -31 percent lower. This means panelists expect a "catch-up" between now and a year from now. And on the positive side, planned expansion to new markets abroad is expected by 15 percent (up 5 points), while fewer are expected to reduce international activities (8 percent).

Key findings

Optimism about the US economy continues at even lower levels

A year ago, 69 percent of US industrial manufacturers were optimistic about the 12-month prospects for the US economy. In 2Q 2016, optimistic sentiment dropped further to the 35 percent level, off 7 points from the prior quarter (42 percent), or 34 points below a year ago.

On the bright side, only 12 percent were pessimistic about the US economy's prospects (12 points above a year ago). The remaining majority were uncertain, 53 percent, signaling possible growth problems ahead.

In 2Q 2016, 38 percent believed the US economy was growing (38 points below the 76 percent in 2Q 2015), and 15 percent viewed the US economy as declining (up 12 points from a year ago). Overall, attitudes about the US economy's prospects over the next 12 months appeared to have softened further due to prevailing uncertainty.

Optimism about the world economy continued at a low level

A year ago, 38 percent of industrial manufacturers were optimistic about the world economy's prospects over the next 12 months, and 8 percent were pessimistic, nearly 5-to-1 on the plus side. Today, 29 percent are optimistic about global prospects and 25 percent are pessimistic, a 1.2-to-1 ratio positive to negative. Yet 46 percent remain on the fence, neither optimistic nor pessimistic. However, panelists had a worse view of the world economy in the quarter (2Q 2016), with 38 percent seeing it as declining, while only 20 percent viewed it as growing. Overall, panelists have a much more positive view of the global economy's prospects when looking beyond the current quarter to a larger, 12-month outlook.

New composite hiring moves into the negative

Looking ahead, 32 percent of panelists plan to add employees to their workforce over the next 12 months, off from 38 percent last quarter and 52 percent a year ago (off 20 points). Few, only 10 percent, plan to reduce their workforce and the majority, 58 percent, plan to stay about the same.

However, the overall composite growth forecast is negative 0.4 percent, below the prior quarter (+0.1 percent) and below a year ago (+0.2 percent). A year ago, the majority of industrial manufacturers were planning new hiring (52 percent). Note that those 32 percent planning to hire expect much higher revenues over the next 12 months (6.7 percent) and plan to add nearly one percent to their composite workforces.

Types of employees planning to hire focused a bit more on blue collar workers (22 percent), including skilled or specialized workers (17 percent) and semi-skilled or unskilled workers (8 percent) and professionals (18 percent), chiefly technology and engineering (15 percent).

Less CapEx but continued operational spending

CapEx spending is lower, planned by 43 percent of these industrial manufacturers over the next 12 months, down 10 points quarter-to-quarter. The mean investment as a percentage of total sales is slightly higher: from 1.9 percent of total sales level to 2.2 percent going forward.

Increased operational spending over the next 12 months was still high at 80 percent, up 5 points from a year ago. The leading increased spending areas were new product or service introductions, 52 percent (off 3 points quarter-to-quarter), and research and development, 40 percent (off 10 points), followed by information technology, 30 percent (off 5 points). Business acquisitions were lower, 18 percent (off 15 points). Plans for geographic expansion were off 5 points to 15 percent. Marketing and sales promotion rose 3 points to 20 percent, and internet commerce rose 8 points to 10 percent.

Key findings

More than half (55 percent) of panelist firms have plans for new business initiatives over the next 12 months – M&A activities led the way, cited by 27 percent (off 13 points quarter-to-quarter), specifically purchase of another business (22 percent) and sale of own business in whole or part (10 percent).

International expansion to markets abroad is on the rise again, cited by 15 percent, up 5 points quarter-to-quarter; and new facilities abroad maintained a 7 percent level. On the debit side, a net 8 percent will be reducing/closing facilities abroad. Overall, a net 17 percent will be expanding abroad, while a net 8 percent will be reducing activities abroad.

Headwinds: Strong dollar, demand, and legislative/ regulatory pressure

Condition of the world economy remains the underlying barrier to own-company growth over the next 12 months and is reflected in the two top headwinds: the strong dollar/monetary exchange rate, 48 percent (up 11 points from a year ago), and lack of demand, 42 percent (up 3 points from a year ago). At the next barrier level are legislative/regulatory pressures, 35 percent (up 5 points quarter-to-quarter) and decreasing profitability, 32 percent (up 5 points).

On the upside, concern about oil/energy prices rose sharply quarter-to-quarter from 12 percent to 32 percent, a 20-point increase as the price of crude oil rose to $47 a barrel. Concern about lack of skilled, qualified workers was up 5 points quarter-to-quarter to 20 percent.

Gross margins slightly positive; costs and prices higher

In this low inflationary environment, the gross margins of industrial manufacturers was slightly positive in 2Q 2016, with 30 percent reporting higher margins and 27 percent lower, for a net +3 percent increasers (versus +28 percent last quarter).

Costs were higher, a net +19 percent, while prices were somewhat higher, a net +11 percent. Looking ahead, concern about decreasing profitability rose to 32 percent level, 5 points above last quarter, and 8 point above a year ago (21 percent).

A quarter-over-quarter comparison of key indicators shows the business outlook for the next 12 months and how the views of the panel have changed each quarter (see chart 1.1). The pages that follow provide a detailed look at each question for the past five quarterly surveys.

Special topic: Diversity and inclusion

Diversity and inclusion strategy

Overall, nearly seventy percent (69 percent) of US industrial manufacturers currently have a diversity and inclusion strategy in place (65 percent) or plan to adopt one (4 percent).

It is noteworthy that their talent diversity and inclusion strategy enables their companies to do a better job in eight (8) key areas:

1. Collaborate internally/externally	91%	*53% strongly
2. Provide a friendlier, more inclusive environment	89%	*62% strongly
3. Attract talent	88%	*50% strongly
4. Serve new and evolving customer needs	77%	
5. Strengthen organization's brand and reputation	71%	
6. Enhance business performance	68%	
7. Compete in new industries/geographies	65%	
8. Enhance customer satisfaction	65%	

There are seven (7) major dimensions of talent diversity and inclusion addressed in their company's talent strategy:

1. Knowledge, skills, experience	74%
2. Education/skill/training	74%
3. Ethnicity/nationality/race	68%
4. Adaptability	56%
5. Gender	53%
6. Disability	53%
7. Age	53%

Key indicators for the business outlook

Chart 1.1 Key indicators for the business outlook

A quarter-over-quarter comparison of the survey's key indicators shows how the 12-month outlook has changed each quarter. The change column indicates the movement of opinion of those surveyed over the past two quarters.

Business outlook, next 12 months among industrial manufacturers		**2015**		**2016**		**Change**	**Page**
	2Q'15	**3Q'15**	**4Q'15**	**1Q'16**	**2Q'16**	**1Q'16–2Q'16**	
Optimistic about US economy	69%	60%	46%	42%	35%	↓	11
Optimistic about world economy	38%	23%	27%	24%	29%	↑	12
Expect positive revenue growth	81%	73%	70%	72%	78%	↑	20
Average growth rate expected	4.9%	5.3%	3.6%	3.7%	4.2%	↑	20
Planning major new investments	34%	37%	49%	53%	43%	↓	22
New investments as a % of sales	3.3%	5.6%	1.9%	1.9%	2.3%	↑	22
Planning to hire	52%	37%	42%	38%	32%	=	21
New workers as a % of workforce (net)	0.2%	-0.2%	0.0%	0.1%	-0.4%	↓	21
Expected barriers to growth:							
• Monetary exchange rate	37%	38%	49%	45%	48%	↑	23
• Lack of demand	39%	32%	39%	50%	42%	↓	23
• Legislative/regulatory pressures	39%	25%	22%	30%	35%	↑	23
• Decreasing profitability	24%	25%	29%	27%	32%	=	23
• Oil/energy prices	22%	20%	32%	12%	32%	↑	23
• Competition from foreign markets	17%	12%	22%	13%	28%	↑	23
• Lack of qualified workers	24%	10%	14%	15%	20%	↑	23
• Taxation policies	29%	17%	14%	13%	18%	↑	23
• Higher interest rates	7%	12%	10%	12%	7%	↓	23
• Pressure for increased wages	12%	12%	14%	10%	7%	↓	23
• Capital constraints	14%	12%	7%	7%	5%	=	23

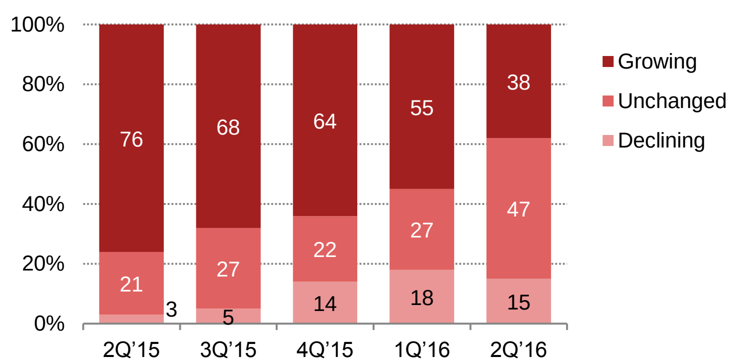
Economic views

View of the US economy, this quarter

Which best describes your view of the US economy this quarter?

In second-quarter 2016, 38 percent of US industrial manufacturers surveyed believed the US economy was growing, off 17 points from the prior quarter's 55 percent and half of the high 76 percent a year ago (-38 points). Fifteen percent believed it was declining (an improvement of 3 points) and 47 percent saw no change from first-quarter 2016.

Chart 2.1 View of the US economy, this quarter



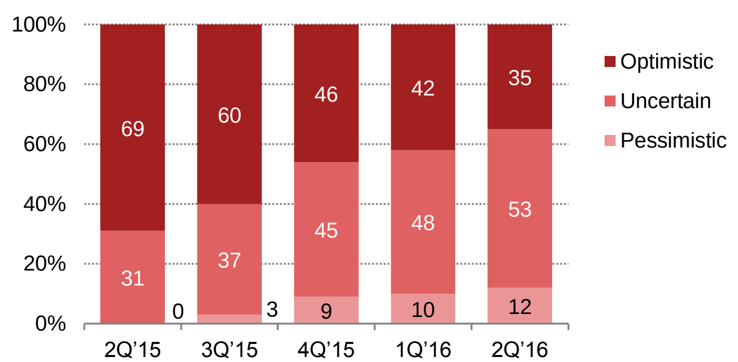
Note: In 2Q 2016 total respondents = 60

View of the US economy, next 12 months

Looking at the next 12 months, how do you feel about the prospects for the US economy?

Looking ahead, 35 percent of industrial manufacturing panelists expressed optimism about the 12-month outlook for the US economy, down 7 points from the prior quarter's 42 percent and 34 points below a year ago (69 percent). Twelve percent were pessimistic (up 2 points from last quarter), while a majority, 53 percent, were uncertain. A year ago, 69 percent were optimistic, and none percent were pessimistic.

Chart 2.2 View of the US economy, next 12 months



Of note:

51% of US industrial manufacturing CFOs believed the Federal Reserve should stop new interest rate increases, while 43% favored two or more rate increases this year.

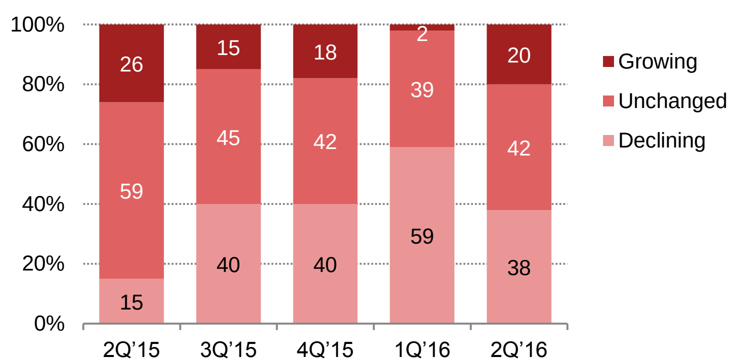
View of the world economy, this quarter

Which best describes your view of the world economy this quarter (international marketers only)?

In second-quarter 2016, 20 percent of the panelists marketing abroad viewed the world economy as growing, up 18 points from last quarter's low of 2 percent, and 6 points below the 26 percent a year ago. Thirty-eight percent believed it was declining (21 points fewer than the prior quarter). A year ago, only 15 percent viewed it as declining. Forty-two percent said they saw no change. Currently, perceptions of the world economy regained strength from its disturbingly low point in 1Q 2016.

Chart 2.3 View of the world economy, this quarter

Industrial manufacturers



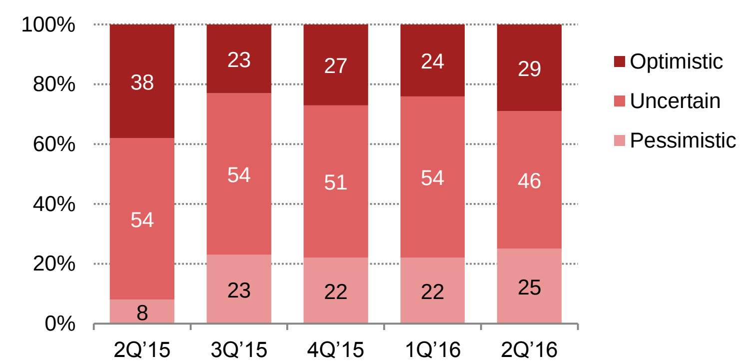
View of the world economy, next 12 months

Looking at the next 12 months, how do you feel about the prospects for the world economy (international marketers only)?

Looking ahead, 29 percent of US-based industrial manufacturers who market abroad are optimistic about the prospects for the world economy over the next 12 months, up 5 points from the prior quarter's 24 percent, but 9 points below a year ago (38 percent). Twenty-five percent are pessimistic (up 3 points), while 46 percent are uncertain. A year ago, 38 percent were optimistic (9 points higher) and 8 percent were pessimistic (17 points lower).

Chart 2.4 View of the world economy, next 12 months

Industrial manufacturers



Note: In 2Q 2016 total respondents marketing abroad = 56

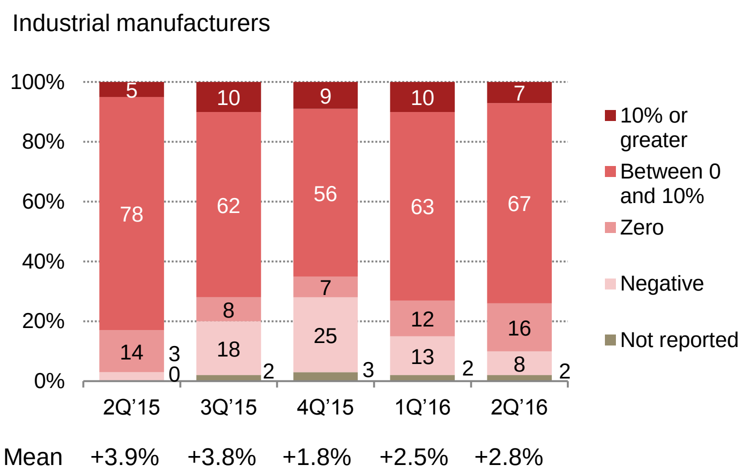
Company performance

Company revenue growth, calendar year

What is your company's estimated revenue growth rate for the calendar year?

The composite average growth estimate for own-company revenue for the calendar year 2016 rose to 2.8 percent from 2.5 percent in the first quarter for calendar-year 2016, but was sharply below the 3.9 percent a year ago. Seventy-four percent of respondents said they expect positive own-company growth, with 7 percent expecting double-digit growth and 67 percent anticipating single-digit growth. Eight percent were on the negative side (5 points fewer), while 16 percent expected zero growth and 2 percent were not reported.

Chart 3.1 Company revenue growth, calendar year



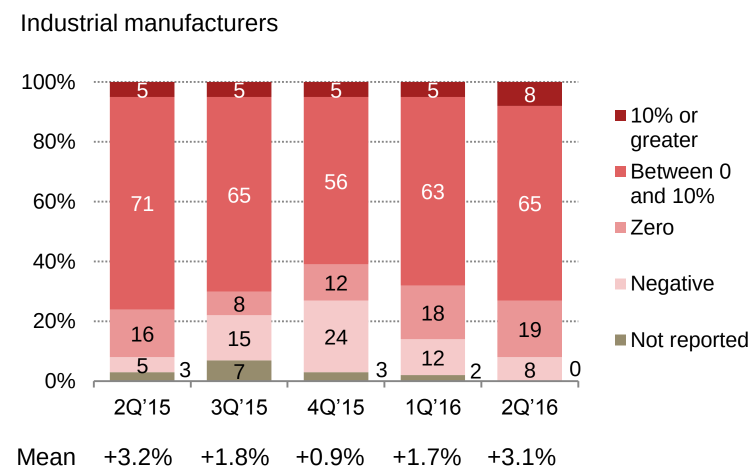
Note: In 2Q 2016 total respondents = 60

Industry growth, calendar year

What is your industry's estimated growth rate for the calendar year?

Estimated industry growth rate for calendar year 2016 rose to 3.1 percent, above the first quarter's 1.7 percent for calendar-year 2016 and is similar to the 3.2 percent a year ago. Seventy-three percent of panelists reported positive industry growth for 2016 (8 percent double-digit growth and 65 percent single-digit growth). Eight percent were on the negative side (4 points fewer) and 19 percent expected zero growth for this year.

Chart 3.2 Industry growth, calendar year

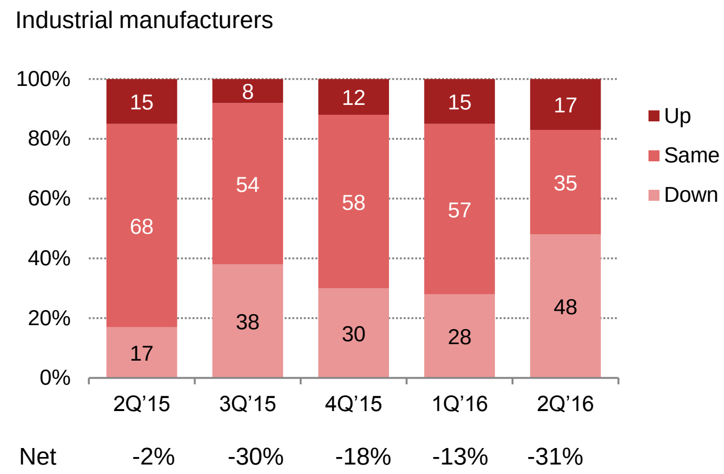


International sales

Are international sales up, down, or the same compared with three months ago (international marketers only)?

US-based industrial manufacturers that sell abroad reported continued downward momentum in international with only 17 percent reporting an increase in sales but a high of 48 percent reporting a decrease, for a net -31 percent decreasers (18 points worse than the previous quarter, and 29 points below a year ago). The remaining 35 percent said sales stayed about the same quarter to quarter. Note that this appears to continue a sharp quarterly slowdown of international sales among these panelists.

Chart 3.3 International sales

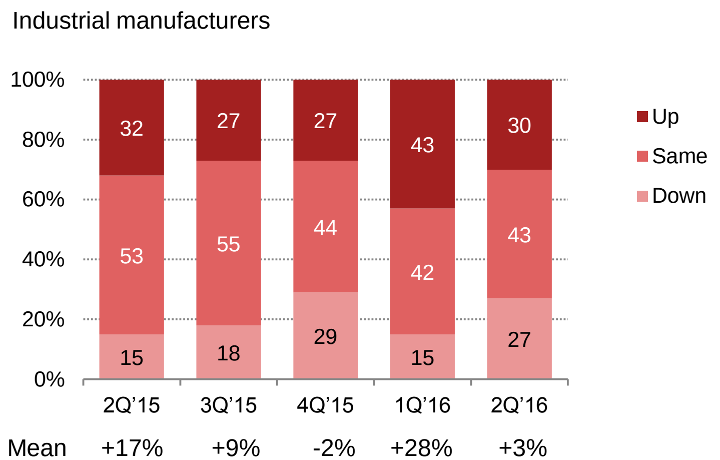


Note: In 2Q 2016 total respondents marketing abroad = 56

Are gross margins up, down, or the same compared with three months ago?

In second-quarter 2016, gross margins were slightly positive. They were higher for 30 percent of panelists and lower for 27 percent (12 points higher), for a net +3 percent, 25 points below the prior quarter's +28 percent, and 17 points below the +17 percent a year ago. Forty-three percent stayed about the same.

Chart 3.4 Changes in gross margins



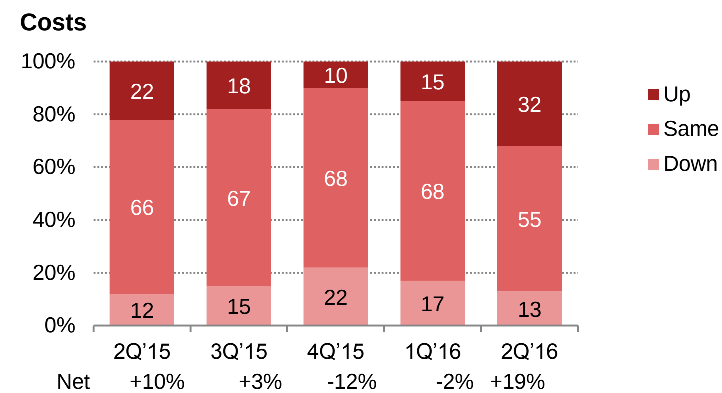
Note: In 2Q 2016 total respondents = 60

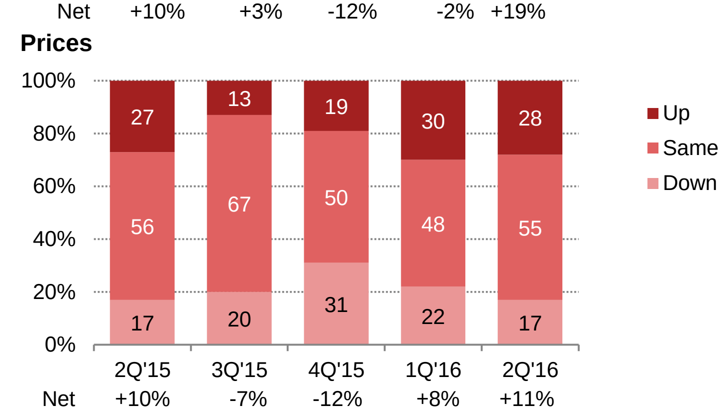
Are costs up, down, or the same compared with three months ago? prices?

In second-quarter 2016, costs were higher and prices moderately so. Thirty-two percent of US-based industrial manufacturers reported higher costs (up 17 points) and 13 percent reported lower costs (down 4 points), for a net +19 percent change, 17 points better than the prior quarter's -2 percent. On the price side, 28 percent raised prices (off 2 points) while 17 percent lowered them (off 5 points), for a net +11 percent reporting lower prices (3 points better than the prior quarter) as some price flexibility returned.

Chart 3.5 Changes in costs and prices

Industrial manufacturers



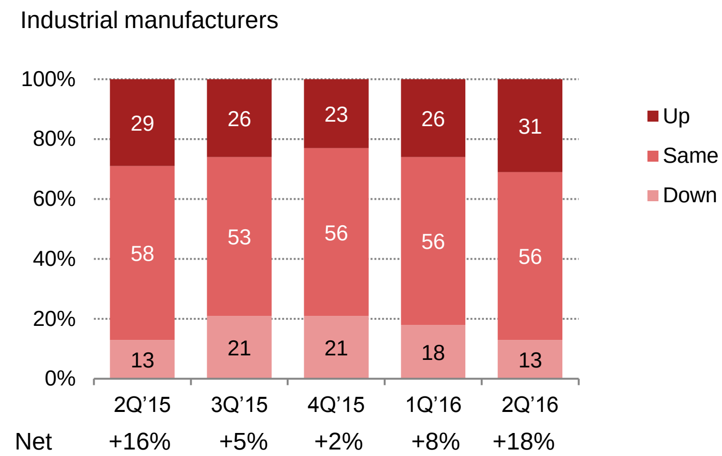


Inventory movement

Are finished inventories as a percentage of sales up, down, or the same compared with three months ago?

Inventories as a percentage of sales grew for 31 percent of US-based industrial manufacturers in the fourth quarter, up 5 points from the prior quarter. Levels were down for 13 percent (5 points lower), for a net +18 percent higher inventory movement in second-quarter 2016. A year ago in 2Q15, inventories were at a similar net +16 percent, on the up side.

Chart 3.6 Inventory movement



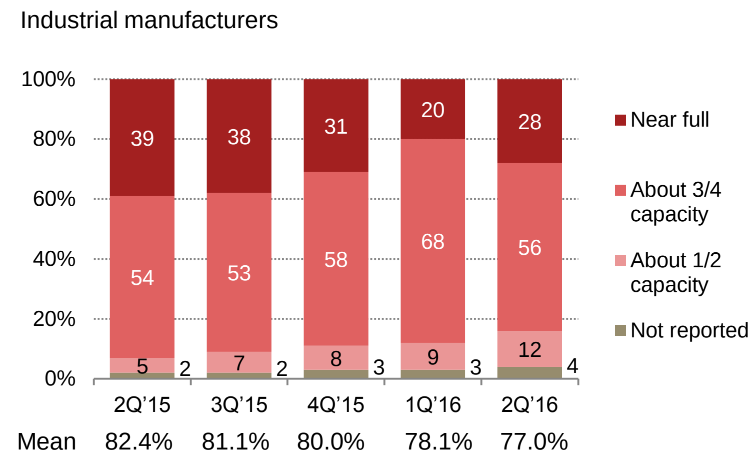
Note: In 2Q 2016 total respondents = 60

Level of operating capacity

What is your organization's current operating capacity?

Operating capacity is an estimate of the current level of permanent staffing and operations compared with what is needed for full-capacity output. In the second quarter, the mean was off slightly to 77.0 percent of capacity, with 28 percent of industrial manufacturers surveyed claiming to be at or near full capacity, up 8 points from the prior quarter but 11 points below a year ago (39 percent).

Chart 3.7 Level of operating capacity



Note: In 2Q 2016 total respondents = 60

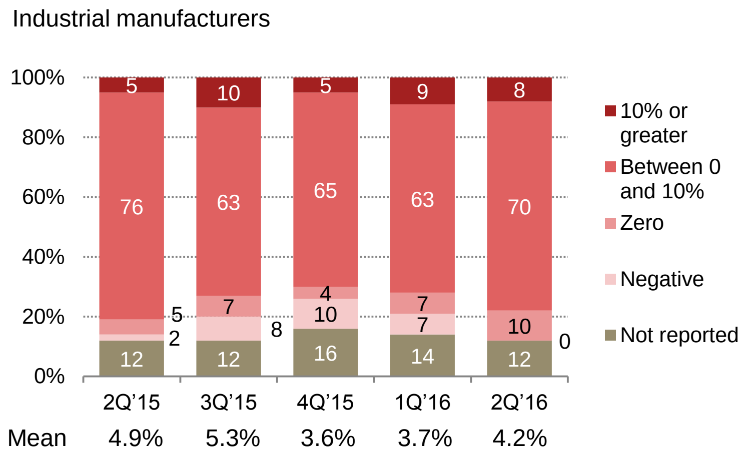
Business outlook, next 12 months

Revenue growth, next 12 months

What is your organization's estimated revenue growth rate for the next 12 months?

The projected average revenue growth rate over the next 12 months among panelists increased to a 4.2 percent pace, a half-point above the prior quarter's 3.7 percent, but below a year ago (4.9 percent). Seventy-eight percent expect positive revenue growth for their own companies, with 8 percent forecasting double-digit growth and 70 percent forecasting single-digit growth. None forecast negative growth, and 10 percent forecast zero growth, and a high 12 percent were not reported. A growth below the revenue growth pace of a year ago is now expected.

Chart 4.1 Revenue growth, next 12 months



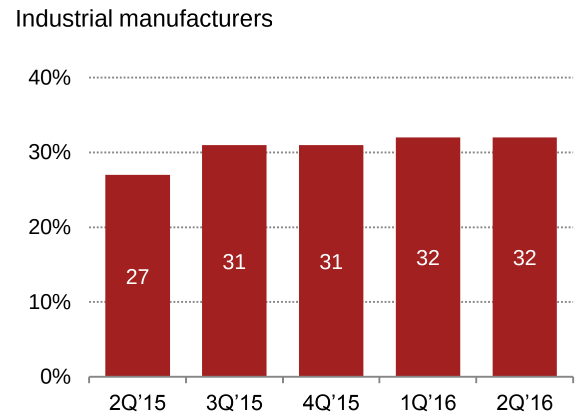
Note: In 2Q 2016 total respondents = 60

International sales, next 12 months

What percentage of your business's total revenue over the next 12 months do you expect to be derived from international sales (international marketers only)?

Of respondents selling abroad, the projected contribution of international sales to total revenue over the next 12 months continued at the 32 percent level, similar to the prior three quarters, and 5 points above a year ago. Interestingly, contribution from international sales remained high, despite the sharply lower quarterly pace of international sales.

Chart 4.2 International sales, next 12 months



Note: In 2Q 2016 those marketing abroad = 56

Of note:

61% of US industrial manufacturing CFOs would like to see a higher inflation rate, which they believe would be beneficial to the revenue growth of their own company.

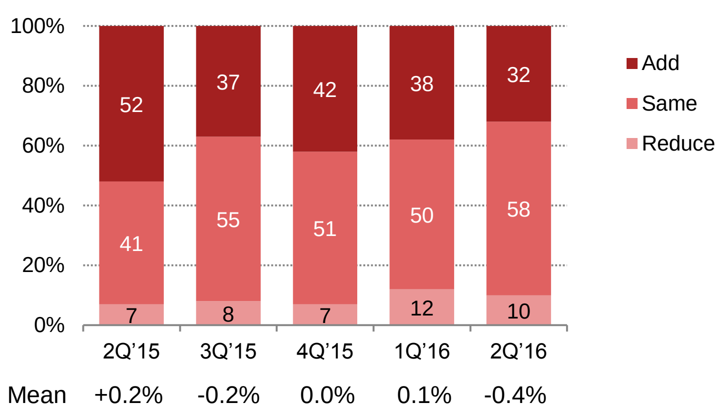
Percent planning to hire

Do you plan to add or reduce the number of full-time equivalent employees over the next 12 months?

In total, 32 percent of industrial manufacturers plan to add employees to their workforce over the next 12 months, off 6 points from the 38 percent in the first-quarter 2016, and off 20 points from a year ago (52 percent). Only 10 percent plan to reduce the number of full-time equivalent employees (off 2 points) and 58 percent will stay about the same. Total net workforce growth projection was negative this quarter, dropping to -0.4 percent, below the last quarter's +0.1 percent and last year's +0.2 percent, indicating a number of net layoffs among these industrial manufacturing firms.

Chart 4.3 Percent planning to hire

Industrial manufacturers



Note: In 2Q 2016 total respondents = 60

Percent planning to hire by type of employee

What types of employees do you plan to add over the next 12 months?

Among the 32 percent of panelists planning to hire within the next 12 months, the most sought-after employees will be blue collar/skilled labor (22 percent, same) and professionals/ technicians (18 percent, off 9 points). White collar support was at 5 percent and middle management at 3 percent. Note that technology/ engineering led the way among professionals, at 15 percent (off 8 points). Blue collar is split between skilled/ specialized workers (17 percent) and semi-skilled (8 percent).

Chart 4.4 Percent planning to hire by type of employee

Industrial manufacturers

	2Q'15	3Q'15	4Q'15	1Q'16	2Q'16
Planning to hire (net)	52%	37%	42%	38%	32%
• **Blue collar workers**	39%	23%	29%	22%	22%
• Skilled/specialized workers	29%	17%	19%	15%	17%
• Semi-skilled or unskilled workers	22%	15%	15%	17%	8%
• **Professionals**	29%	25%	27%	27%	18%
• Technology/engineering	29%	25%	27%	23%	15%
• Sales/marketing	12%	3%	---	7%	5%
• Business/finance	10%	3%	2%	---	---
• **White collar support**	19%	5%	10%	5%	5%
• **Middle management**	12%	7%	2%	7%	3%
• **Senior management**	3%	2%	---	---	---

Percent planning major new investments of capital

Percent planning to increase operational spending

Are you actively planning any major new investments of capital over the next 12 months? If so, what percentage of total sales do you expect to invest?

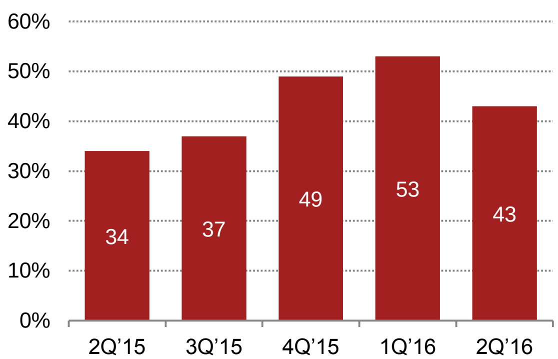
Overall, 43 percent of US industrial manufacturers surveyed plan major new investments of capital during the next 12 months, down 10 points from the prior quarter's 53 percent, but 9 points above last year's 34 percent. The mean investment as a percentage of total sales was at a similar low 2.2 percent, down from 3.3 percent a year ago. These findings indicate a moderate continuity in the number of panelist firms planning CapEx spending over the next 12 months.

Over the next 12 months, where do you expect to increase spending?

Looking ahead over the next 12 months, operational spending also reflects continuity with 80 percent of respondents planning to increase operational spending (same quarter-to-quarter). Increased expenditures leaders were new product or service introductions (52 percent, off 3 points), research and development (40 percent, off 10 points), information technology (30 percent, off 5 points), and business acquisitions (18 percent, off 15 points). Plans for geographic expansion decreased 2 points to 18 percent. Marketing and sales promotion rose 3 points to 20 percent, and advertising rose to 8 percent. Note that internet commerce rose 8 points to 10 percent.

Chart 4.5 Percent planning major new investments of capital

Industrial manufacturers



Mean investment as a % of total sales	+3.3%	+5.6%	+1.9%	+1.9%	+2.2%

Note: In 2Q 2016 total respondents = 60

Chart 4.6 Percent planning to increase operational spending

Industrial manufacturers

	2Q'15	3Q'15	4Q'15	1Q'16	2Q'16
Percent planning to increase spending (net)	75%	82%	86%	80%	80%
• New product or service introduction	44%	48%	44%	55%	52%
• Research and development	34%	37%	41%	50%	40%
• Information technology	22%	22%	36%	35%	30%
• Facilities expansion	10%	20%	22%	18%	20%
• Marketing and sales promotion	9%	10%	15%	17%	20%
• Business acquisition	20%	23%	34%	33%	18%
• Geographic expansion	12%	13%	19%	20%	15%
• Internet commerce	7%	5%	2%	2%	10%
• Advertising	2%	---	9%	5%	8%

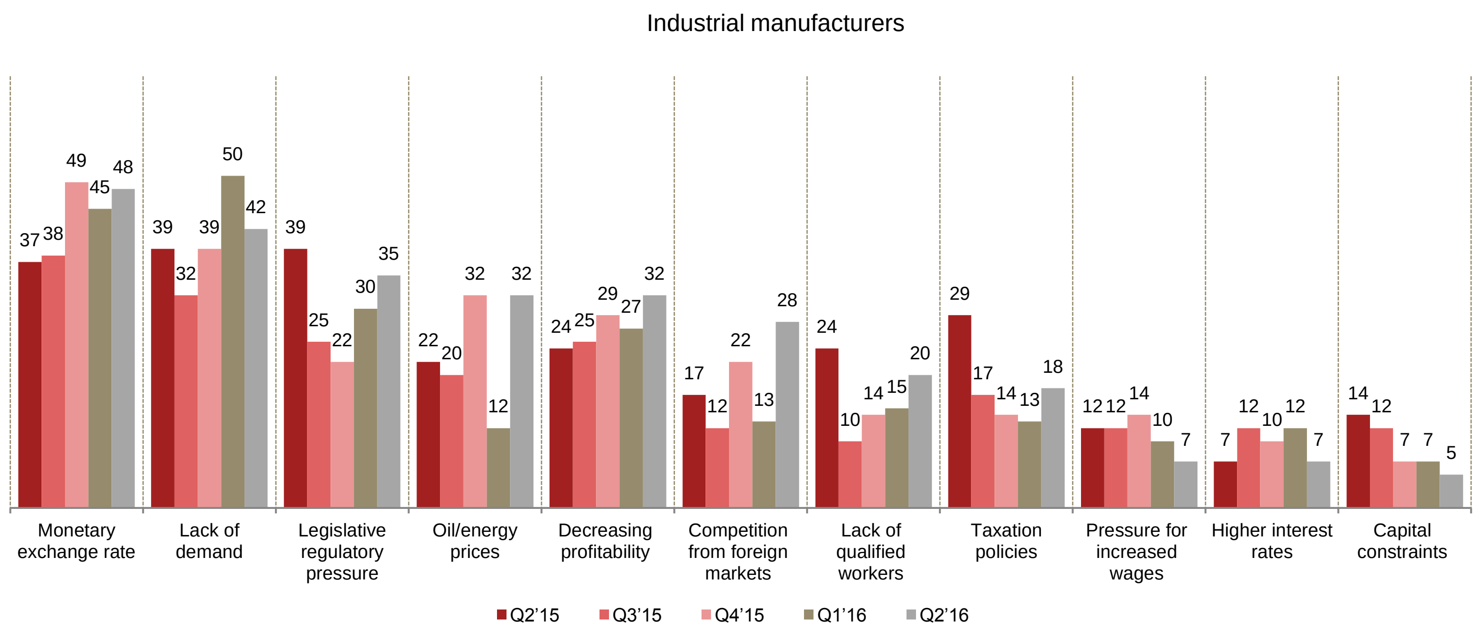
Expected barriers to business growth

Over the next 12 months, will any of the following represent barriers to business growth?

Significantly, monetary exchange rate and lack of demand have become the leading headwinds to growth over the next 12 months, at 48 percent and 42 percent, respectively, reversing their positions this quarter. A year ago, monetary exchange rate was at 37 percent, 11 points lower, while lack of demand was at 39 percent, 3 points lower. Oil/energy rose sharply this quarter, up 20 points to 32 percent, as the price of crude oil rose into the high forties.

Other chief barriers to growth rising this quarter were legislative/regulatory pressure at 35 percent (up 5 points from last quarter), decreasing profitability at 32 percent (up 5 points), competition from foreign markets at 28 percent (up 15 points), taxation policies, up 5 points to 18 percent, and lack of qualified workers, 20 percent (up 5 points).

Chart 4.7 Expected barriers to business growth



Note: In 2Q 2016 total respondents = 60

Plans for M&A and other business initiatives

Over the next 12 months, do you expect to participate in any of the following new business initiatives?

More than half the panelists are planning new business initiatives (55 percent, off 2 points). Importantly, many panelists (27 percent) are planning M&A activity over the next 12 months, but this is 13 points below the first quarter high. They are mostly planning to purchase another business (22 percent, off 15 points), and some are planning to sell part or all of their own business (10 percent). Plans for expansion to new markets abroad rose to 15 percent (up 5 points), with 7 percent planning new facilities abroad. Reductions abroad were reported by a net 8 percent, with closing/reduction of facilities abroad cited by 6 percent, and reduced activity abroad by 6 percent. Net expansions abroad was at 17 percent (9 points higher).

Strategic alliances (20 percent) remained on pace, as did new joint ventures (15 percent).

Chart 4.8 Plans for M&A and other business initiatives

Industrial manufacturers

	2Q '15	3Q '15	4Q '15	1Q '16	2Q '16
New business initiatives (net)	54%	43%	49%	57%	55%
• M&A activities (net)	29%	27%	39%	40%	27%
• Purchase another business	19%	22%	34%	37%	22%
• Sell part/all own business	14%	7%	10%	10%	10%
• Equity carve-out/spin-off	---	2%	2%	2%	---
• New strategic alliance	29%	13%	20%	20%	20%
• New joint venture	19%	13%	17%	13%	15%
• Expand to new markets abroad	12%	8%	14%	10%	15%
• New facilities abroad	9%	5%	9%	8%	7%
• Reduce activity in markets abroad	7%	7%	7%	3%	7%
• Close/reduce facilities abroad	10%	7%	3%	8%	5%

Note: In 2Q 2016 total respondents = 60

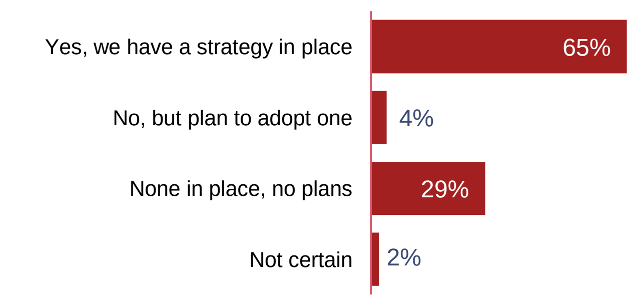
Special topic: Diversity and inclusion

Diversity and inclusion strategy

Does your organization have a diversity and inclusion strategy in place?

Nearly seventy percent (69 percent) have a diversity and inclusion strategy in place (65 percent) or plan to adopt one (4 percent). Another 29 percent have none and no plans, while 2 percent were not certain.

Chart 5.1 Diversity and inclusion strategy in place

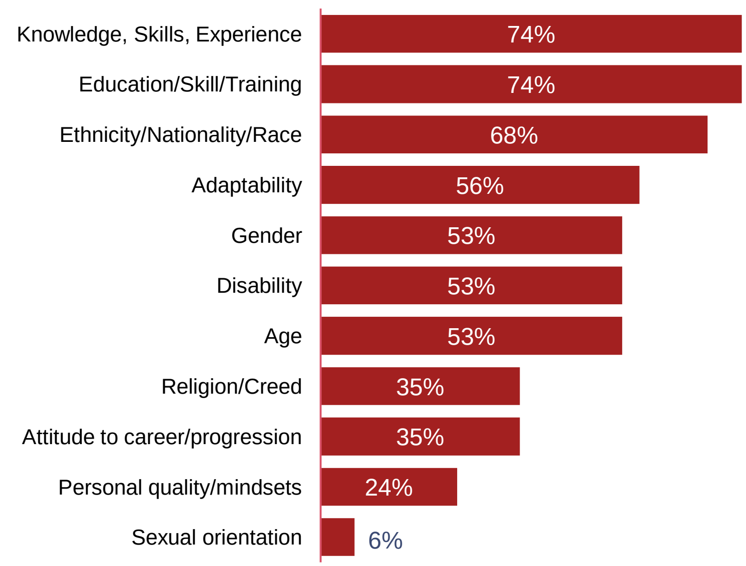


Dimensions of diversity and inclusion

Which dimensions of talent diversity and inclusiveness do you specifically address, or plan to address, in your company's talent strategy?

Significantly, there are seven major dimensions of talent diversity and inclusion addressed in company's talent strategy, led by: knowledge, skills, experience (74 percent), education/skill/training (74 percent) and ethnicity/nationality/race (68 percent). Half of industrial manufacturers also address adaptability (56 percent), gender (53 percent), disability (53 percent), and age (53 percent). Religion/creed and attitude toward career/progression were cited by 35 percent each but relatively few get into issues of sexual orientation (only 6 percent).

Chart 5.2 Dimensions of diversity and inclusion



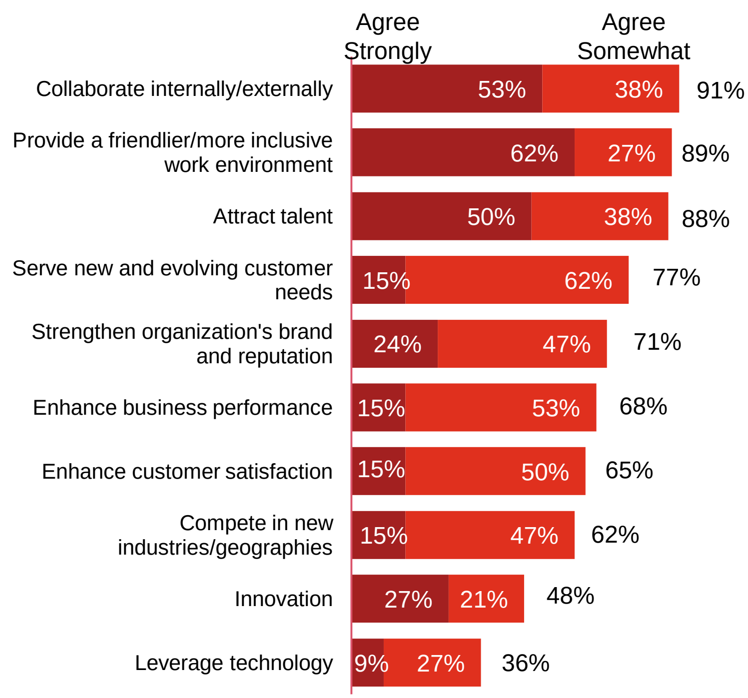
Results of diversity and inclusion strategy

To what extent do you agree or disagree that, as a result of your strategy to promote talent diversity and inclusiveness, your organization is better able to do the following?

The three chief results of industrial manufacturer's talent diversity and inclusion strategy is that their companies are better able to (1) collaborate internally/externally; (2) provide a friendlier, more inclusive environment; and (3) attract talent.

There is moderate agreement by 60 percent or more of the panelist companies that they are better able to (4) serve new and evolving customer needs; (5) strengthen their organization's brand and reputation; (6) enhance business performance; (7) compete in new industries/geographies; and (8) enhance customer satisfaction.

Chart 5.3 Results of diversity and inclusion strategy

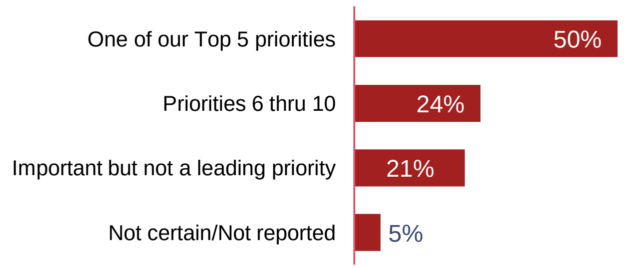


Importance of diversity

How important is diversity to the company's human capital strategy?

It is noteworthy that diversity and inclusion in industrial manufacturers' human capital strategy is a top 10 priority in three-fourths (74 percent), and a top 5 priority in half of these companies (50 percent).

Chart 5.4 Importance of diversity to companies' human capital strategy



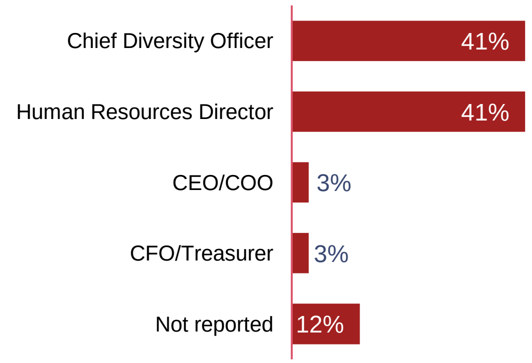
Executive in charge of diversity objectives

The highest-ranked executive accountable for diversity objectives typically holds the title of Chief Diversity Officer, Director of Diversity, or a related title. Does your company have such a title?

Overall, 41 percent of these industrial manufacturers have a specific Chief Diversity Officer or Director of Diversity title. Otherwise, the Human Resources Director is typically in charge of the company's diversity objectives (41 percent).

In turn, the Chief Diversity Officer typically reports to the CEO/COO (57 percent), CFO/Treasurer (29 percent) and/or the Director of Human Resources (29 percent) (note: 15% overlap).

Chart 5.5 Executive in charge of diversity objectives



Survey demographics and research methodology

Demographics	
Who	Senior executives of US-based industrial manufacturing organizations
Interview dates	March 22, 2016 to June 20, 2016
	Industrial manufacturers (60)
Average number of employees at location	7,985
Average business unit revenue	$2.98 billion
Average enterprise revenue	$9.07 billion
Market capitalization	$10.59 billion
Industry sectors	Products 100% Manufacturing 100%

Methodology	
	PwC's *Manufacturing Barometer* is a quarterly telephone survey conducted by the independent research firm BSI Global Research Inc. Our regular survey panel consists of senior executives from a geographically balanced sample of large companies in the United States. Ninety-five percent of the panelists hold titles such as president, CEO, CFO, VP of finance, treasurer, controller, internal audit director, or other related title.

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About the research:

The *Manufacturing Barometer* is one in a series of quarterly business outlook surveys from PwC. The survey provides a view on the 12-month outlook for revenue growth, new investments, new hiring plans, emerging business barriers and more. In addition to the business outlook, we hear from our panelists about special issues they face as the business climate changes. Results of the quarterly business outlook surveys and special issue surveys are available at *www.barometersurveys.com*.

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