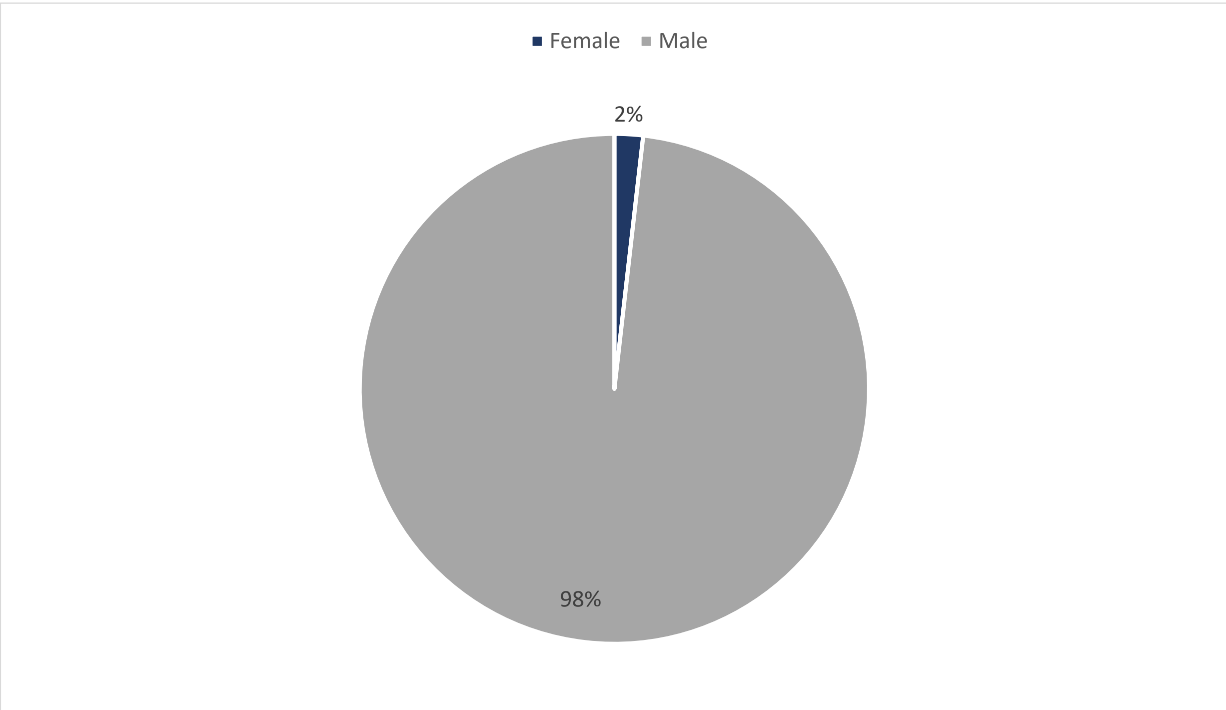
Plumbing National Survey 2019

IOPSA conducts the Plumbing National Survey annually. The survey is sent out digitally through the main IOPSA and PIRB communication channels including emails, social media, IOPSA website and Plumbing Africa digital. The aim of the analysis is (i) to understand IOPSAs market and the plumbing industry better, (ii) to track progress and assess whether there have been any significant changes from the previous survey, and (iii) to get guidance for future strategic direction. This analysis is an initial review of the responses and some preliminary findings from the Plumbing National Survey 2019.

According to Statistics South Africa (2019), there are approximately 126 000 plumbers and apprentices operating in South Africa. In total, 939 respondents completed the Plumbing National Survey 2019, accounting for 0,75% of all plumbers and apprentices in South Africa. From the 2018 findings, 779 respondents took part in the survey, 160 fewer responses than in 2019.

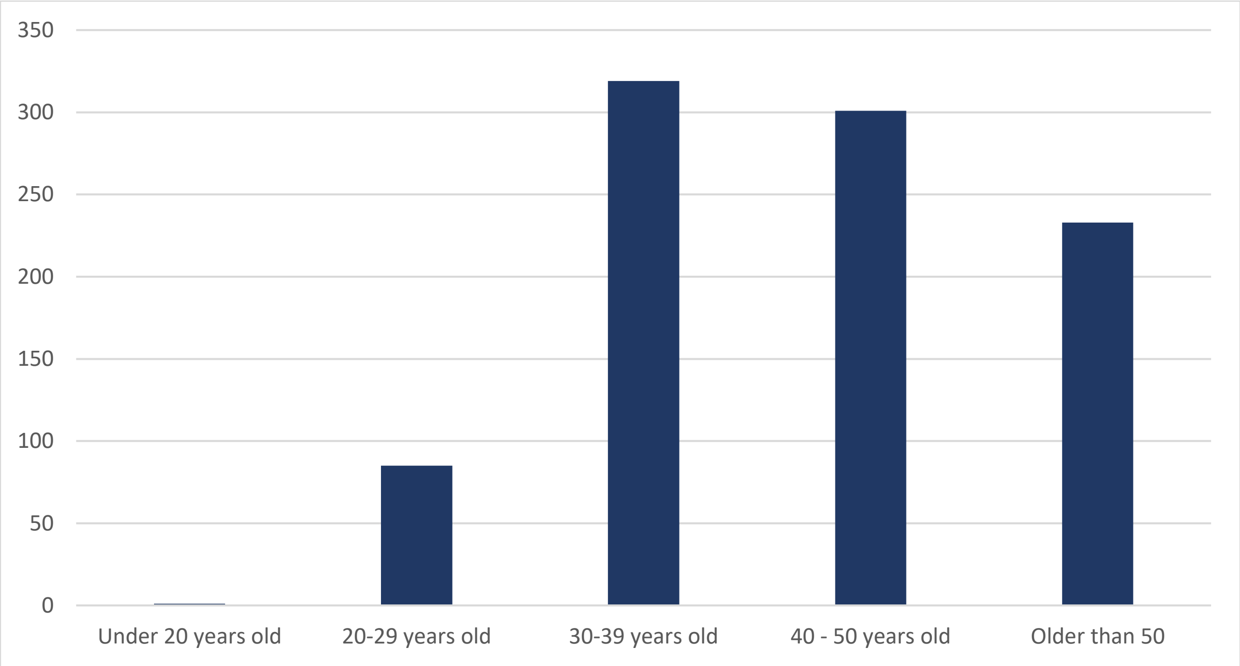
Graph 1: What is your gender?

The results in Graph 1 show that the survey was almost entirely completed by males. Plumbing is a male dominated industry. Of the 939 responses received, 98% were male. Only 2% of responses received from the survey were female, so there is big opportunity through diversifying the traditionally male dominated membership of IOPSA and PIRB, and the plumbing industry in general. From the survey, the women in plumbing were either self-employed or work for plumbing companies, government and merchants and manufacturers of plumbing materials and equipment. StatsSA (2019) estimates that women make up 8% of the total percentage of plumbers and apprentices in South Africa. Comparatively, Graph 1 illustrates the same gender demographics as the previous Plumbing National Survey conducted in 2018.



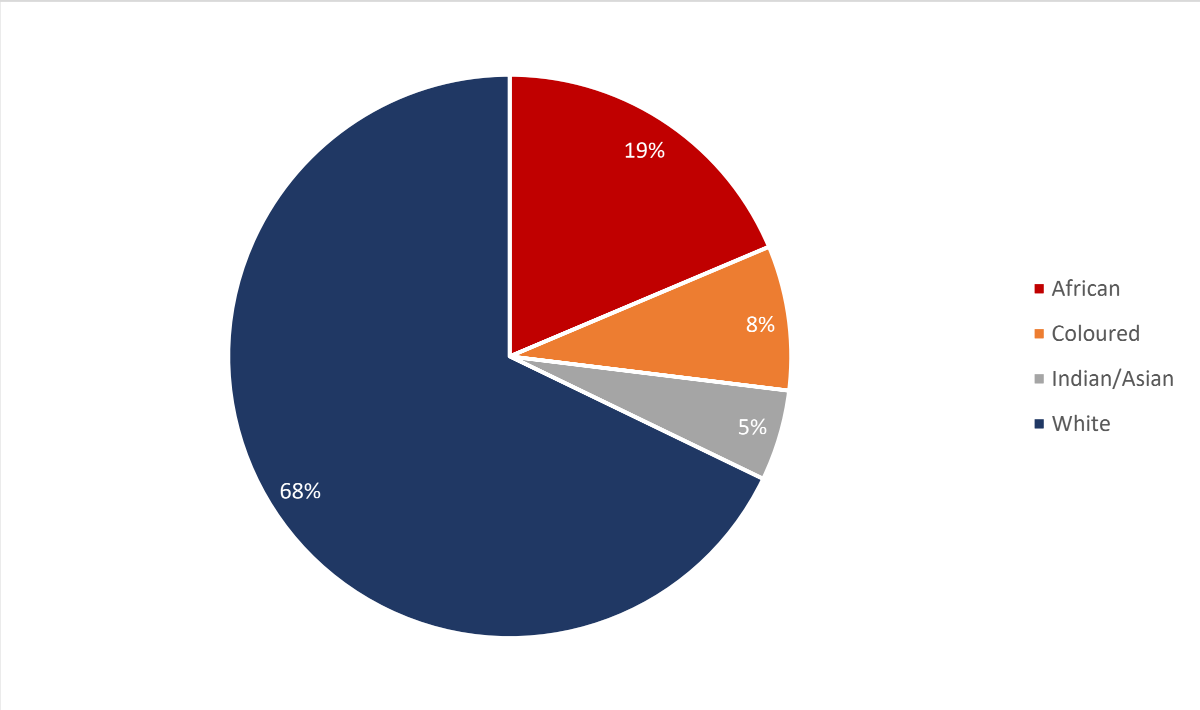
Graph 2: What is your age?

Regarding age, Graph 2 shows that a significant majority, two-thirds of plumbers from the survey are between 30 and 50 years old. From the respondents, there is one young plumber under 20 years old and a relatively small portion of plumbers who are 20-29 years old. Respondents older than 50 made up a notable share (24,7%) of plumbers in the industry. Similar to Graph 2, from the 2018 Survey results, there was only 1 plumber under 20 years old. The overall share of respondents under 30 years old declined from 10,4% in 2018 to 9,1% in 2019.

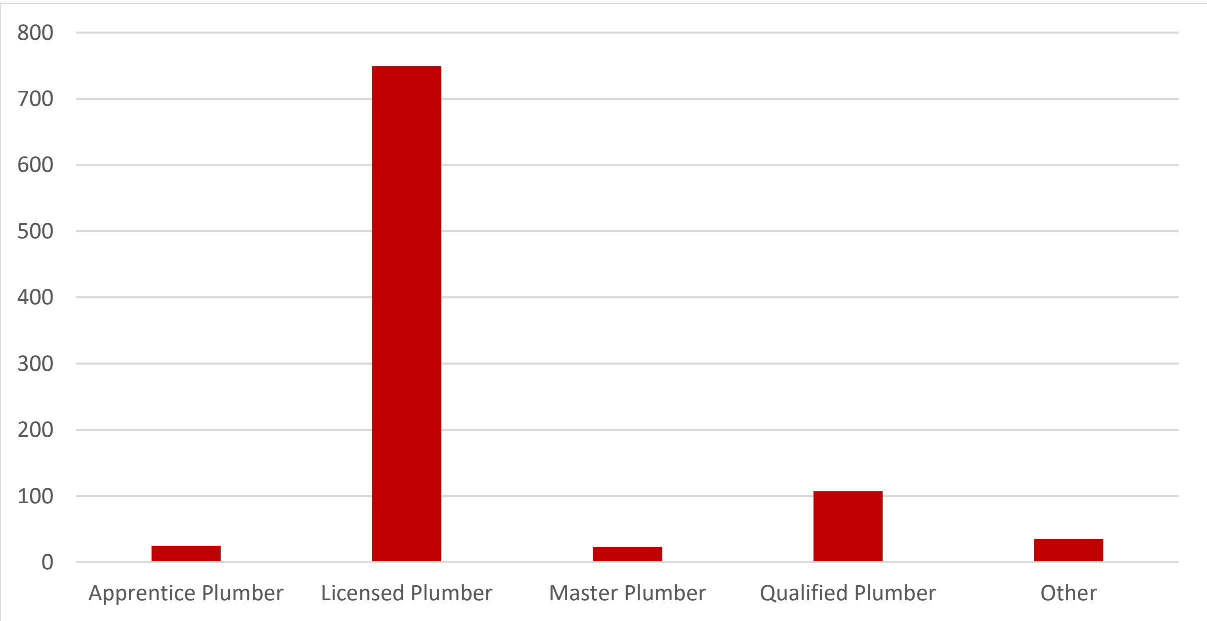


Graph 3: What is your racial classification?

Graph 3 shows the racial classification of respondents. The Graph reveals that 68% (637) of respondents from the survey were White. Africans (19%) (178) made up the second largest number of respondents from the survey, while there were 8% (78) Coloureds, and only 5% (49) of respondents from the survey were Indian/Asian. In 2018, the results show that there were more White respondents (72,9%), and very few Indian/Asian (3,5%) and Coloured (5,6%) respondents compared to 2019.



Graph 4: What plumbing qualification do you have?

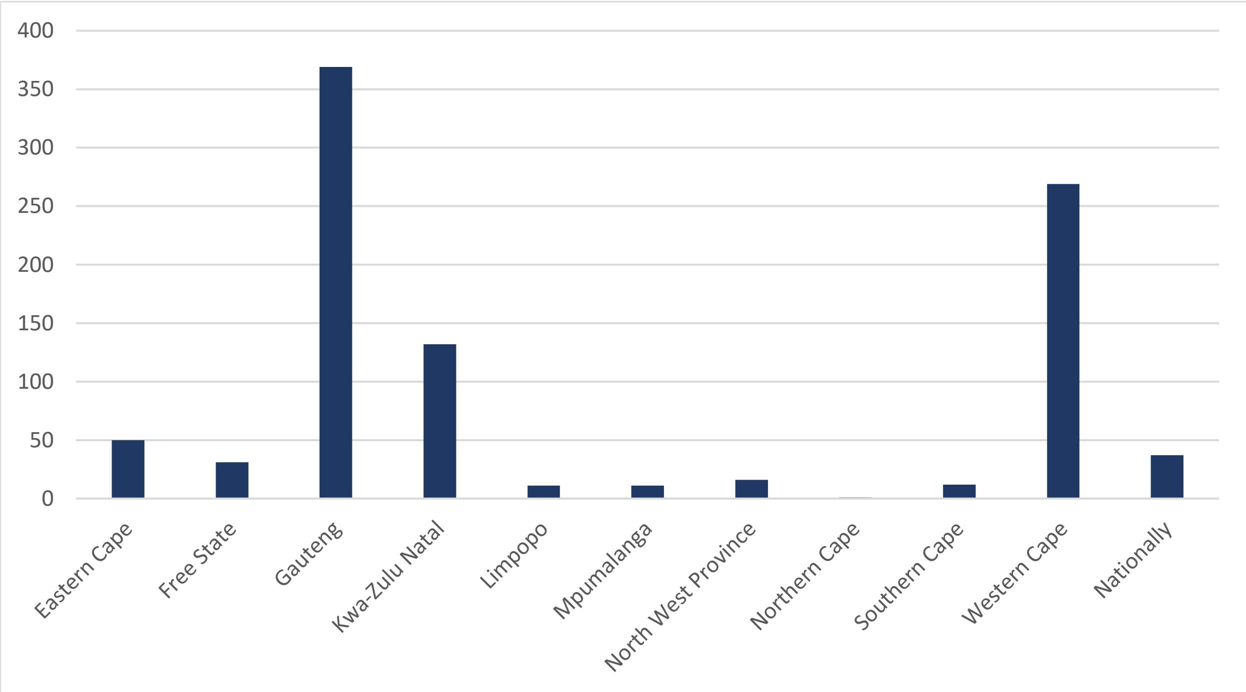


The results from Graph 4 show that a significant number of respondents from the survey were licensed plumbers (79,8%), followed by 11,4% respondents who reported that they were qualified plumbers.

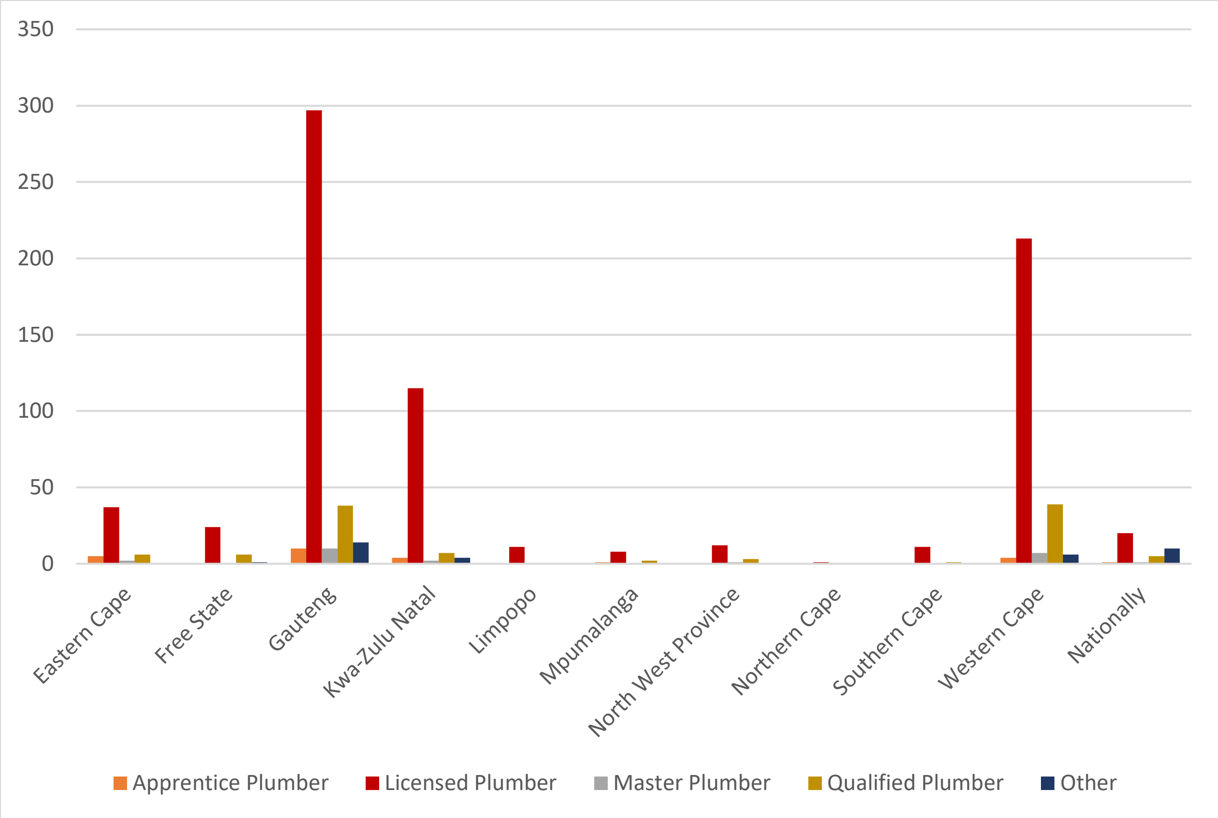
There were 2,7% respondents surveyed who were apprentices, and only 2,4% said they were Master plumbers. When comparing Graph 4 to the 2018 Survey results, 85% of respondents reported that they were licensed plumbers, a slightly higher percentage compared to 2019. 2019 saw a rise in qualified plumbers from 6,4% in 2018 to 11,4% in 2019, while the share of apprentices in both years remained with very little difference, 2,3% in 2018 and 2,7% in 2019.

Graph 5: Which province does your company trade in?

From Graph 5, over two-thirds of respondents from the survey worked for companies that trade in Gauteng (39,3%), Western Cape (28,6%) and Kwa-Zulu Natal (14,1%), with the Eastern Cape (5,3%) in fourth place. 22 (2,4%) respondents, 11 from Mpumalanga and 11 from Limpopo said that their companies trade in the two provinces, while 12 (1,3%) respondents said that their companies trade in the Southern Cape. From Graph 5, only one respondent said their company trades in the Northern Cape. 37 (3,9%) respondents said that their companies trade nationally. The major difference between the findings from 2018 vs 2019 is that in 2018 the third largest percentage of responses were from respondents who worked for companies that traded nationally (12,8%), with Kwa-Zulu Natal in fourth place accounting for 6,2% of respondents. However, in 2019, only 3,9% of respondents said that their companies traded nationally, and 14,1% said their companies traded in Kwa-Zulu Natal.



Graph 6: Plumbing qualifications by province



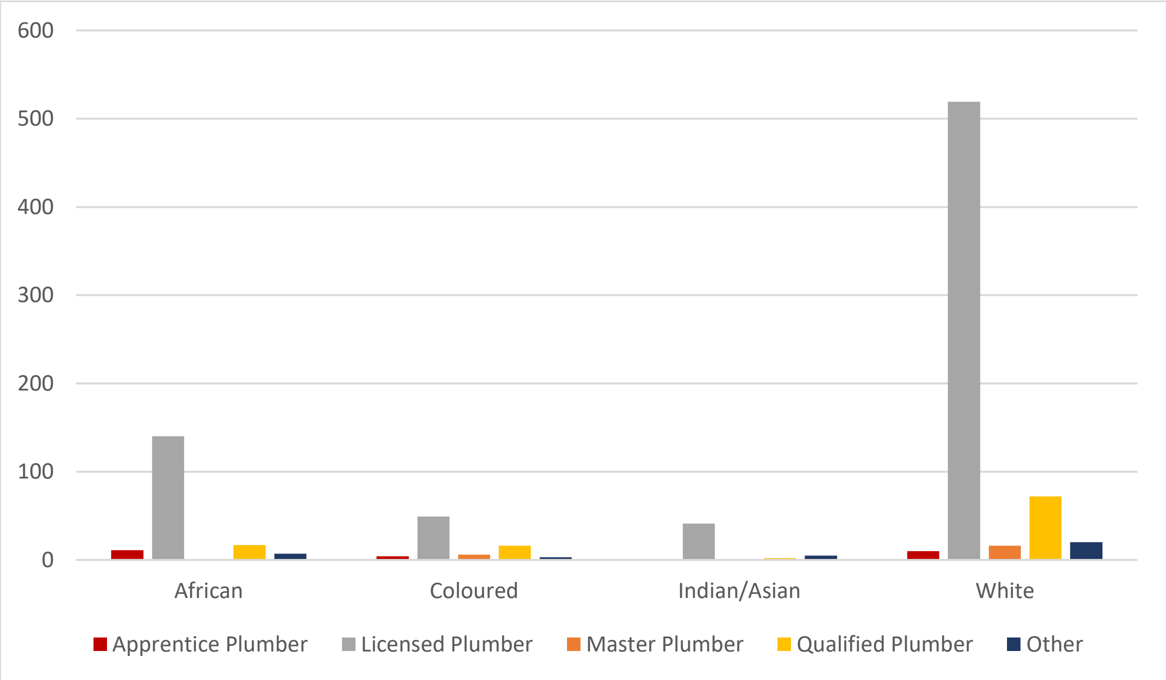
From the respondents, the largest percentage of licensed plumbers are in Gauteng, Western Cape and Kwa-Zulu Natal, closely followed by the Eastern Cape. The least number of (licensed) plumbers were in the Northern Cape (1), Mpumalanga (8), Limpopo (11), the Southern Cape (11) and the North West (12). Of the 23 Master plumbers who took part in the survey, only five provinces, Gauteng, the Western Cape, North West (1), Kwa-Zulu Natal (2) and the Eastern Cape (2) have Master plumbers. Gauteng and the Western Cape both have approximately the same number of respondents who are qualified plumbers; 38 qualified plumbers in Gauteng and 39 plumbers in the Western Cape. The Northern Cape and Limpopo are the only two provinces with no respondents who are qualified plumbers.

Graph 7: Plumbing qualification by race

From Graph 7, licensed plumbers are spread across all race classifications. Because the majority of respondents are White (68%), there are relatively more White licensed plumbers compared to other races. In three race groups with the exceptions of Indian/Asian, the second highest form of qualification after licensed plumbers are qualified plumbers. The large number of apprentice plumbers from the survey were 11 (44%) African respondents, followed by 10 (40%) White respondents and 4 (16%) Coloured apprentice respondent. From a total of 749 licensed plumbers, only 41 (5,5%) Indian/Asian respondents indicated that they were licensed plumbers, while there were no Indian/Asian respondents who indicated that they were apprentices, qualified or Master plumbers. There were also no African Master plumbers from the survey.

In the previous survey, 63% of White respondents reported that they were licensed plumbers, while there were 22%% Black respondents who were licensed plumbers. In 2019, as shown in Graph 7, there were 68% licensed White plumbers and 14,9% African licensed plumbers, a drop from previous figures.

For apprentices, in 2019, African apprentices accounted for 44% of all apprentices in the survey, White apprentices accounted for 40% and Coloured apprentices accounted for 16% of apprentices in the survey. In 2018, these results slightly differ as White apprentices accounted for 56% of all apprentices, while Black apprentices accounted for 44% of apprentices. There were no reported results for Coloured or Indian/Asian apprentices.

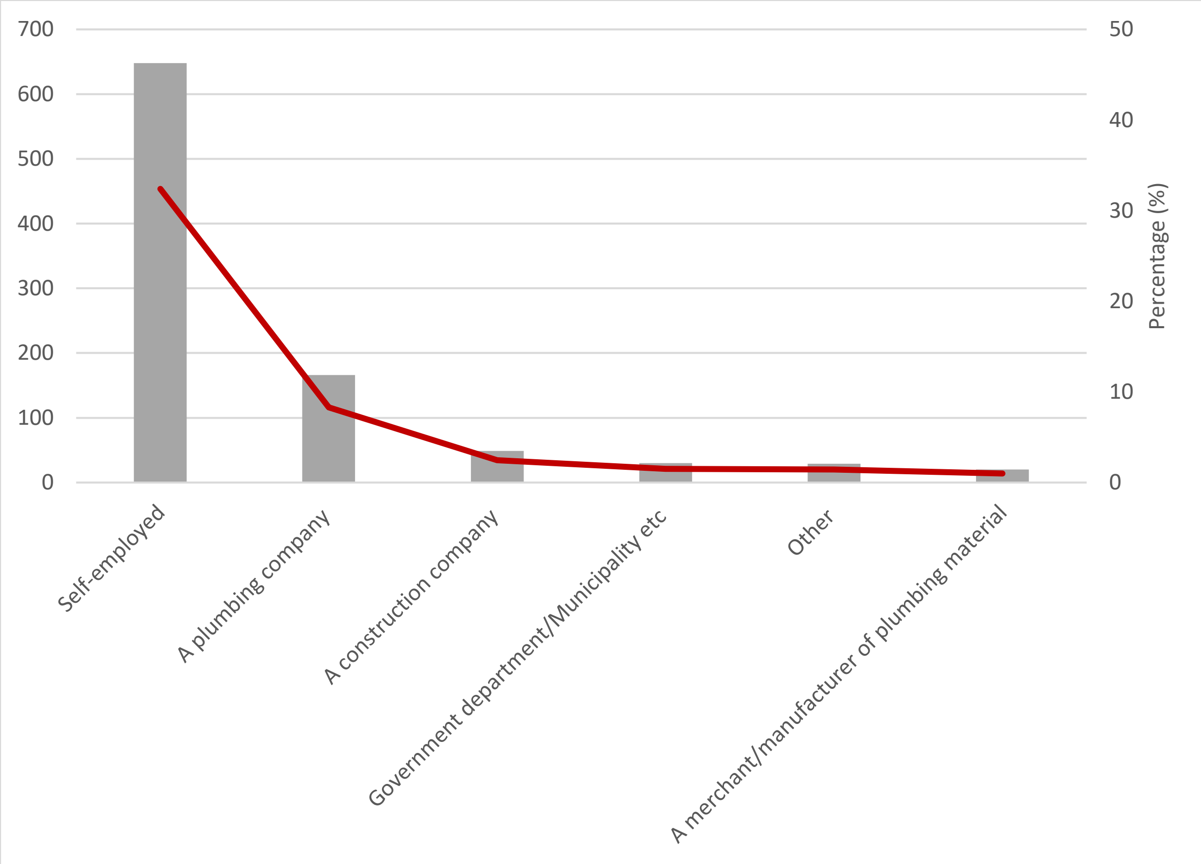


Graph 8: Who do you work for?

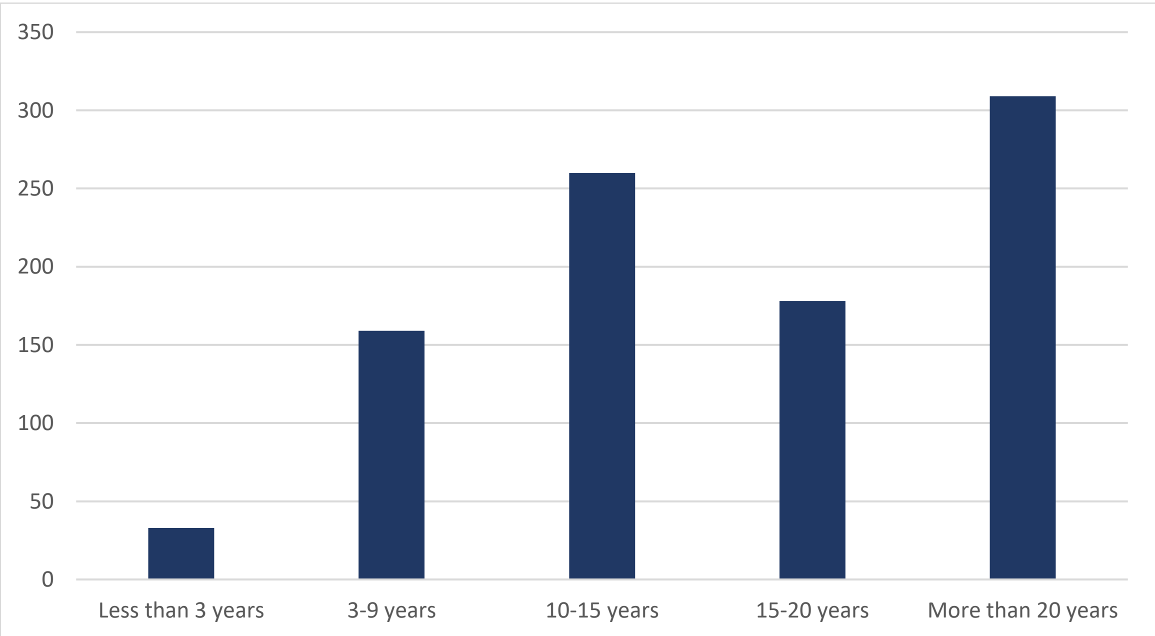
A significant number of respondents in the survey operate as self-employed (69%[1]). Respondents surveyed are not only employed in plumbing companies, but they are also employed in the construction sector, government departments or by merchants or manufacturers of plumbing materials and equipment. Outside of self-employment, the majority of respondents (17,7%) are employed by a plumbing company, with the construction sector as the second largest employer of the respondents (5,2%). 3,1% of respondents are employed in various other companies and sectors including insurance, education and training, quantity surveyor practices and IOPSA. The smallest number of respondents (2,1%) are employed by merchants and manufacturers of material and equipment.

In comparison to the 2018 survey results, self-employment, plumbing companies and the construction sector remained the key employers of plumbers. 4,0% of respondents worked for merchant and manufacturers of plumbing material and equipment in 2018, the fourth largest employer of plumbers, however from the 2019 survey, as shown in Graph 8, merchant and manufacturers of plumbing material and equipment employed the lowest percentage of plumbers.

[1] It is possible that IOPSA and PIRBs membership may be largely skewed towards self-employed plumbers.



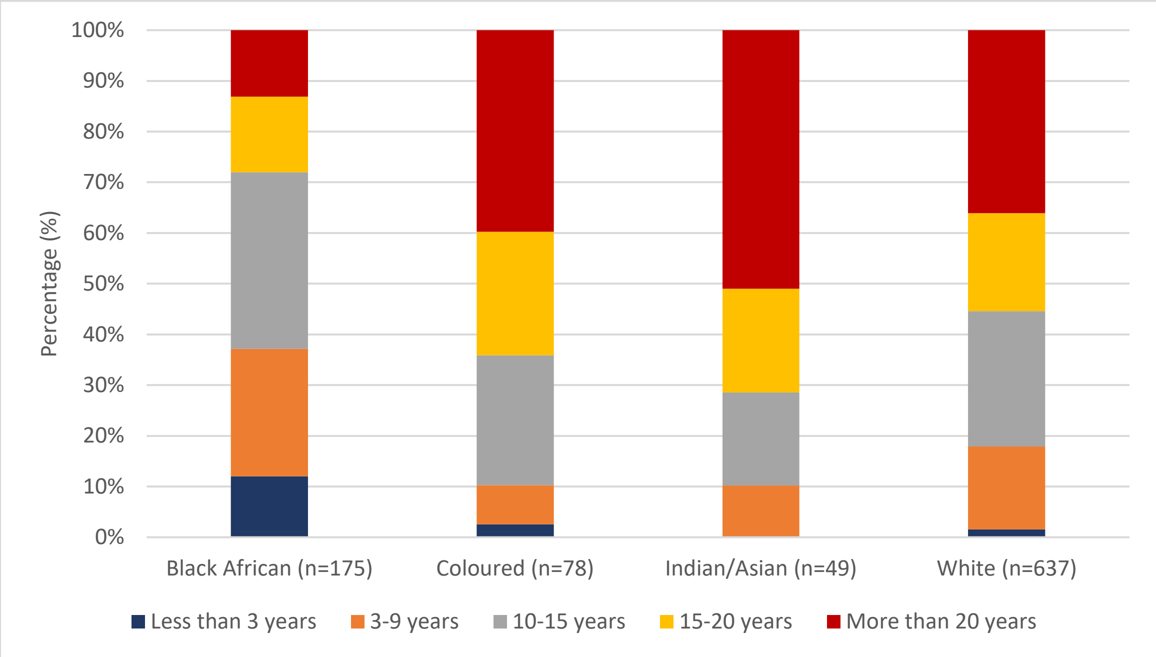
Graph 9: For how long have you been in the plumbing industry?



A very small portion (3,5%) of respondents have been in the plumbing industry for less than 3 years. Over half (51,9%) of the respondents from the survey have been operating in the plumbing industry for over 15 years. From Graph 9, 309 (32,9%) respondents indicated that they have been in the plumbing industry for more than 20 years.

In both surveys, 2018 and 2019, there were very few respondents with less than 3 years of experience, 2,6% and 3,5% respectively. Plumbers with over 15 years of experience accounted for 49,3% of respondents in the 2018 survey, while in 2019, plumbers with over 15 years of experience accounted for 51,9% of responses. In 2018, the results show that there was a marginally higher share of plumbers with more than 20 years of experience (33,5%) compared to 32,9% responses in 2019.

Graph 10: Number of years in the plumbing industry by race



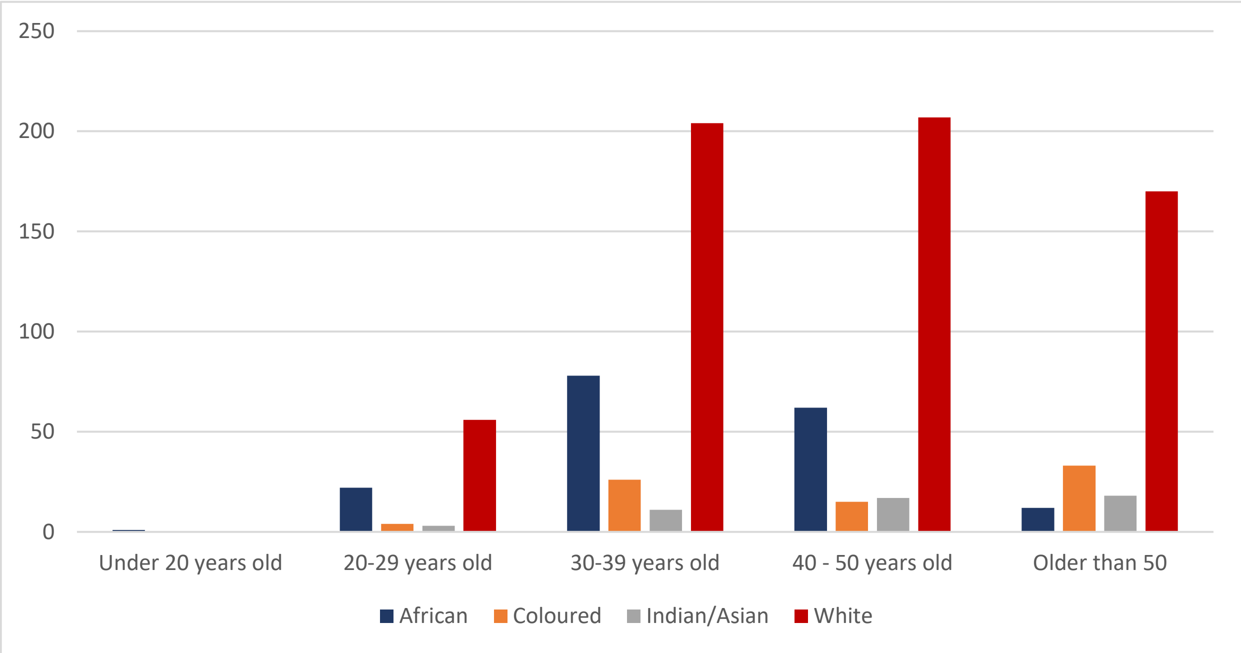
Looking at the numbers of years in the plumbing industry by race, a great majority of White respondents (82,1%) have more than 10 years' experience in the plumbing industry. A relatively large number of Indian/Asian (51,0%) and Coloured (39,7%) respondents said that they have more than 20 years of experience in the plumbing industry, while only 23 (13,1%) African respondents have more than 20 years of experience in the industry. From the survey results, 2 (2,6%) Coloured respondents indicated that they have been in the plumbing industry for less than 3 years compared to 10 (1,6%) White and 21 (12%) African respondents. On average, one is likely to find African respondents with 3-15 years of experience, and Coloured and Indian/Asian respondents with 10 or more than 20 years of experience in the industry. There were no Indian/Asian respondents with less than 3 years of experience in the industry.

Comparatively, from Graph 10, there were 82,1% of White respondents with more than 10 years of experience, while only 60% of Black respondents had 10 or more years of experience. In 2018, these figures were much lower. 81,1% of White respondents had 10 or more years of experience, with only 50% Black respondents with 10 or more years of experience.

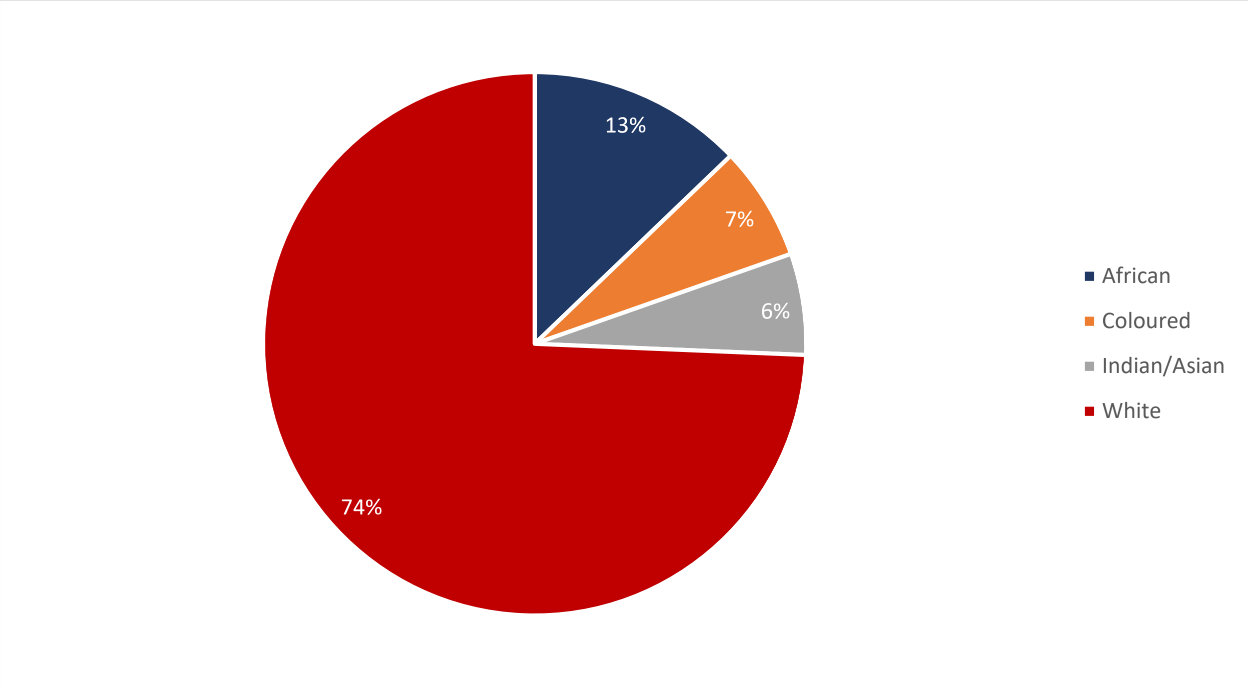
Graph 11: Age of respondents by race

The only respondent under 20 years old is African, while the majority of African respondents are between 30-39 years old, see Graph 11. The number of Indian/Asian respondents increased with age. There were 3 (3,5%) responses from Indian/Asian plumbers between 20-29 years old, 11 (3,4%) plumbers between 30-39 years old and 17 (5,6%) plumbers between 40-50 years old. Not surprisingly, there are 33 (14,2%) Coloured plumbers and 18(7,7%) Indian/Asian plumbers who are older than 50, while African plumbers made up the lowest number (5,2%) of plumbers older than 50. From Graph 11, White plumbers accounted for 73% of all plumbers older than 50 from the survey results. However, White respondents were predominately between 30-50 years old.

In 2018, the 1 respondent under 20 years old was Black. The participation of Black respondents in their 20s (between 20-29 years old) improved from 2,1% to 2,3%. Looking at the participation of Black respondents in their 20s in relation to the overall response from the 20s cohort, in 2018, 19,8% of respondents in their 20s were Black and 80,2% were White. In 2019, 25,9% of respondents in their 20s were Black and 65,9% were White.



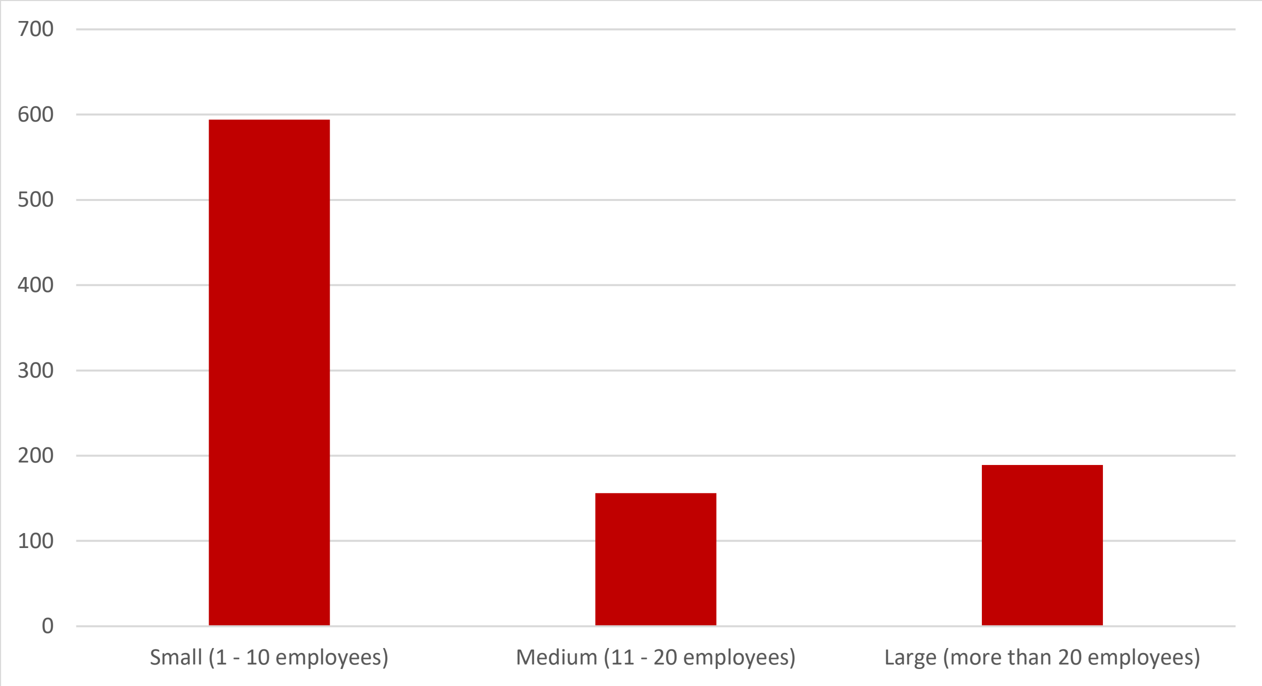
Graph 12: Self-employment by race



An analysis of self-employment by race shows that White respondents are self-employed by a large margin (74%), with Indian/Asian and Coloured owners at the lowets levels. Africans accounted for 13% of self-employed respondents from the survey. Relative to the total share of the Africa population in the sample size, from 939 respondents in the plumbing industry, 47,4% of African respondents are self-employed.

In the 2018 survey, 78,7% of White respondents were self-employed, and 21,3% of Black respondents were self-employed. Compared to the figures in Graph 12, it is clear that the share of self-employed White respondents is dropped in 2019.

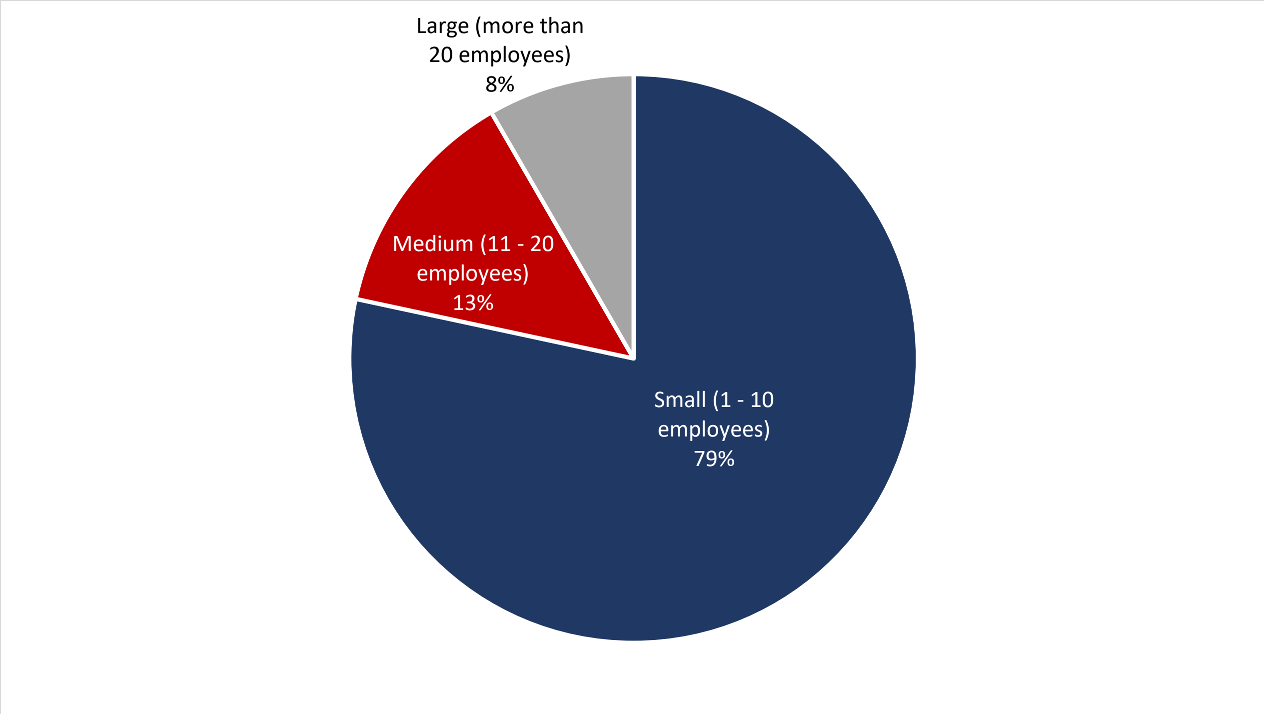
Graph 13: How big is the company you work for?[2]



Most respondents worked for small companies employing 1 to 10 employees. 189 (20,1%) respondents worked for large companies, while the lowest number of respondents' reported that they worked for medium companies employing 11-20 employees.

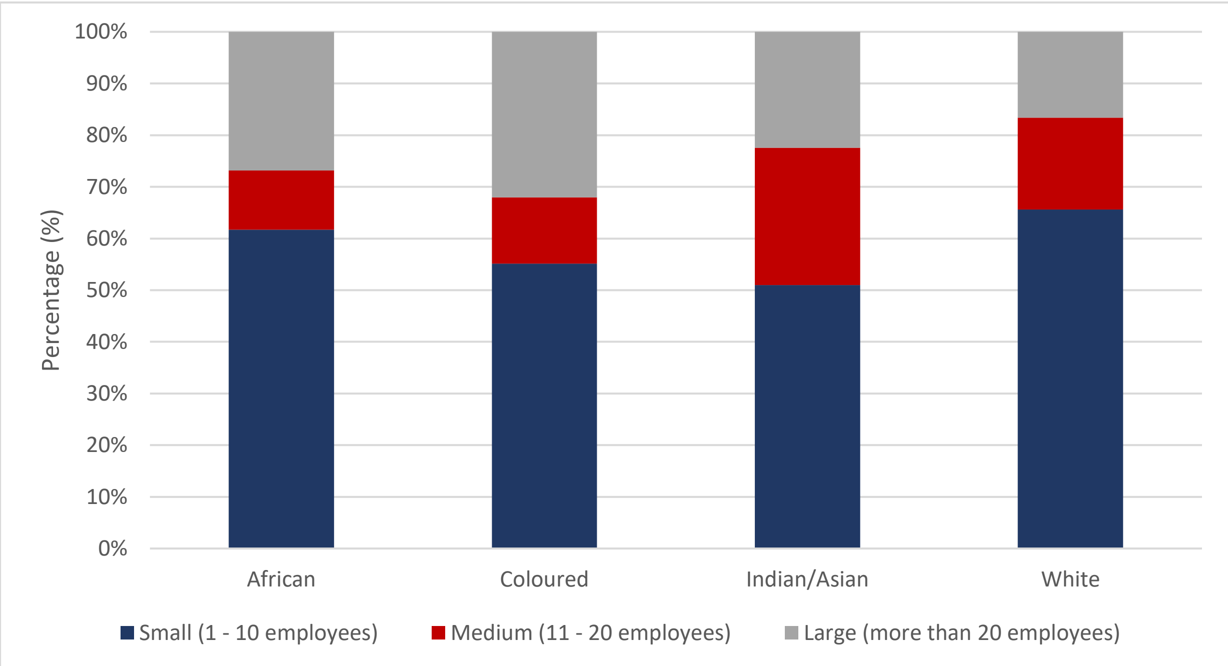
[2] According to various sources including the Government Gazette (2019) and the Small Business Institute (SBI) (2018), definitions of micro, small and medium enterprises (SMME) in South Africa are as follows: SMME definitions for the service industry – micro (1-10), small (11-50), and medium (51-250), so large would have 250+ employees https://businesstech.co.za/news/business/305592/these-are-the-new-definitions-for-micro-small-and-medium-enterprises-in-south-africa/. For the SBI, micro is 1-10, small (11-50), medium (51- 200) and large (201+) https://www.smallbusinessinstitute.co.za/wp-content/uploads/2018/10/SBIbaselineAlert1final.pdf.

Graph 14: Self-employed plumbers by size of their companies



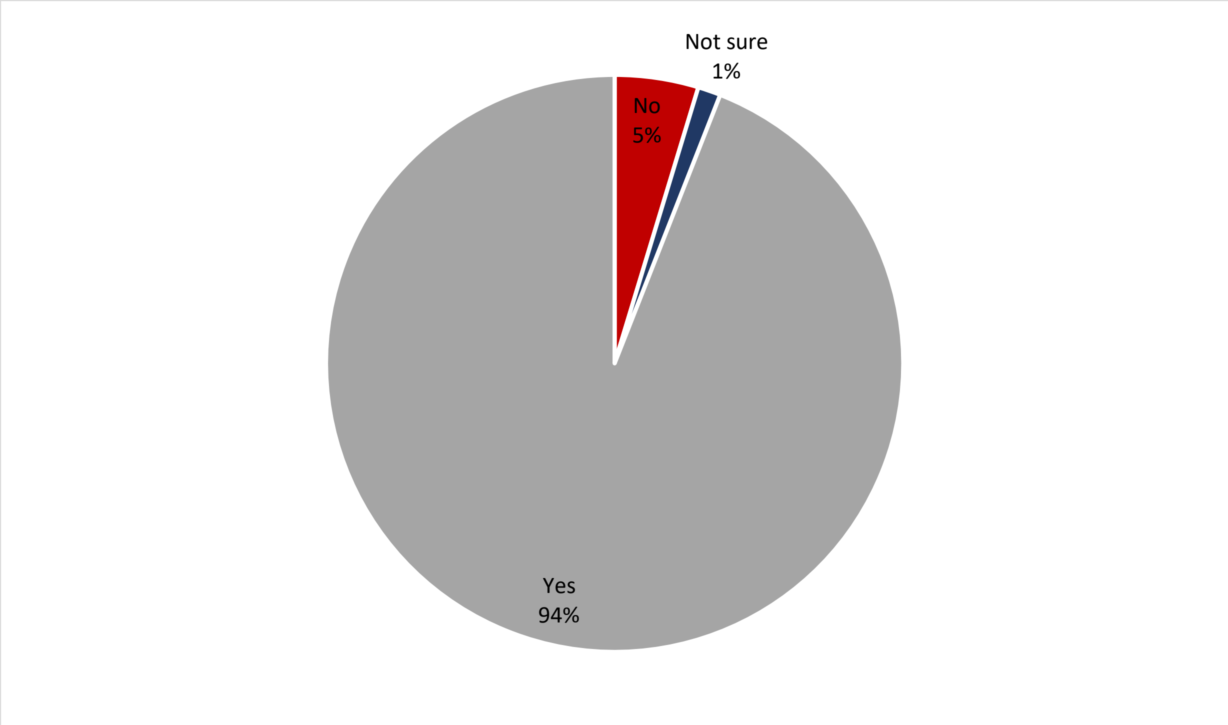
79% of respondents who are self-employed plumbers operated small businesses with either one own-account worker, or between 2 to 10 employees. Graph 14 shows that there are only 54 (8%) self-employed respondents from the survey who operated as large businesses with more than 20 employees. Only 13% of self-employed respondents operated medium sized business.

Graph 15: Company size by race



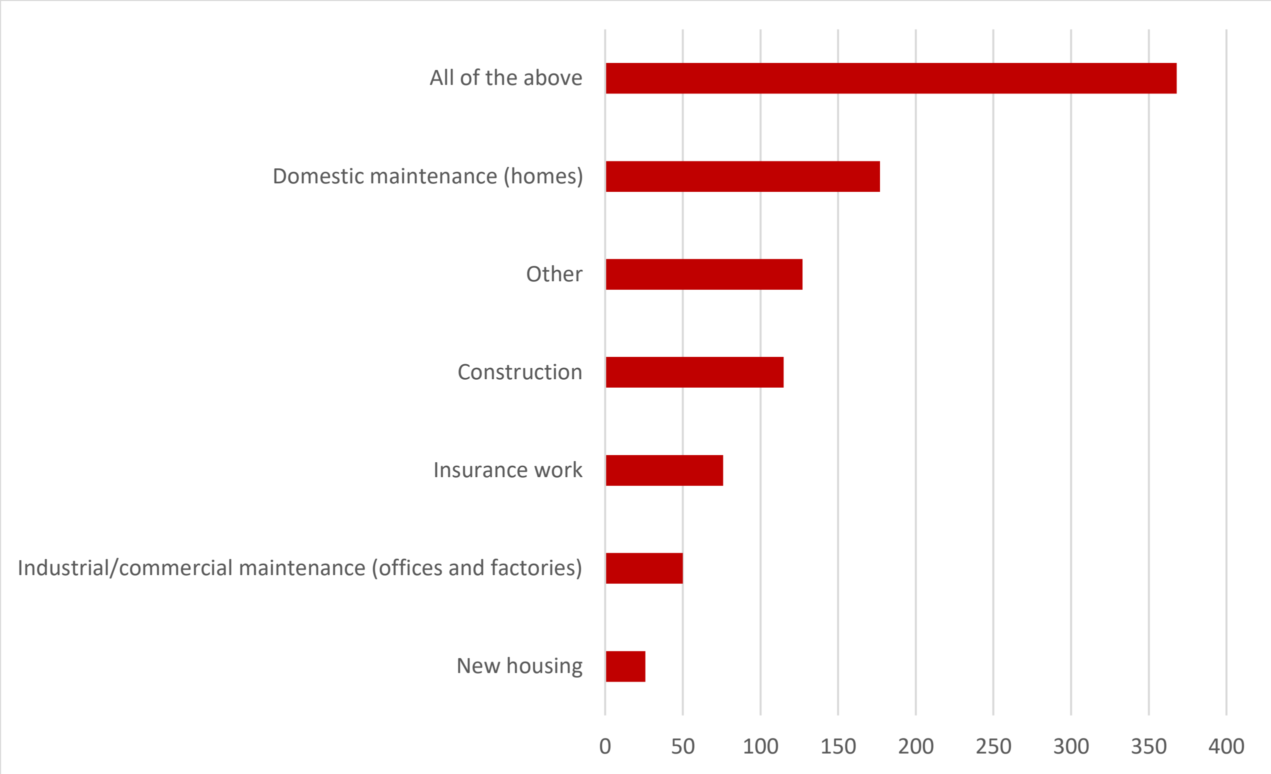
By looking at race and different company sizes in Graph 15, it can be seen that small companies are the biggest employer of respondents across all race classifications. More Coloured and African respondents worked for large companies employing more than 20 employees than medium companies. 418 (65,6%) White respondents worked for small companies, 113 (17,7%) worked for medium companies and 106 (16,6%) said that they worked for large companies. For Indian/Asian respondents, 25 (51,0%) respondents worked for small companies, 13 (26,5%) worked for medium companies, while only 11 (22,4%) worked for large companies.

Graph 16: Are you PIRB registered?



94% of respondents from the survey declared that they are registered with PIRB, and 5% said they are not registered with PIRB. 1% of respondents declared that they are unsure concerning their registration with PIRB.

Graph 17: What is your company's main area of business?

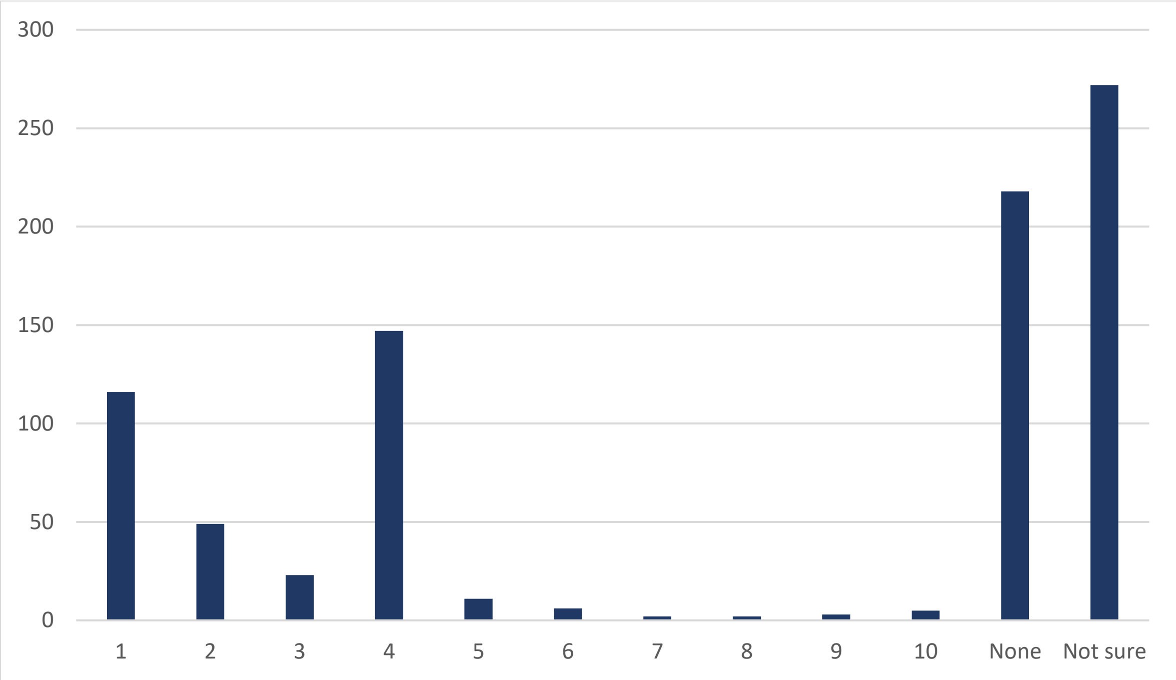


368 (39,2%) respondents reported that they operate in all areas of business being construction, new housing, insurance and domestic maintenance and industrial and commercial maintenance. The second most popular area of business for respondents was in domestic maintenance (18,8%) and the construction sector (12,2%). 127 (13,5%) respondents said that they worked in other businesses. Other areas of businesses that the 127 respondents worked in include consultancy, audits and inspection, solar, manufacturing and hotel maintenance. Very few, 26 (2,85) respondents said they worked in new housing.

According to the StatsSA (2019) data, the majority of plumbers in South Africa work in the construction sector, which reveals a different picture when compared to Graph 17.

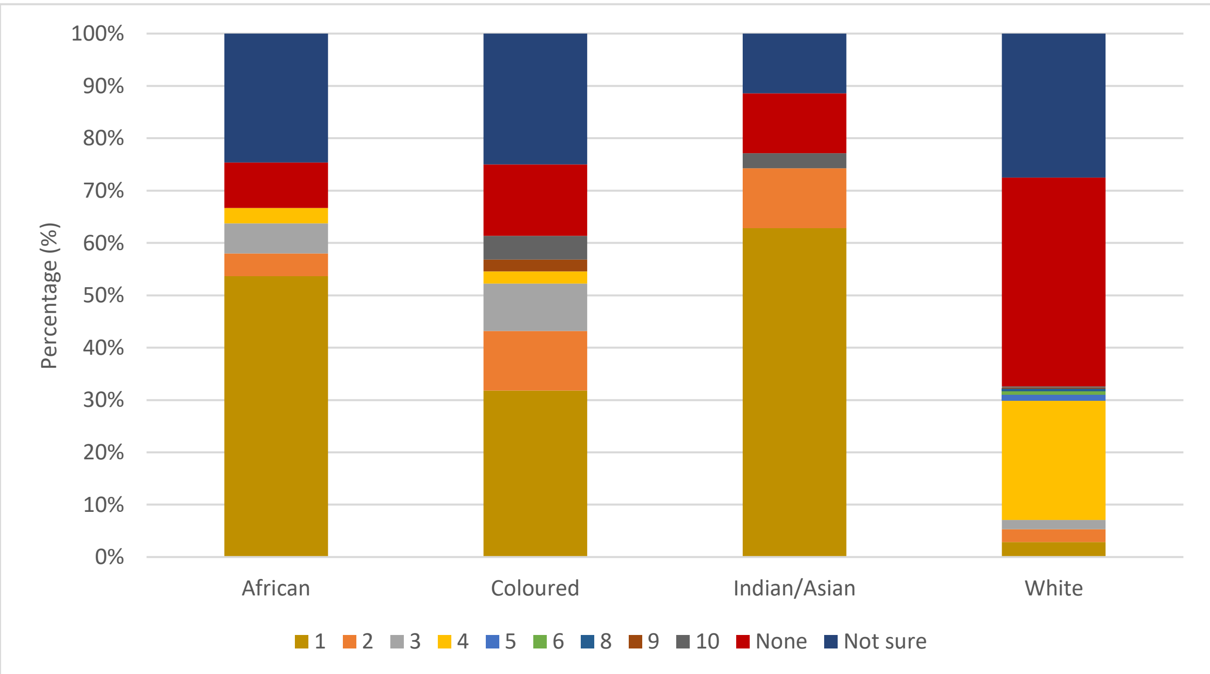
The insurance sector employed 11,6% of respondents in 2018, however this share dropped in 2019 to 8,1% of all respondents employed in insurance. In 2018, Black respondents were largely employed in construction (35,5%), commercial maintenance (17,5%) and insurance (16,6%). In 2019, Black respondents were largely employed in insurance (18,3%), construction (13,7%) and domestic maintenance (10,9%)

Graph 18: What is your company's BBBEE score?



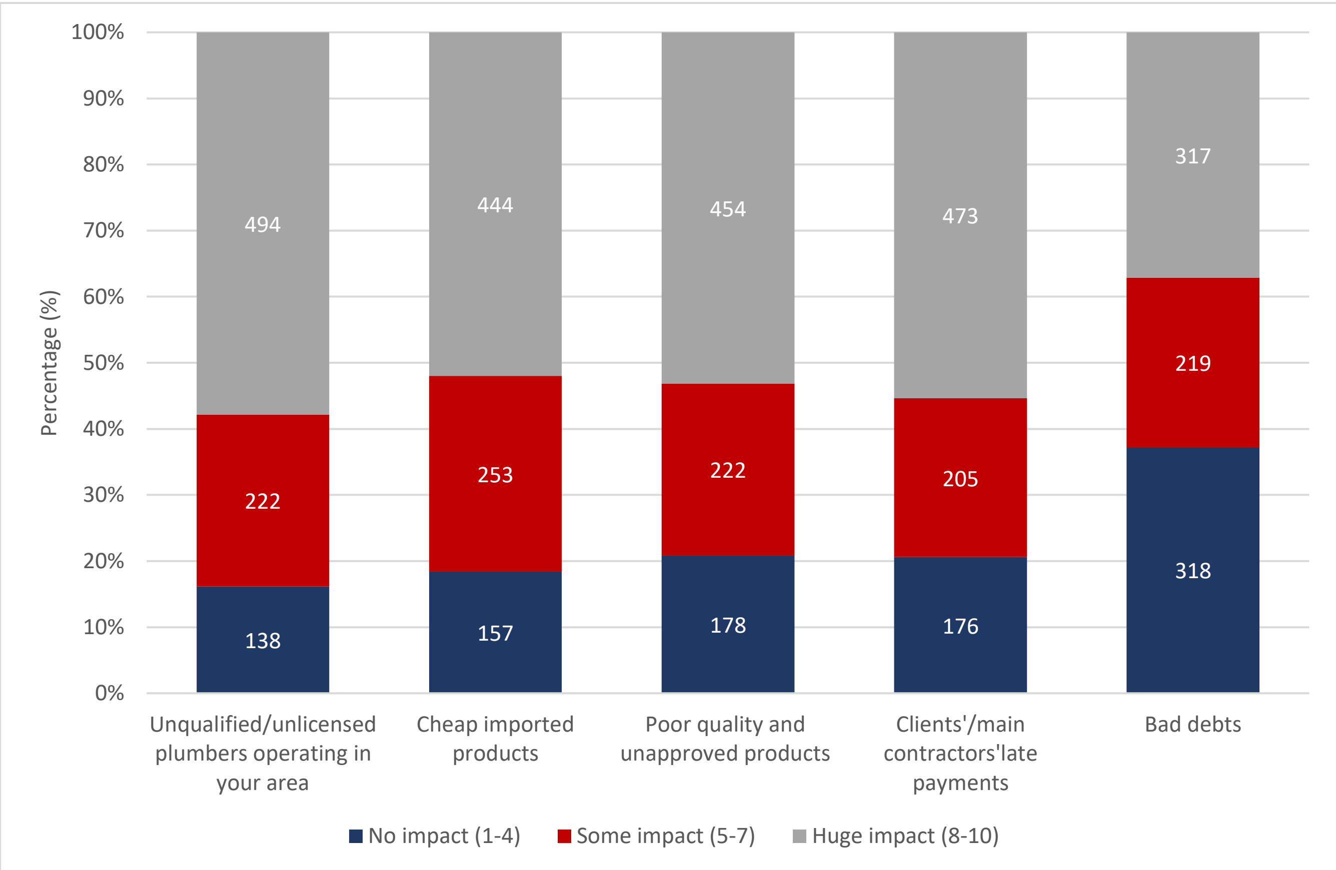
Graph 18 shows BBBEE levels of companies that respondents worked for. 116 (13,6%) indicated that they worked for companies rated level 1, and 49 (5,7%) worked for companies rated level 2. The majority of respondents (17,2%), who worked for BBBEE compliant companies worked for companies recognised as level 4 BBBEE. 272 (31,9%) respondents indicated that they were not sure of their BBBEE status, while 218 (25,5%) did not have a BBBEE status/were BBBEE non-compliant. 39,2% of respondents in 2019 had a BBBEE score of 4 or better in comparison to 34,8% of respondents in 2018 who reported a BBBEE score of 4 or better.

Graph 19: BBBEE score and ownership by race



From Graph 19, BBBEE requirements were less of a problem for approixamtely 75% of African owned businesses. From a total of 647 self-employed respondents, surprisingly, 53,6% African business onwers were not rated level 1. African respondents were rated between level 1 to level 4, with level 4 as the lowest BBBEE rating for African owned businesses. More Indian/Asian respondents are rated level 1 compared to Coloured respondents, however both Indian/Asian and Coloured respondents had more level 2 rated businesses than African owners. There were at least 2 (4,5%) Coloured owners rated level 10 and 1 rated level 9. 135 (29,9%) White-owned businesses had a BBBEE rating of level 1 to 4, while the rest featured in all the other levels. A significant percentage of all races, pariticularly White respondents, did not have a BBBEE score, while another significant share of all races were unsure of their score.

Graph 20: What impact do the following items have on your business' ability to be successful?

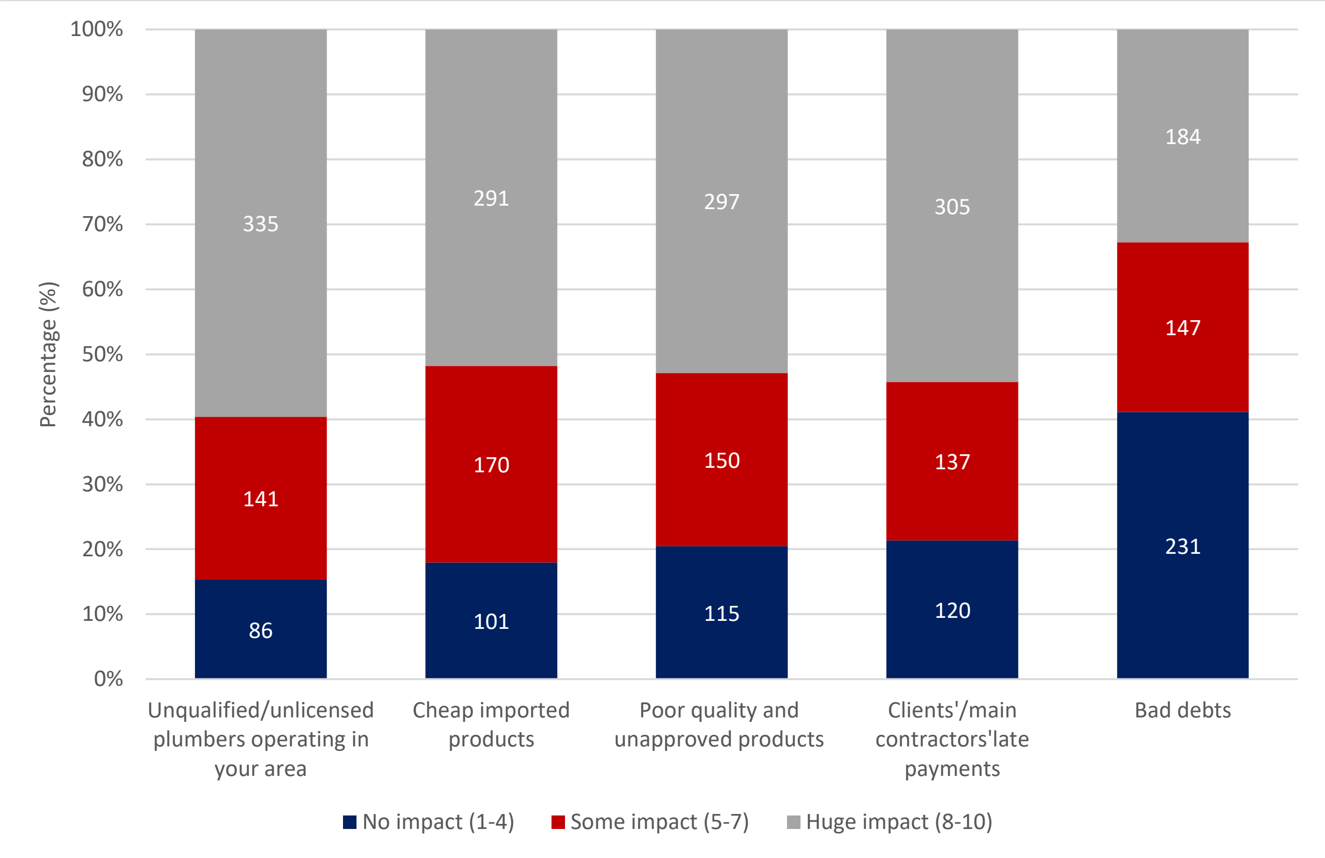


In the survey, respondents were asked to rate the level of impact different items were to the success of their businesses[3]. The results from Graph 20 show that from the respondents, there was no item that significantly stood out the most as a huge impact for businesses' ability to be successful. Unqualified plumbers operating in the area, clients' contractors' late payments, poor quality and unapproved products and cheap imported products had the highest impact on plumbing businesses' ability to be successful, while bad debts, cheap imported products and client's contractors' late

[3] The reason why we have decided to group the responses is because the average human being doesn't make meaningful distinctions between more than 10 levels of a given stimulus, and it makes things manageable for the analysis (since few people will have a clear idea of the difference between, say, the eighth and ninth point on a ten-point impact- no impact scale).

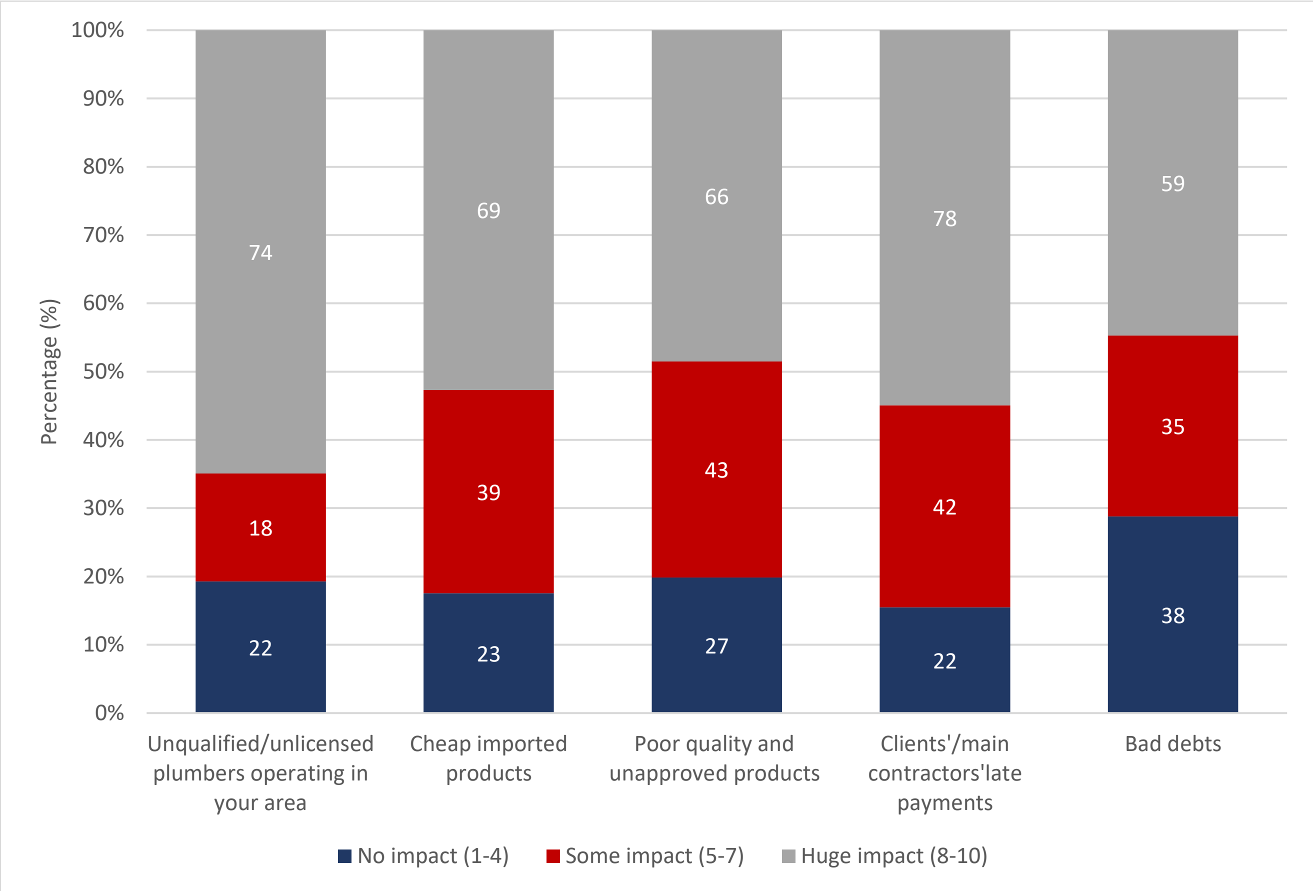
payments had the least impact on the businesses' ability to be successful. Unsurprisingly, based on the responses from the 2018 survey and Graph 20, the biggest impact on plumbers' business success remains unqualified plumbers operating in the market and late payments by contractors and main clients.

Graph 21: What impact do the following items have on your small business' ability to be successful?

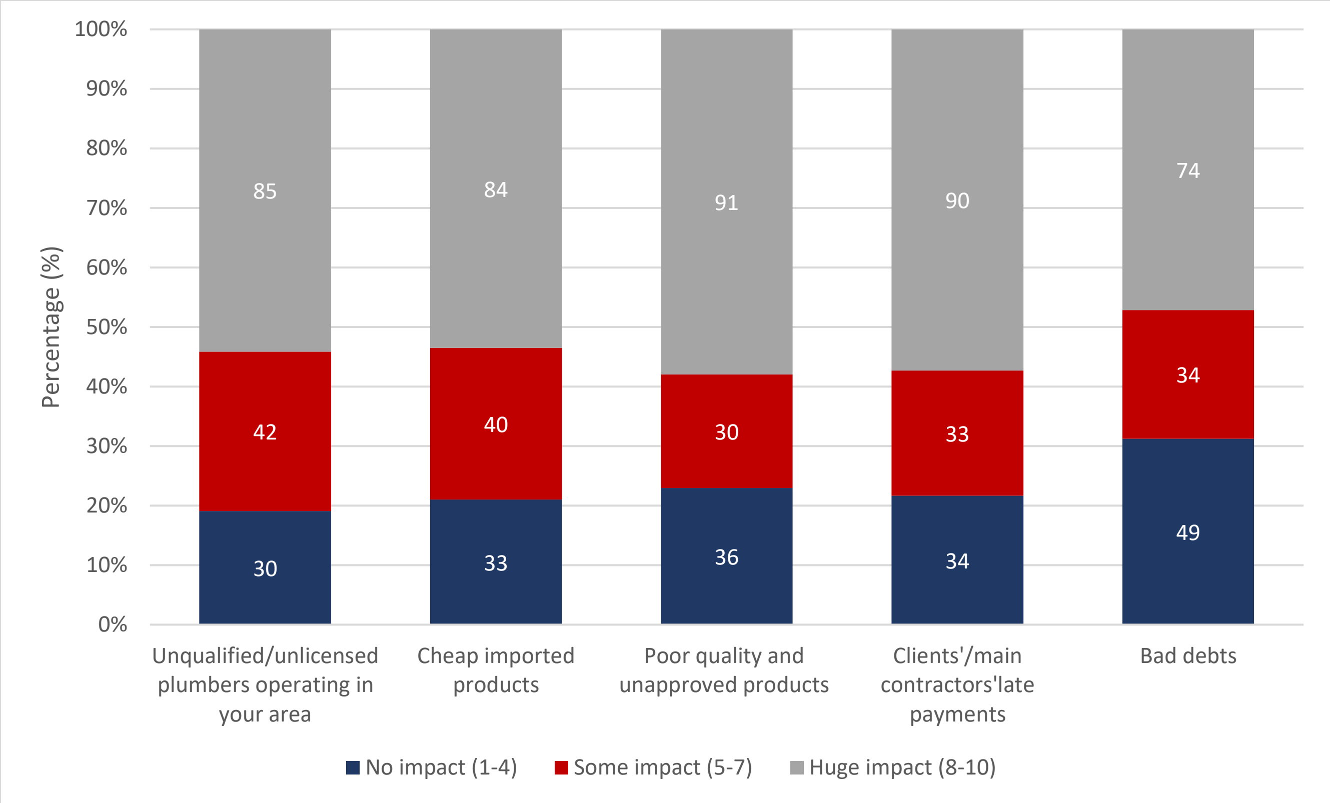


The majority of respondents in the survey were small businesses and their impacts mirror the general pattern in Graph 21 above. The results in Graphs 22, 23 and 24 show that as companies grow in size, then they were most likely affected by poor quality and unapproved products, although as previously highlighted there was no one impact that stood out. For all company sizes, the impacts on business challenges were more or less spread across all five areas, however bad debts were less of an issue for smaller businesses as opposed to larger businesses' ability to be successful.

Graph 22: What impact do the following items have on your medium business' ability to be successful?

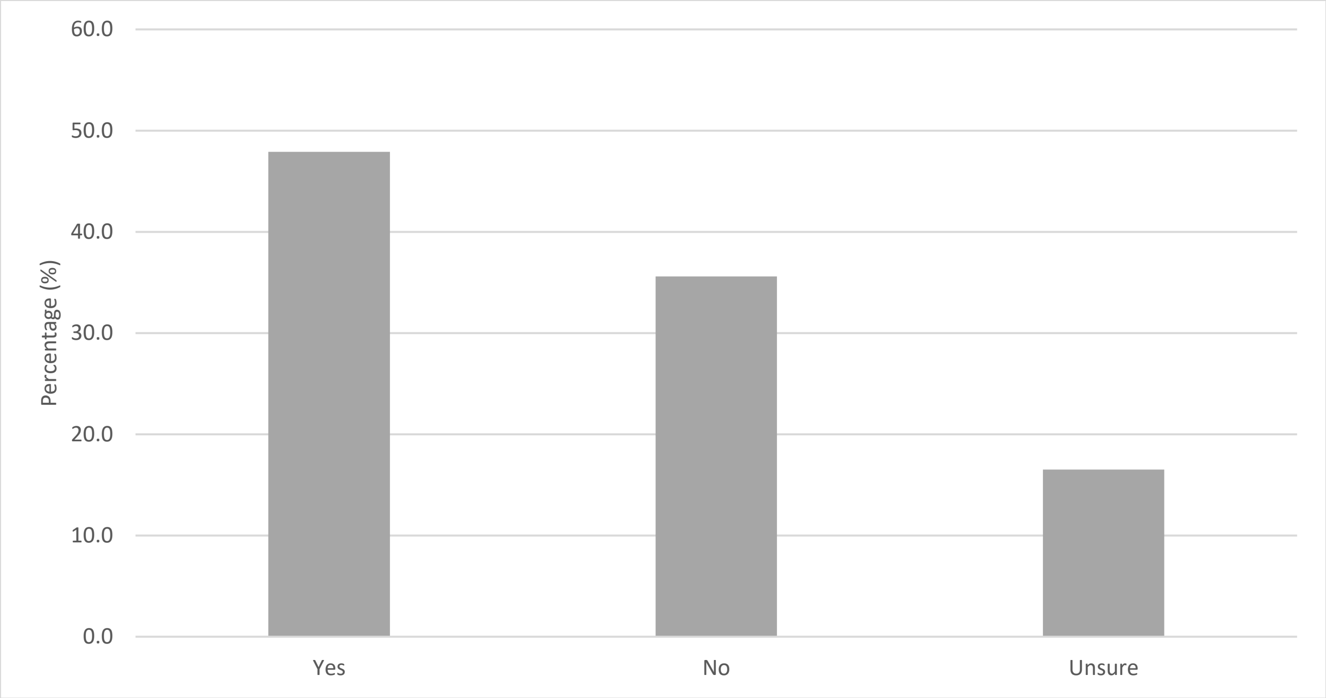


Graph 23: What impact do the following items have on your large business' ability to be successful?



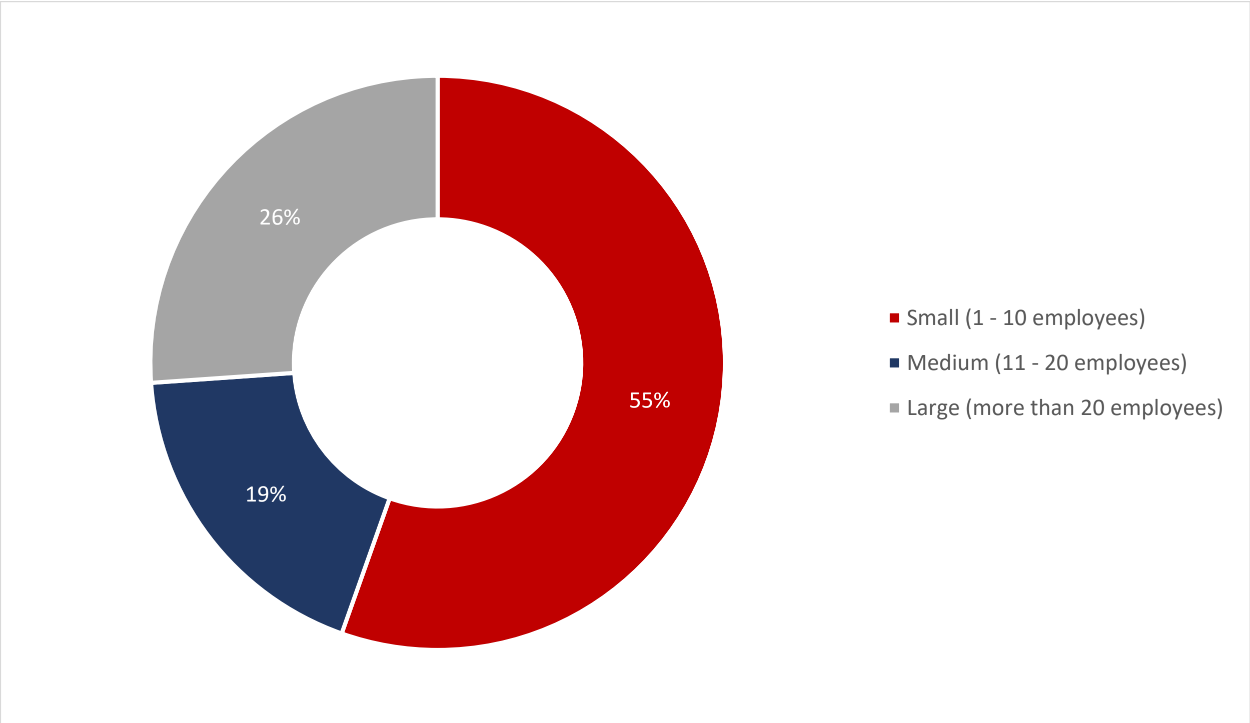
Graph 24: Do you or your company conduct/participate in formal training?

Almost 50% respondents (406) said that their companies participated/conducted formal training and 35,6% (302) said their companies did not conduct/participate in formal training. 16,5% (140) respondents said that they were unsure if their companies conducted or participated in formal training. Compared to the 2018 results, 66,8% respondents said yes, their companies participate in formal training, while 24,8% said no.

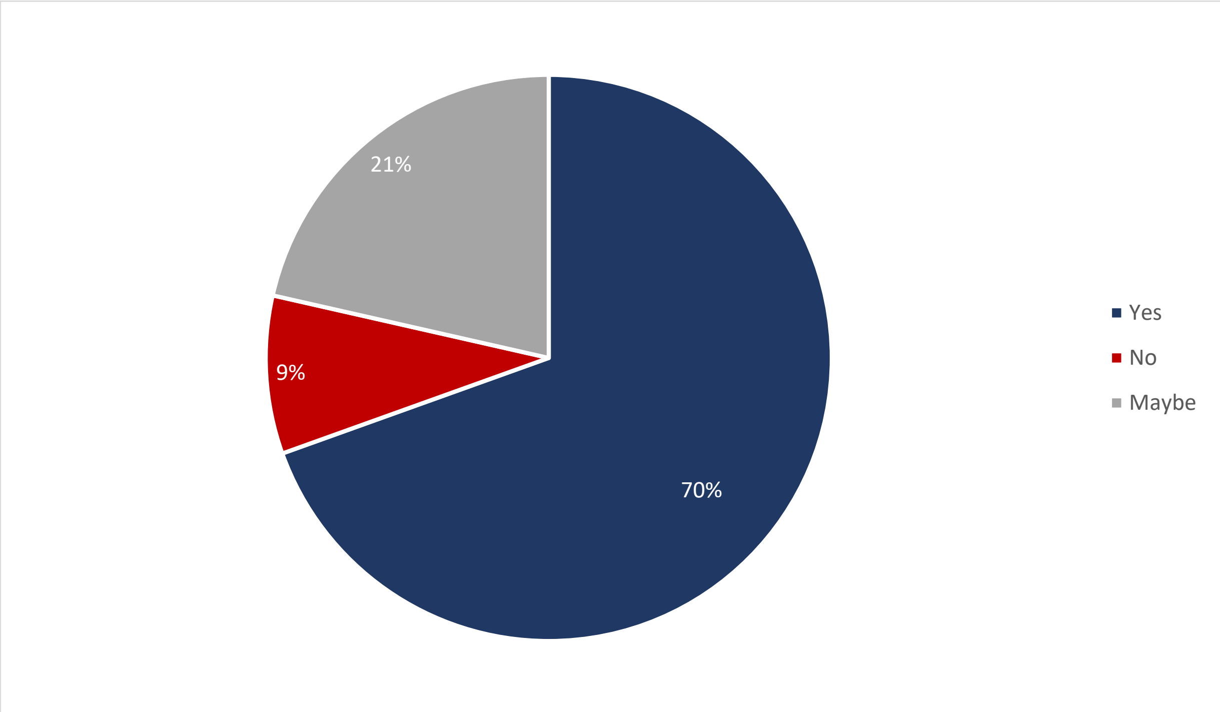


Graph 25: Training participation by company size

55% of respondents working for small companies indicated that their companies participated in formal training. 26% respondents employed at large companies employing more than 20 employees said that their companies participated in formal training. Only 19% of respondents working for medium companies said that their employers did not participate in formal training.

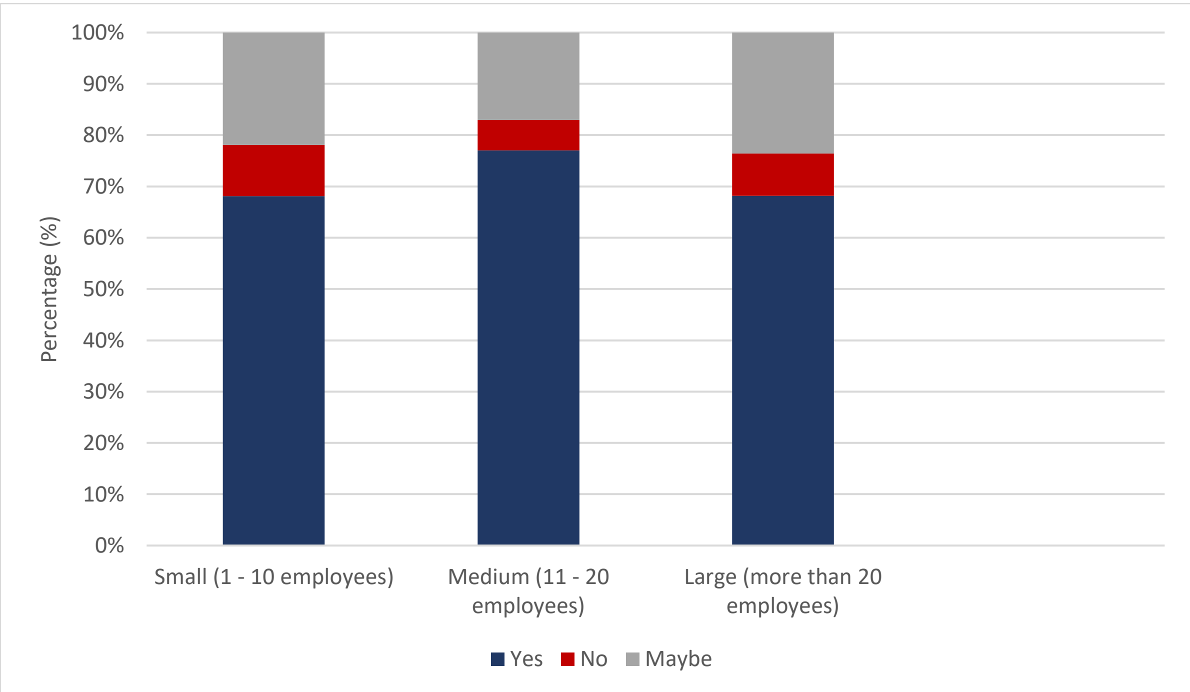


Graph 26: Would you or your company participate in formal plumber training with the support of IOPSA?



Most respondents said that their companies would participate in formal training with the support of IOPSA, however 9% respondents said their companies would not participate in training even with the support of IOPSA.

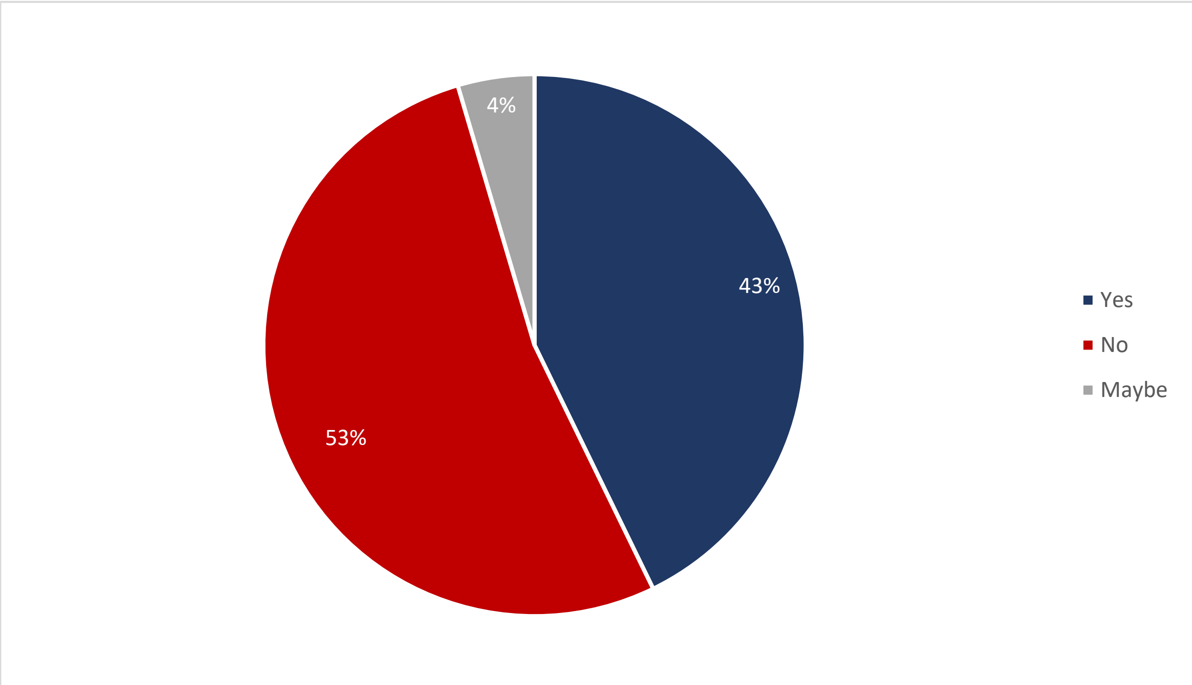
Graph 27: Would you or your company participate in formal plumber training with the support of IOPSA?



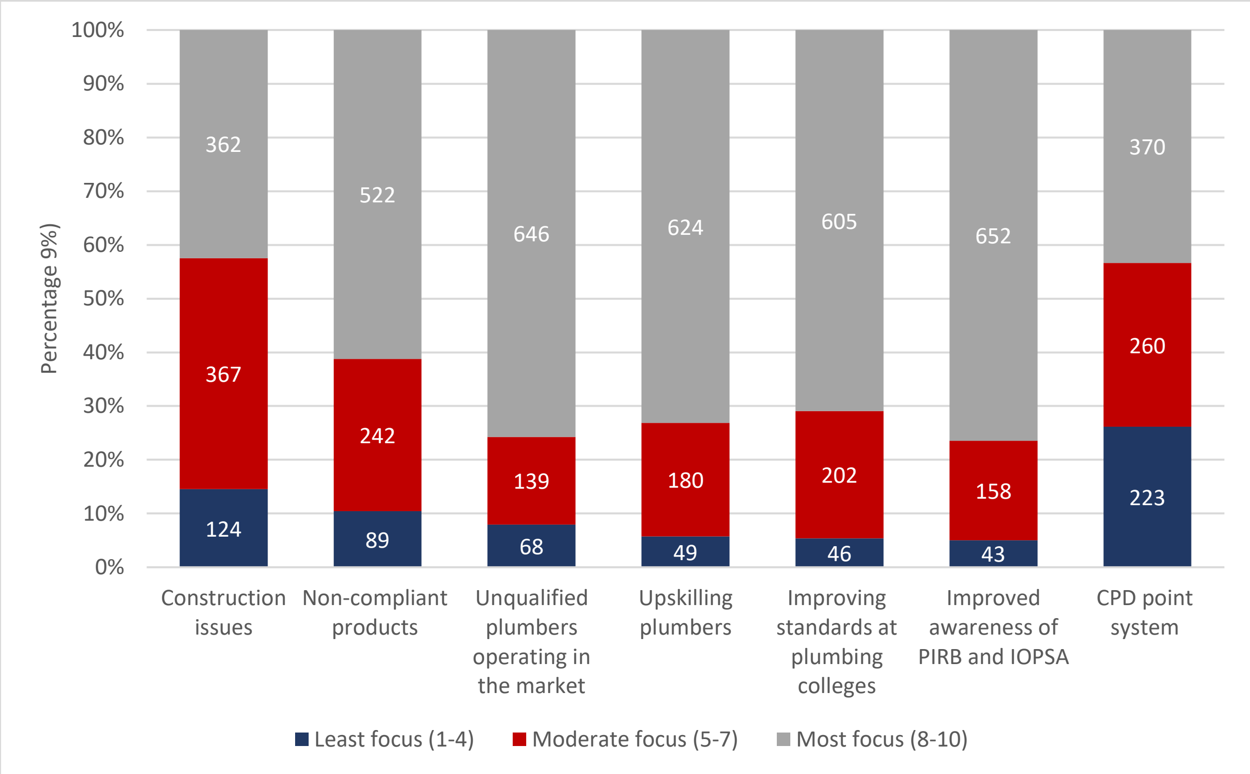
It is clear from the graph in Graph 27 that the majority of respondents from across various company sizes siad that their companies would have an intrest in participating in formal training with the support of IOPSA. Almost 70% (382) of respondents from small companies said that their companies would be interested, 21,9% (123) said maybe and 10,0% (56) said their companies would not be interested. For respondents working in large companies, 68,2% (107) said that their companies would be interested in formal training, 8,3% (13) said no and 23,6% (37) said maybe. Although there were very few respondents working for medium companies from the survey results, 77,0% (104) respondents who worked for medium sized companies said that their companies would particpate in formal training with the support of IOPSA.

Graph 28: Do you receive the Plumbing Africa?

53% respondents said they did not receive the Plumbing Africa magazine, and 43% said that they received the magazine. 4% of the respondents said that maybe they received the Africa Plumbing magazine.



Graph 29: What area would you like IOPSA to focus on?



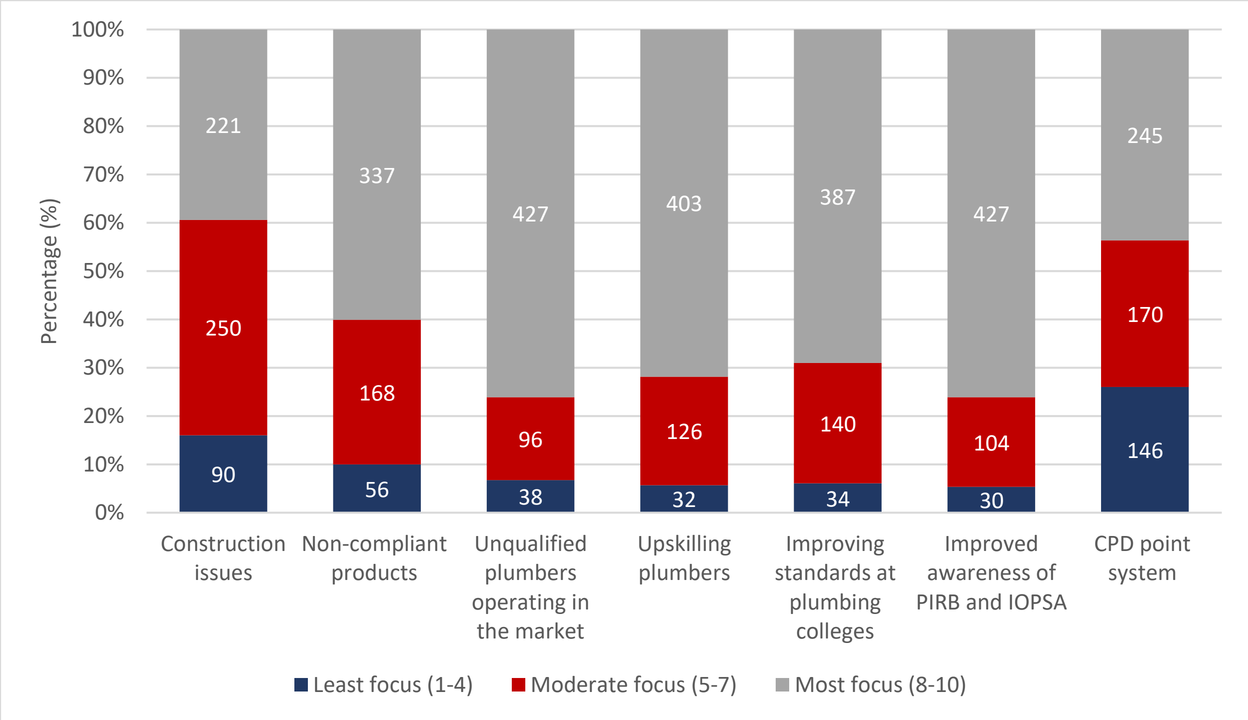
Form Graph 29, according to the respondents, the most important area that IOPSA should focus on is almost equally spread between improving standards and improved awareness of PIRB and IOPSA (76,4%), unqualified plumbers operating in the market (75,7%) and upskilling plumbers (73,2%).It is clear that the CPD point system was the least area of focus that respondents said IOPSA should focus on with 26,1% (223) respondents scoring the CPD point system between 1-4. Construction issues, the focus on non-compliant products and improving standards at plumbing colleges were rated among issues requiring moderate focus from IOPSA.

Graphs 30-32 show areas that IOPSA should focus on by size of enterprise. From Graphs 30-32, similar to Graph 29, respondents across all sizes said that IOPSA should give priority focus on unqualified plumbers operating in the market, upskilling plumbers, improving standards at plumbing colleges and improved awareness of PIRB and IOPSA. For respondents in small businesses, the issue of unqualified plumbers and improved awareness of PIRB and IOPSA were two key areas that emerged as concerns, while for medium firms, their area of focus was to improve awareness of PIRB and IOPSA and to focus in unqualified plumbers operating in the market. For large businesses, most respondents said that IOPSA should focus primarily on upskilling plumbers, improving standards at plumbing colleges and improved awareness of PIRB and IOPSA.

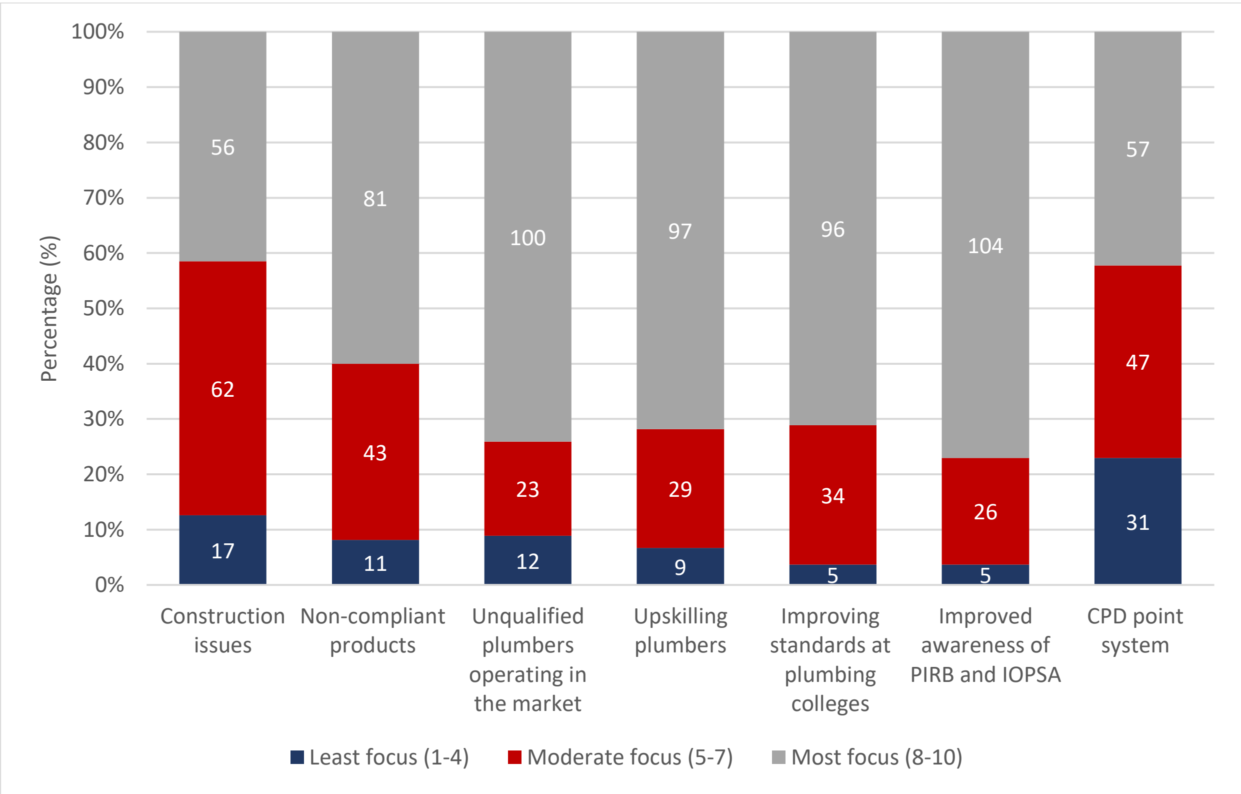
The challenge of unqualified plumbers and cheap products in the plumbing industry were highlighted in Graph 20 as key areas of concerns that impact on business' ability to be successful. These challenges closely link to Graph 29, as respondents highlighted that they would like IOPSA to focus mostly on addressing the issue of unqualified plumbers operating in the market and non-compliant products.

Based on the previous responses from the 2018 survey, similar to the response from the 2019 survey, respondents said that they would like to focus on the issue of unqualified plumbers, improving the awareness of IOPSA and PIRB and on upskilling plumbers. Respondents also stated that IOPSA should focus on the insurance sector, there was no mention of the insurance sector as a key focus area in the 2019 survey.

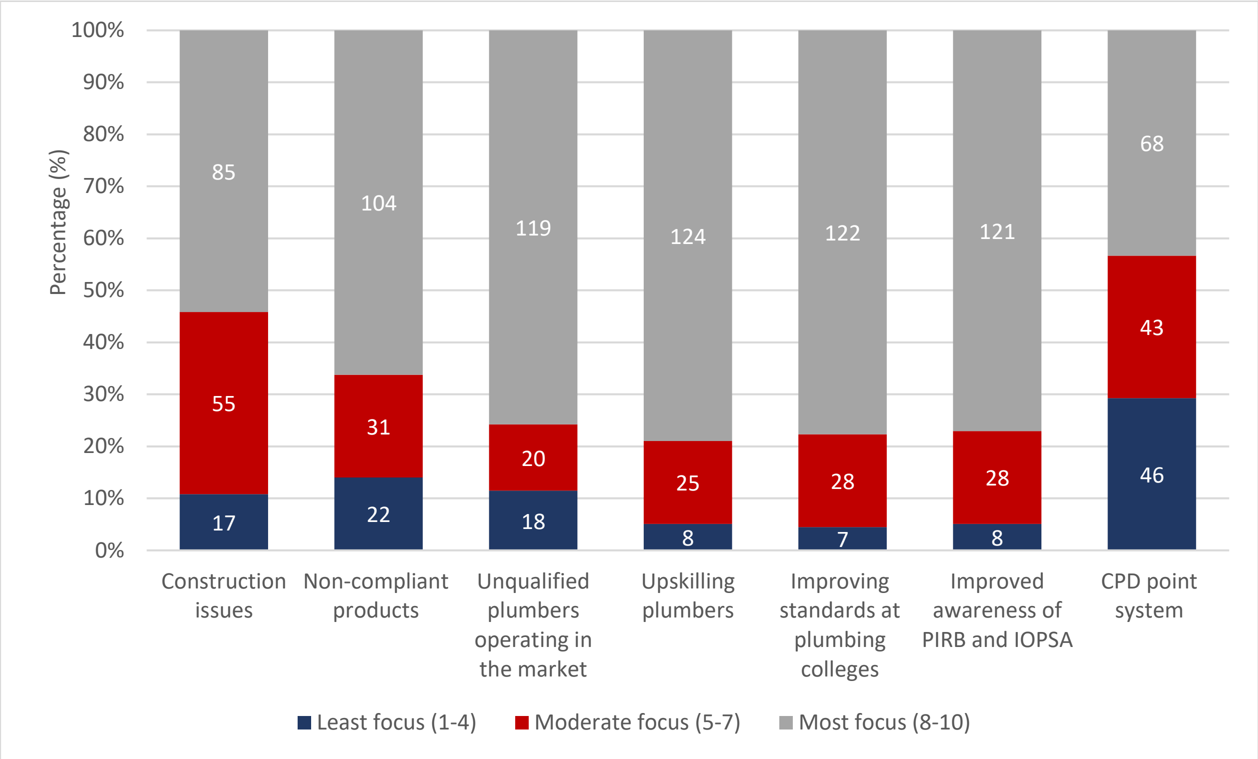
Graph 30: What area would you like IOPSA to focus on for small businesses?



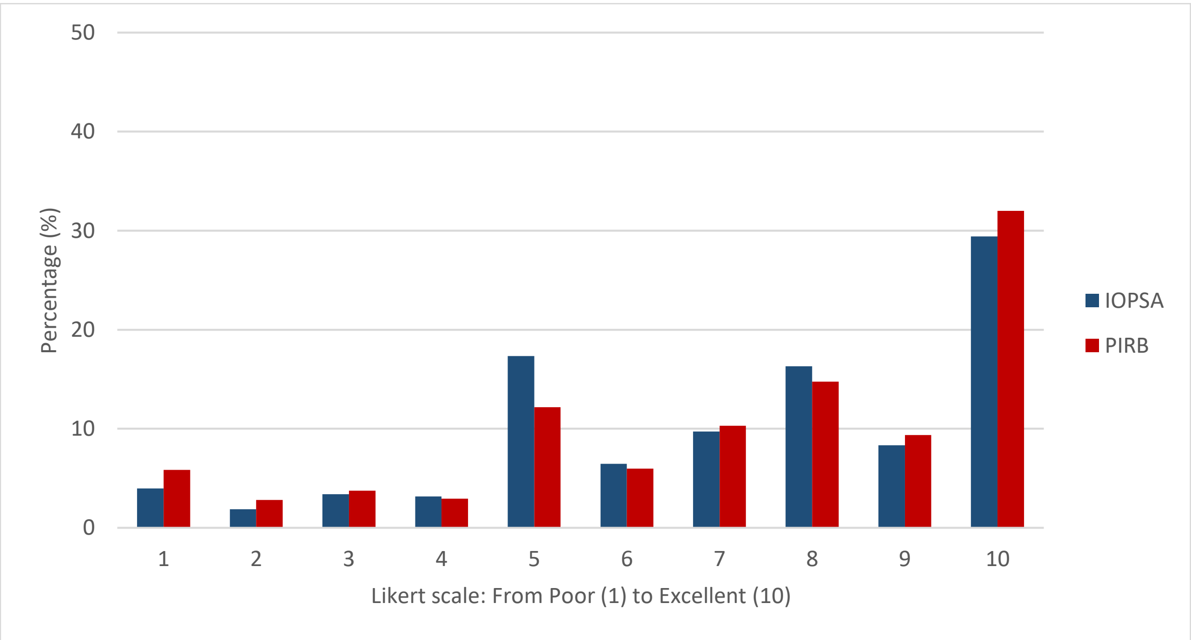
Graph 31: What area would you like IOPSA to focus on for medium businesses?



Graph 32: What area would you like IOPSA to focus on for large businesses?



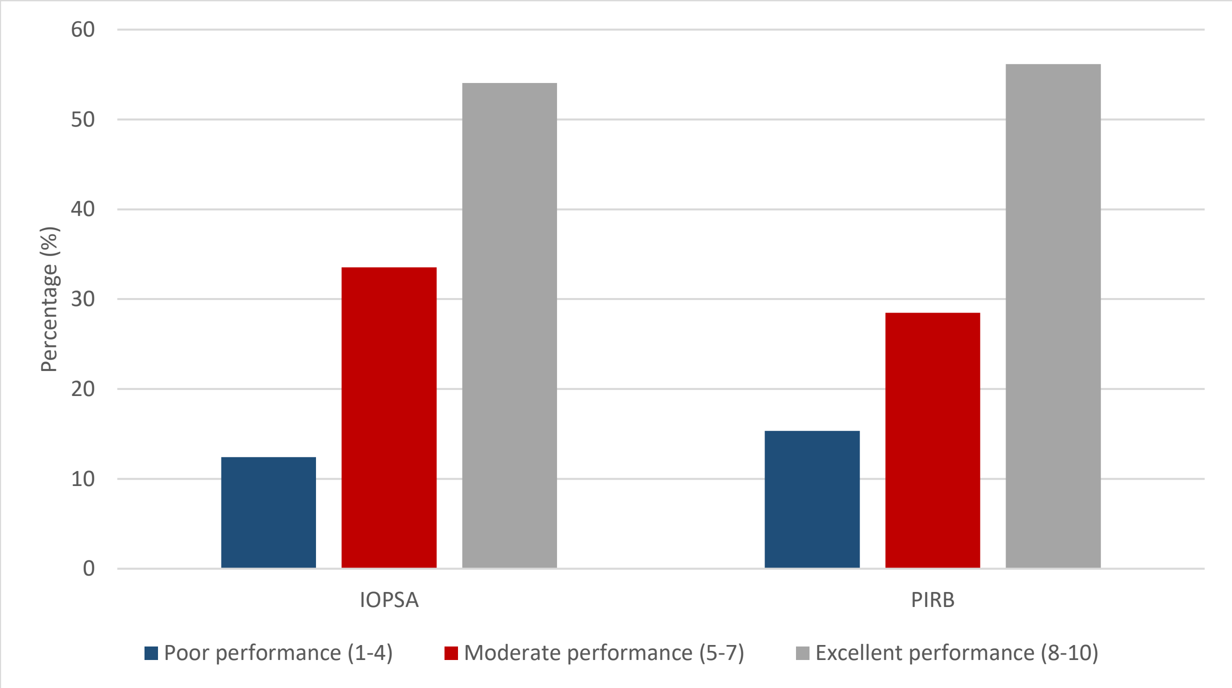
Graph 33: How would you rate your service received from IOPSA and PIRB?



To assess the level of service received from IOPSA and PIRB, the majority of respondents rated both services above 5. The highest ratings of service received from IOPSA was 5 (17,4%), 8 (16,3%) and 10 (29,4%). PIRB received the lowest rating of 1 (5,9%), while only 4% of respondents rated the service received from IOPSA as 1. For PIRB, 32,2% of respondents rated the level of service received from PIRB as 10, 14,8% rated the service as 8 and 12,2% as 5. When comparing services received from both IOPSA and PIRB, from all the 939 respondents who rated the two services 5 to 10, although not significant, a higher percentage of respondents indicated that they received better service from IOPSA (87,6%) than PIRB (84,6%).

In 2018, IOPSA scored an average of 6,6/10 for its service and PIRB was scored a 7,2/10. In 2019, both PIRB and IOPSA received the same average score being 6,6/10.

Graph 34: How would you rate your service received from IOPSA and PIRB?



From Graph 33, more points on the Likert scale should provide more information about the level of service received by respondents from IOPSA and PIRB, however, usually responses are concentrated in few options. From Graph 34 above, 56,2% of respondents surveyed viewed the service they received from IOPSA as 'excellent' scoring it between 8-10, while only 54,0% of respondents viewed the service they received from PIRB as 'excellent'. By looking at Graphs 34 and 35, in Graph 33, more respondents (2,6%) scored the level of service from IOPSA as a 10 – 'excellent' compared to PIRB, however when grouped, more respondents indicated that they received better service from PIRB than IOPSA. 33,5% respondents viewed the level of service received from IOPSA as 'moderate' with a score between 5-7, this was slightly higher than the percentage of respondents who scored PIRB between 5-7. 15,4% of respondents indicated that they received poor service from PIRB, 3% less than respondents who received the same level of service from IOPSA.