Trade & Industrial Policy Strategies (TIPS) is a research organisation that facilitates policy development and dialogue across three focus areas: trade and industrial policy, inequality and economic inclusion, and sustainable growth

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THE INSTITUTE OF PLUMBING SA
QUALITY PLUMBING FOR ALL ESTABLISHED 1989

TRADE & INDUSTRIAL POLICY STRATEGIES

NATIONAL PLUMBING SURVEY 2021

November 2021

Plumbing Survey 2021

The Institute of Plumbing South Africa (IOPSA) is primarily responsible to advise on the practice and principles of the plumbing industry in South Africa. The Institute is constantly engaging with the plumbing industry, governmental and regulatory bodies on matters relating to the plumbing industry (IOPSA, 2020). IOPSA annually conducts the national plumbing survey. The survey is emailed to IOPSA and PIRB members as well as posted on social media platforms and the IOPSA website, the survey is open to anyone in the industry irrespective of their affiliation. The goal of the survey is to gain meaningful data about the industry and to better understand the challenges facing the industry.

The aim of this survey data analysis is to achieve the following:

(i) to understand IOPSA's market and the plumbing industry better,

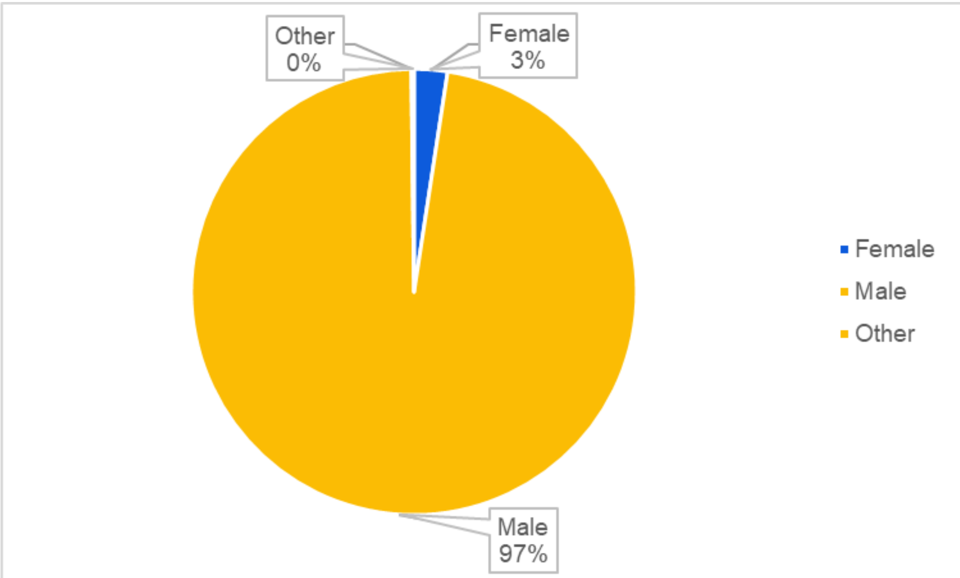
(ii) to track progress and assess whether there have been any significant changes from the previous surveys, and

(iii) to get guidance for future strategic direction of IOPSA and PIRB.

This analysis is an initial review of the responses and some preliminary findings from the Plumbing National Survey 2021. According to 2020 data, there are approximately 95 626 people who self - identify as plumbers (including apprentices) in South Africa, down from previously 113 232 in 2019 (StatsSA, 2020), and 125 000 in 2018 (TIPS/SD4GE 2019) an approximate decrease of 15,5 percentage points and 9.4 percentage points respectively. The 2021 survey received a total of 1074 responses. The respondents represent only approximately 1,1% of those who self-identify as plumbers in the industry. In comparison to 2020, there were 50 more responses to the 2021 survey, however, a handful of participants failed to respond to two questions.

Graph 1: What is your gender?

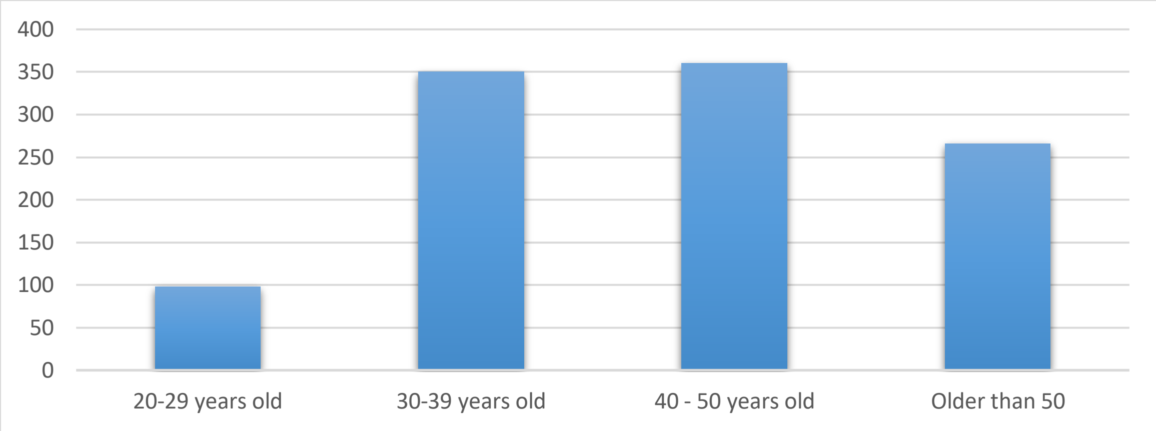
Graph 1 illustrates, that off the 1074 plumbers who participated in the survey, 97% are male. Only 3% of the responses represent women. Two of the survey's respondents identify has being neither male not female and opted for the 'other' option. According to the survey's results, the numbers of male and female respondents remain the same from 2020. Plumbing is a predominantly male dominated industry. In South Africa, women make up 5,4% of the total percentage of plumbers and apprentices (StatsSA, 2020). The majority of the women who responded to the survey are self-employed, while the others are either employed by construction or plumbing companies. The presence of women in this field is an indication that there is room for gender diversification in this traditionally male dominated sector.



Graph 2: What is your age?

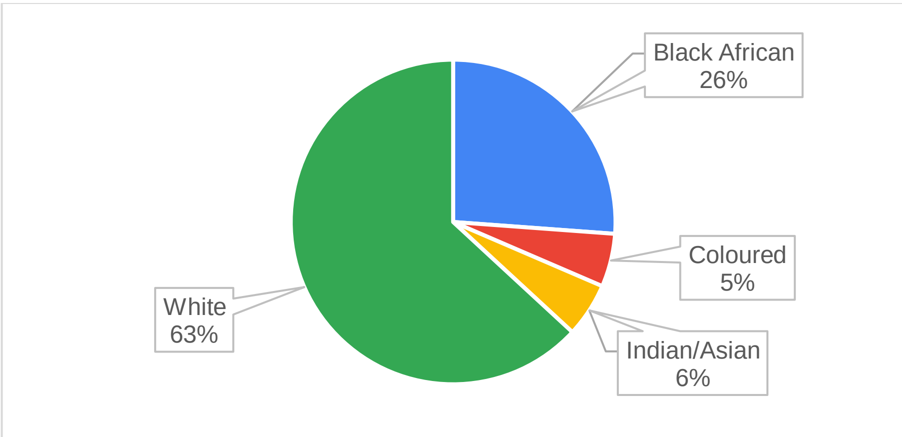
Graph 2 displays that at least 66% of the market is comprised of individuals between the ages of 30 and 50 years old. 20 to 29 year old's form a rather small quantity of the respondents with only 9% of representation. The number of 20 to 29 year old has decreased by 3% from 2020. A prominent share of the industry is occupied by individuals older than 50 years of age (25%). The response from this age category has increased by 3% from 2020.

The average age of a plumber in South Africa is estimated to be at least 55 years old. The survey results verify that the plumbing industry in South African is an increasingly aging one, which could possibly limit the number of young entrants in the industry. A possible concern that stems from this observation is the potential shortage of plumbers in the future.



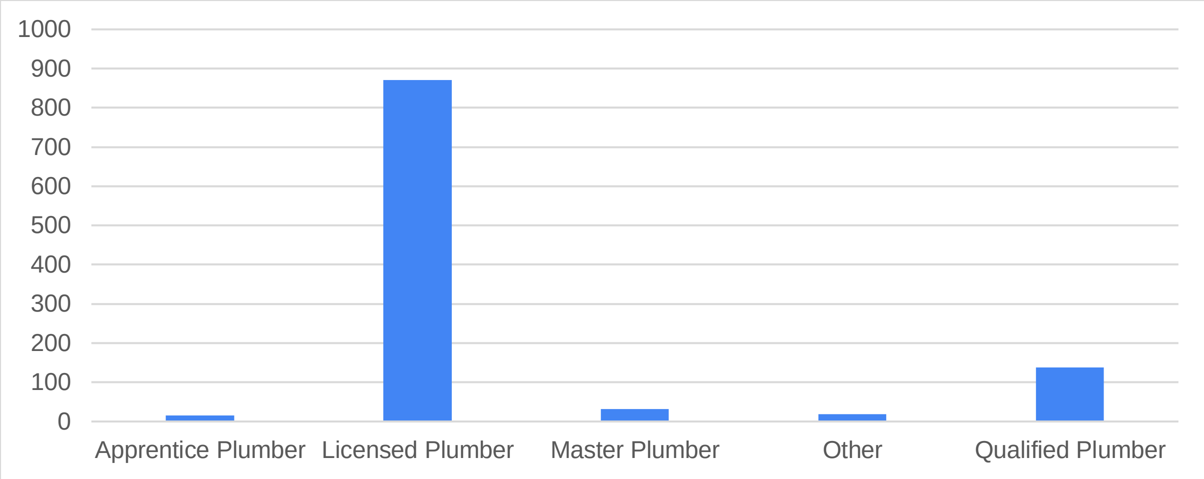
Graph 3: What is your racial classification?

Graph 3 exhibits that a significant portion (63%) of the respondents are White. African make up the second largest group of respondents at 26%, while Coloured and Indian/Asian individuals consist of 5% and 6% of the respondents respectively. In comparison to 2020, a 5% decrease occurred in the number of White plumbers while the number of African plumbers and Indian/Asian plumbers increased by 3% and 2% respectively. According to the Labour Market Dynamics from StatsSA, at least 85% of plumbers and apprentices in South Africa are African, with approximately 50% trading in the formal sector. The survey results therefore indicate there is enormous over representation of White plumbers and apprentices in the association.



Graph 4: What plumbing qualification do you have?

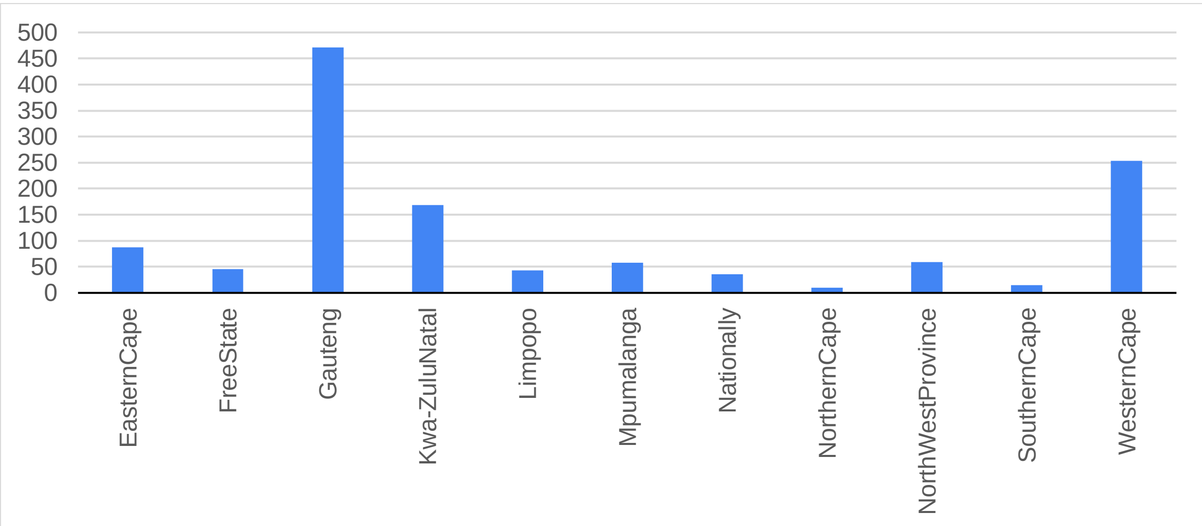
According to graph 4, 81% of the respondents to the survey are licensed plumbers, while qualified plumbers only make up 13% of the responders. A 3% increase in qualified plumbers has occurred between 2020 and 2021. Apprentice plumbers comprise of only 1%, which represents a 4% decrease from 2020. A 1% increase in master plumbers took place in 2021 taking the tally to 3%. Only 2% of the respondents indicated that they had ‘other’ qualifications, which indicated possible qualifications from outside the plumbing industry and National Diplomas.



Graphs 5: What provinces do you trade in?

Graph 5 indicates that more than a third of the respondents trade in Gauteng (38%), Western Cape (20%) and Kwa Zulu Natal (13%). While responders increased by 4% in Gauteng and decreased by 2% and 1% in the Western Cape and Kwa Zulu Natal respectively, they still hold the 71% share from 2020 to 2021. Only 3% of the respondents claimed that they trade nationally. A 2% decline of traders in the Eastern Cape took place. 2% of the respondents' trade in the Northern Cape and Southern Cape, combined. 16% of the respondents comprise of the plumbers and apprentices that trade in the Eastern Cape (7%), North West (5%) and Free State (4%). This shows a significant combined increase of 9% from 2020.

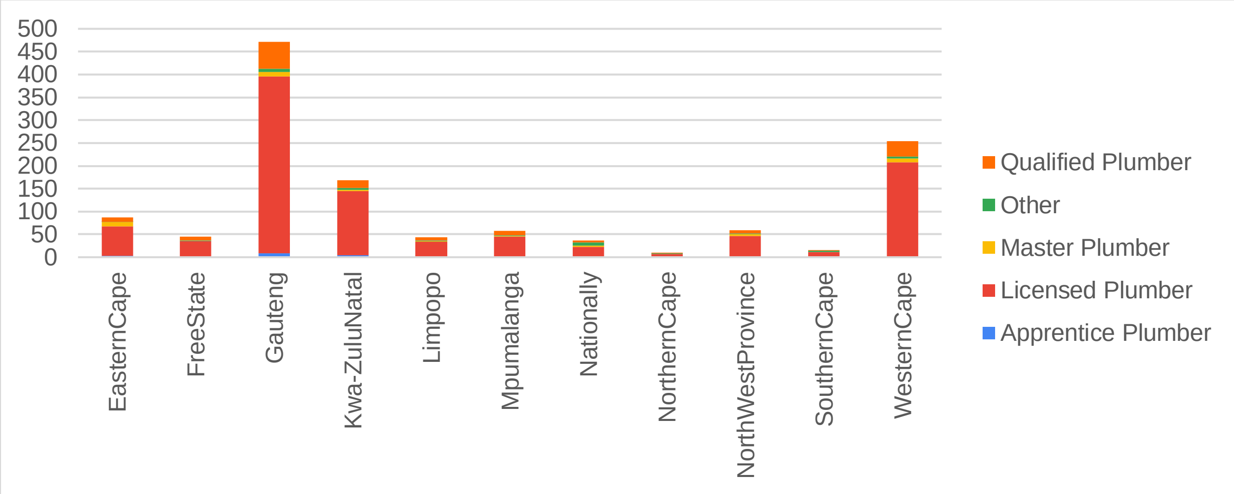
The survey shows that Limpopo and Mpumalanga combined account for 8% of plumbers and apprentices in South Africa, a 2% decrease from 2020.



Graph 6: Plumbing qualification by province

Graph 6 displays that according to the survey, the largest numbers of licensed plumbers hail from Gauteng, Western Cape and Kwa Zulu Natal. The provinces with the least number of licensed plumbers are the Northern Cape (7) and Southern Cape (12). Mpumalanga has had a significant increase in licensed plumbers with numbers increasing from 10 to 45 from 2020 to 2021. The largest number of qualified plumbers are situated in Gauteng (58) and Western Cape (34).

Of the 39 master plumbers that participated in the survey, 10 trade in Gauteng, 9 trade in the Eastern Cape and 8 trade in the Western Cape. The remainder of the master plumbers trade in Kwa Zulu Natal (3), North West (3), Mpumalanga (2) and Limpopo (1). Apprentice plumbers tally at 16, trading in Gauteng, Kwa Zulu Natal, Eastern Cape and the Free State.

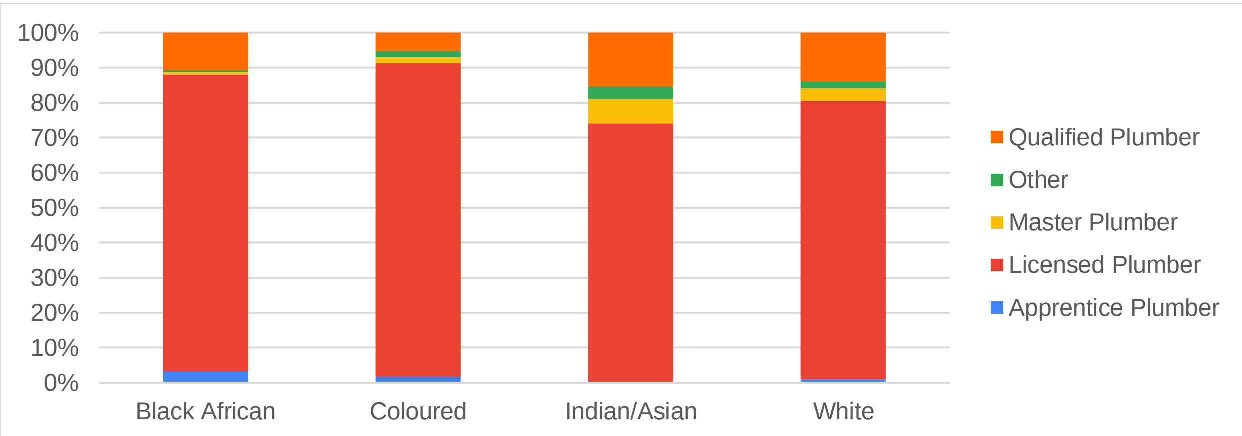


Graph 7: Plumbing Qualification by race

Graph 7 illustrates that licensed plumbers are spread across all races. Due to the majority of the respondents to the survey being White (63%), significantly more White licensed plumbers are shown in comparison to other racial classifications. White plumbers comprise of the bulk of the qualified plumbers followed by those having a master qualification. The second largest group of both licensed plumbers and qualified plumbers are African, representing 27% of all licensed plumbers and 22% of all qualified plumbers. From the total 871 licensed plumbers that were surveyed, 4.9% are Indian/Asian and 6% Coloured.

Only 16 apprentice plumbers participated in the survey, of which the largest group are African (56%). 38% of the apprentice plumbers are White and 6% are Coloured. The survey showed no Indian/Asian apprentice plumbers.

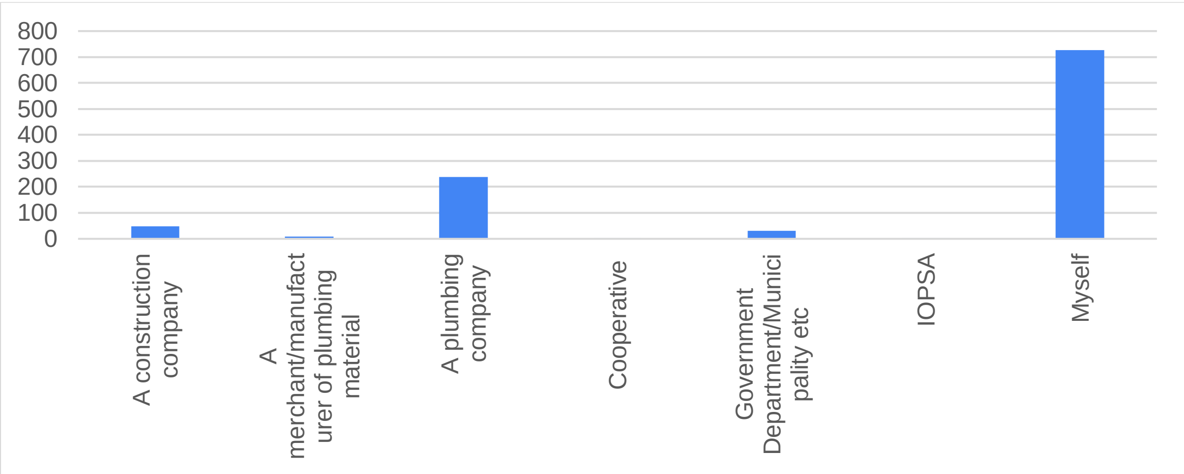
With regards to qualified plumbers 25 are Coloured and 7% are Indian/Asian.



Graph 8: Who do you work for?

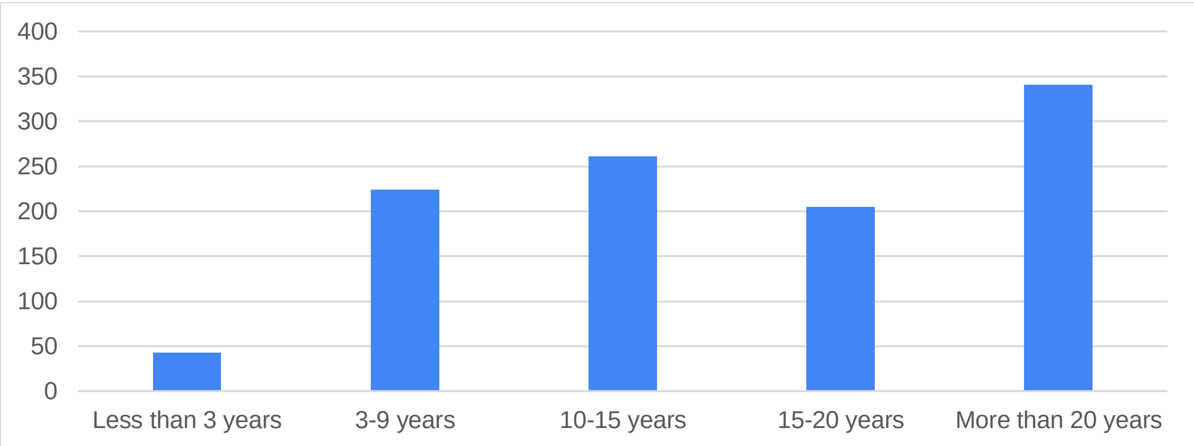
A substantial share (67%) of the respondents are self-employed plumbers and apprentices. Outside the share of respondents that are self-employed, 22% work for plumbing companies and 5% are employed by construction companies. A mere 3% of respondents are employed by government.

The 2021 survey shows a 3% decrease in self-employed plumbers and apprentices since 2020. A minimal 1% increase in those employed by plumbing companies took place while 1% decline occurred for those who are employed by government.



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

The vast majority of the respondents (31%) have more than 20 year of experience in the plumbing industry. 24% have 10 to 15 years in the plumbing industry and 21% with 3 to 9 years. In 2020, 7% of the survey's respondents stated that they had less than 3 years of experience. Only 43 (4%) of the 1074 respondents in 2021 have less than 3 years working in the plumbing industry

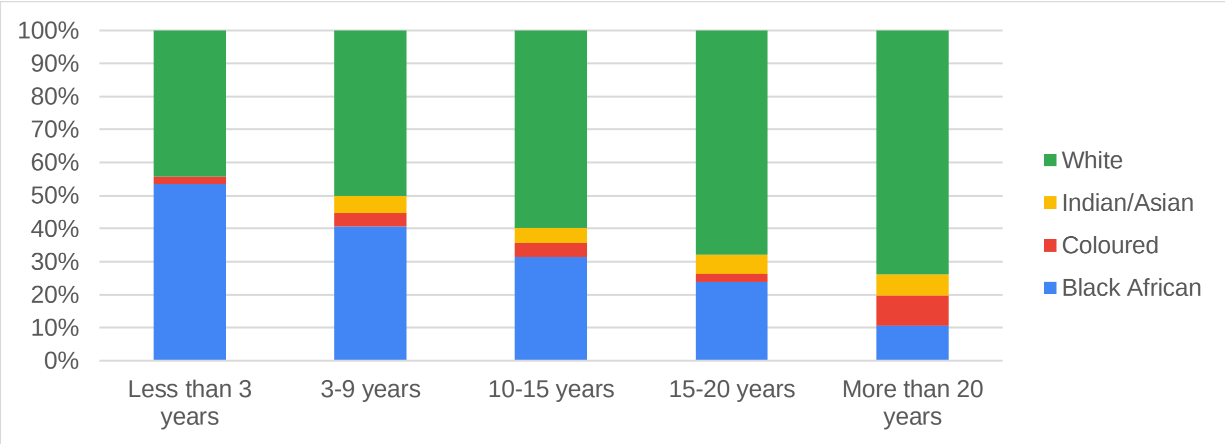


Graph 10: Number of years in the plumbing industry by race

Graph 10 shows that 74% of respondents that have been working in the plumbing industry for more than 20 years are White. According to the other racial classifications, 11% of African respondents have more than 20 years of experience in plumbing. Coloured and Indian/Asian with more than 20 years of plumbing experience account for 9% and 6% respectively. In comparison to 2020, the numbers of White plumbers with over 20 years of experience decreased from 83% to 74%. However, from 2020 there has been a 4% increase in Coloured plumbers with 20 years of experience and a 2% increase for Indian/Asian.

Between 2020 and 2021, there has been a 15% increase in African respondents who have worked in the industry for 10 to 15 years while there has been a 15% decline in White respondents in that category.

For plumbers with less than 3 years of experience in the industry, the majority of the respondents are African (53%). 44% of plumbers working for less than 3 years in the industry are White and 2% are Coloured. There is no record of Indian/Asian plumbers with less than 3 years of industry experience.

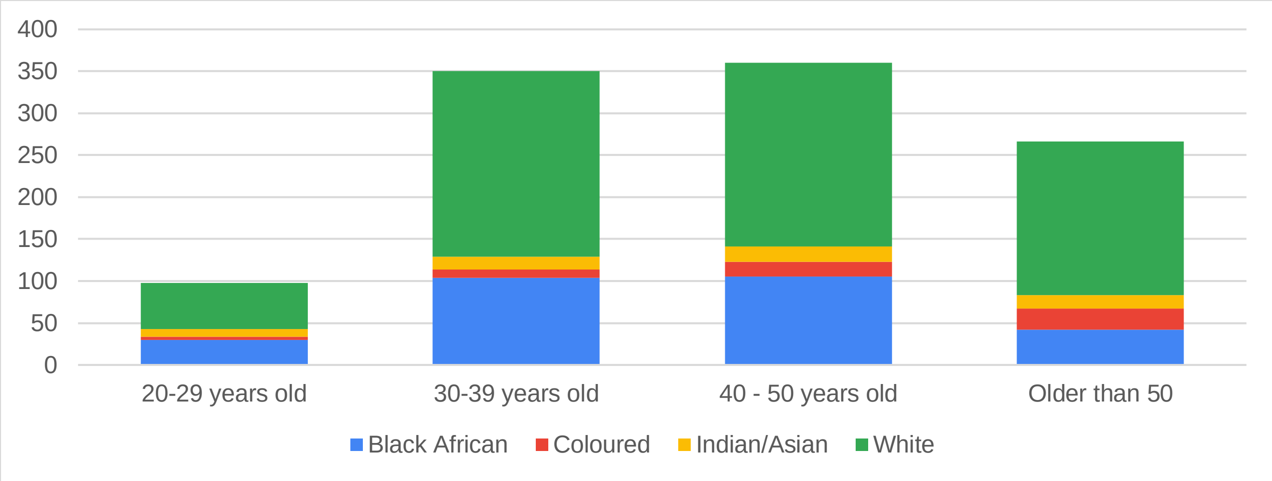


Graph 11: Age of respondents by race.

Looking at the graph below, it shows that more 69% of respondents older than 50 years of age are White. This shows a decline from 82% in 2020. White plumbers make up 61% and 63% of the 40 to 49 and 30 to 39 age cohort respectively. While 56 of plumbers aged 20 to 29 are white.

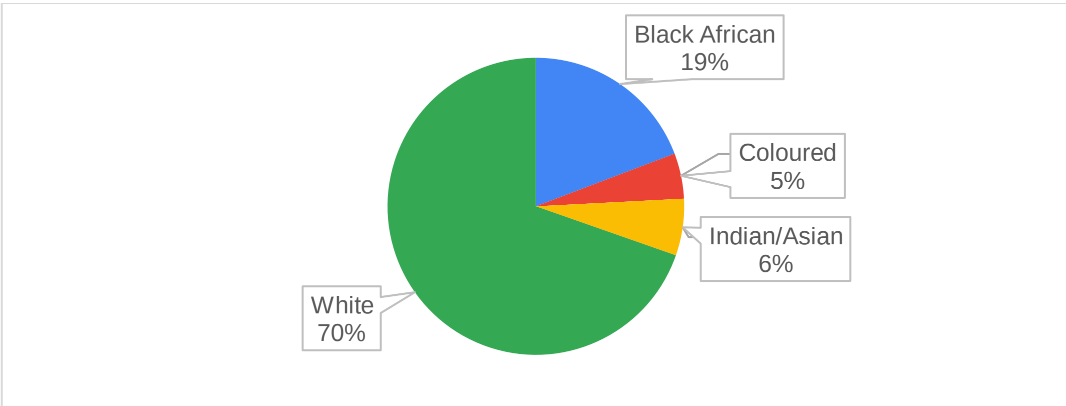
The vast majority of African plumbers are between the ages of 30 and 49 years of age while the minority can be found in the 20 to 29 year category. Only 16% of plumbers older than 50 years are African. The bulk of Coloured plumbers (44%) are older than 50 years of age. Of the total category of plumbers aged 40 to 49, only 5% are Coloured. Only 4 of the 57 Coloured respondents are between the age of 20 and 29.

From the 58 Indian/Asian plumbers that responded to the survey,16 are older than 50, 18 are between the ages of 40 and 49, 15 fall into the 30 to 39 age cohort while the remaining 9 fall in the category between the ages of 20 and 29.



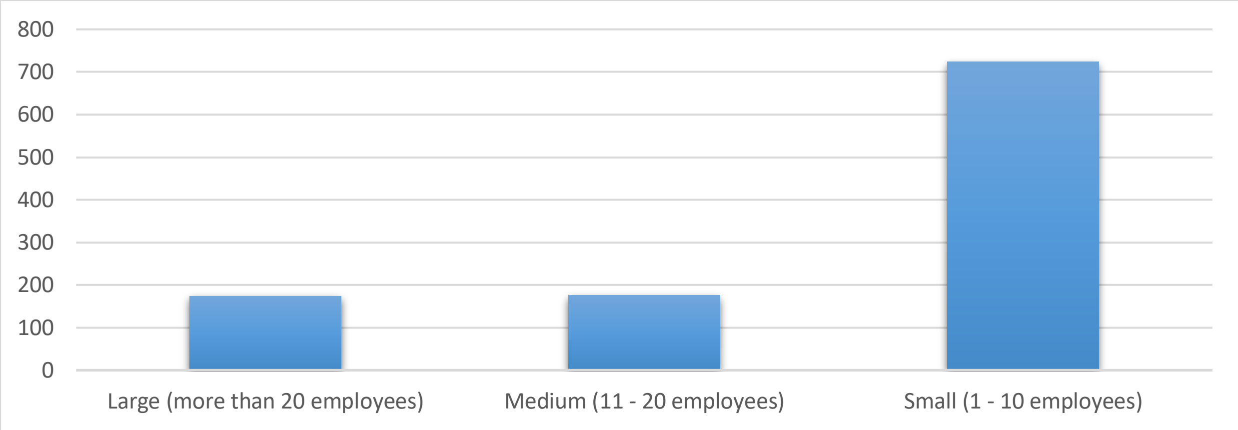
Graph 12: Self-employment by race

Graph 12 shows an analysis of self-employed plumbers. White respondents are self-employed by a large margin (70%). The number of self-employed White plumbers has declined by 4% since 2020. Coloured (5%) and Indian/Asian (6%) owners accounting for the smallest share of self- employment, however both races have seen a collective 2% increase in self-employment since 2020. African plumbers account for 19% of self-employed plumbers, up from 17% in 2020.



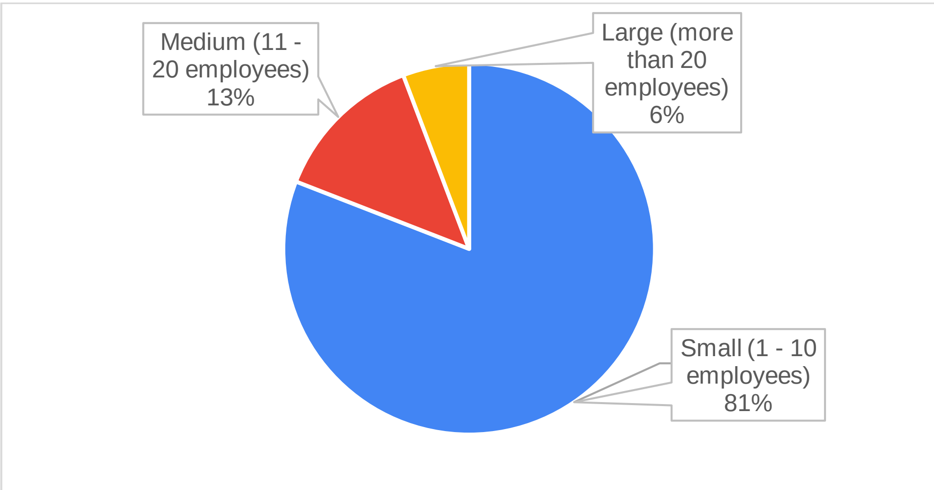
Graph 13: How big is the company you work for?

The majority (67%) of the respondents work for small companies that employ between 1 to 10 individuals. 176 (17%) stated that they are employed by medium sized companies while 174 (16%) of all respondents work for large companies. Since 2020, there has been a 2% decline in the number of plumbers employed by small companies and 1% increase in the share of those employed by both medium and large companies.



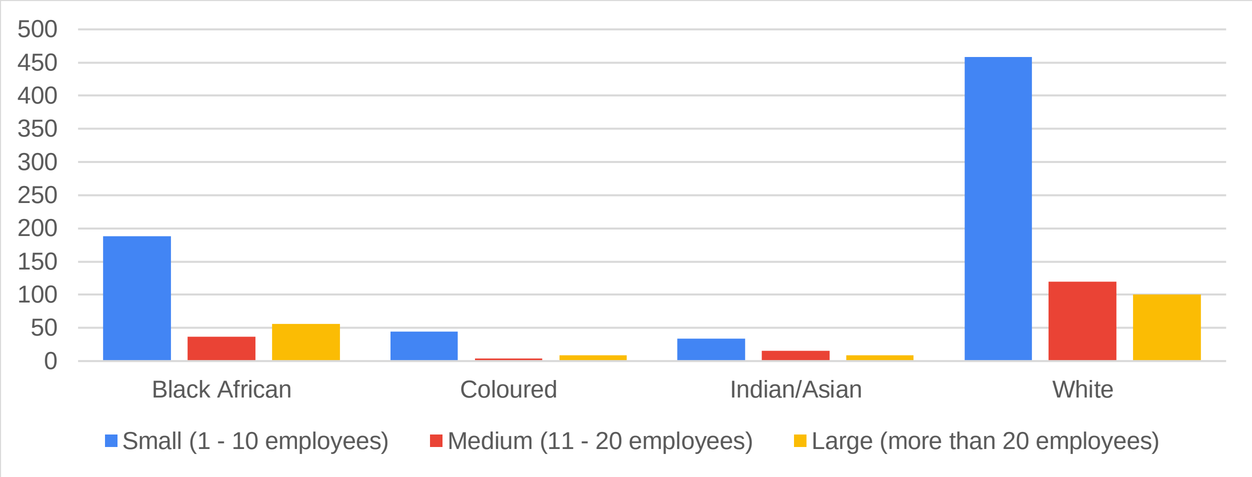
Graph 14: Self-employed plumbers by size of their companies

Graph 14 displays that 81% of self-employed respondents operate small businesses with either an own-account worker, or between 2 to 10 employees. 13% of self-employed respondents operate medium businesses with 2 to 11 employees while 6% operate large businesses with more than 20 employees. The number of self-employed plumbers working in large businesses remains the same from 2020.



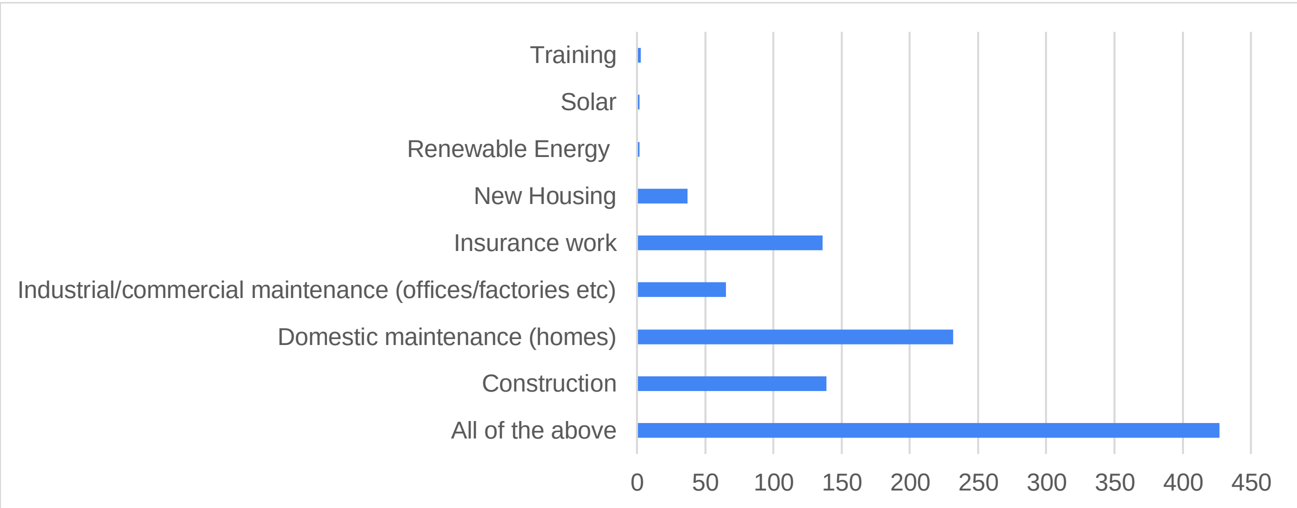
Graph 15: Company size by race

From looking at graph 15, small companies are the largest employers of plumbers through all racial classifications. 458 (68%) of White respondents work for small companies, 120 (18%) work for medium companies and 100 (15%) state that they work for large companies. A large number of Coloured and Indian/Asian work for small and medium sized companies. Among the African population, 188 (67%) work at small companies, followed by 37 (13%) who work at medium sized companies and 56 (20%) who work at large companies.



Graph 16: Company's main area of business

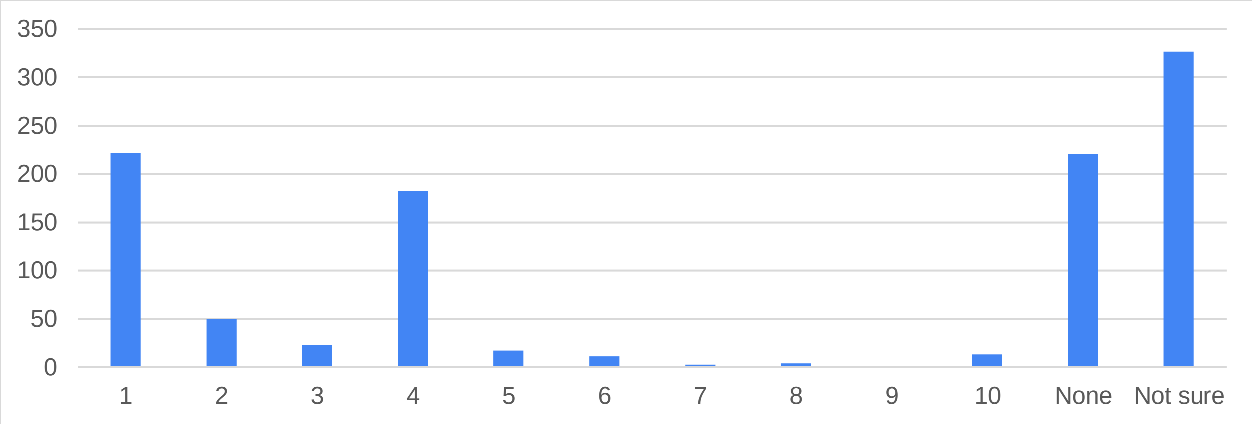
Graph 16 shows that 41% of respondents have stated that they operate in all areas of business, from construction, new housing, insurance and domestic maintenance to industrial and commercial maintenance. The second most popular area of business is domestic maintenance (20%) followed by insurance work (13%) and construction (13%). Only 37 (4%) respondents reported that they work in new housing and only 2 respondents work in renewable energy.



Graph 17: Company's BBBEE score

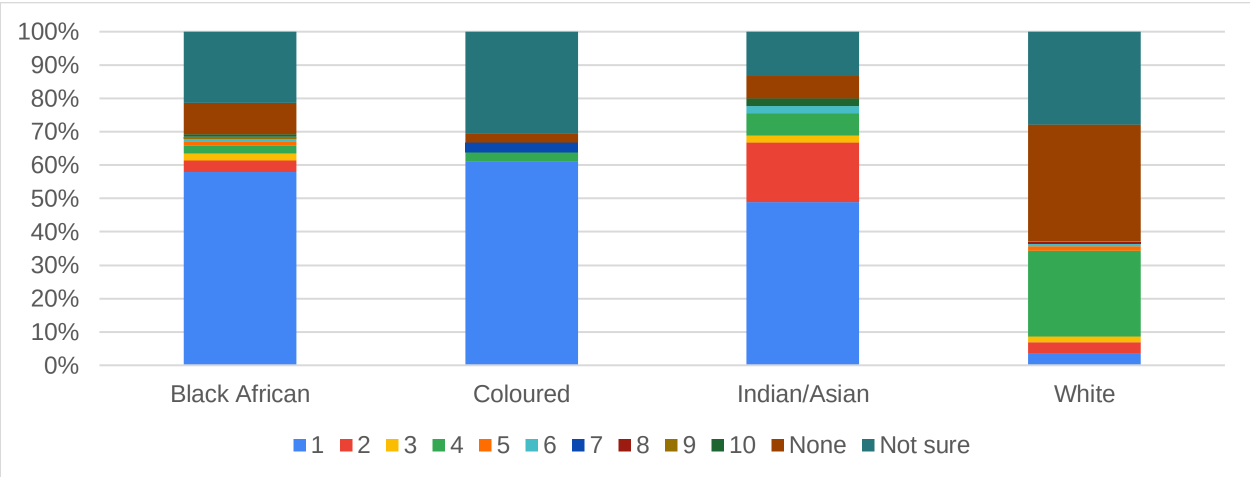
From graph 17, we see that 21% of respondents report that they work for companies with a BBBEE score of 1 and 50 (5%) work for companies rated level 2. The majority of respondents (17%), who work for BBBEE compliant companies work for companies recognised as level 4 BBBEE.

327 (30%) of respondents claimed to not know their company's BBBEE score. 221 (21%) respondents claim their company does not have a BBBEE score. There has been a decline from 2020 in employees who are unsure of their companies BBBEE score and employees who work for companies with no BBBEE score



Graph 18: BBBEE score and ownership by race

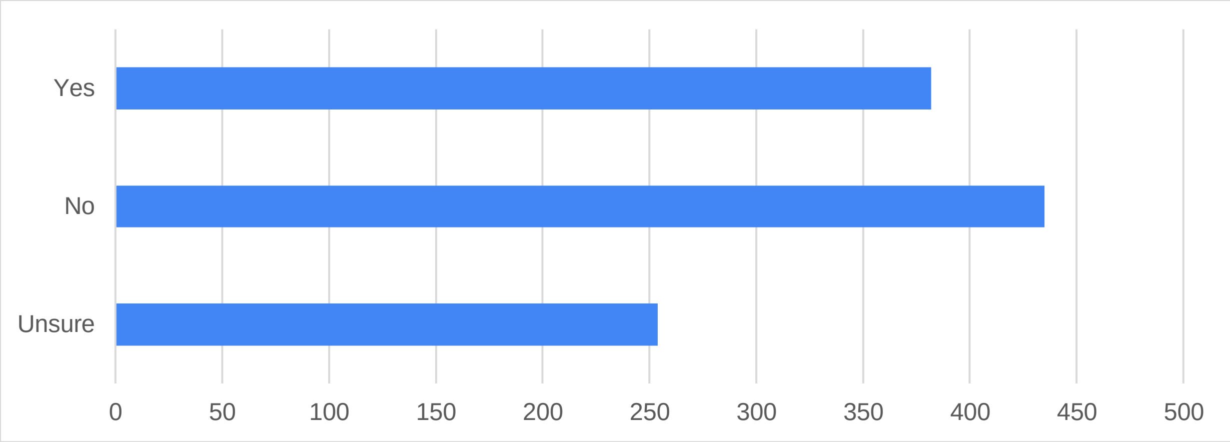
From graphs 18, it shown that more than half of the African owned companies are BBBEE compliant. African respondents who owned businesses have ratings across all levels from levels 1 to 10. African owners make up the largest share of businesses rated at level 1. In comparison to 2020, the same number of Indian/Asian and Coloured respondents have been given a BBBEE rating of level 1.



Graph 19: Does your company conduct formal training?

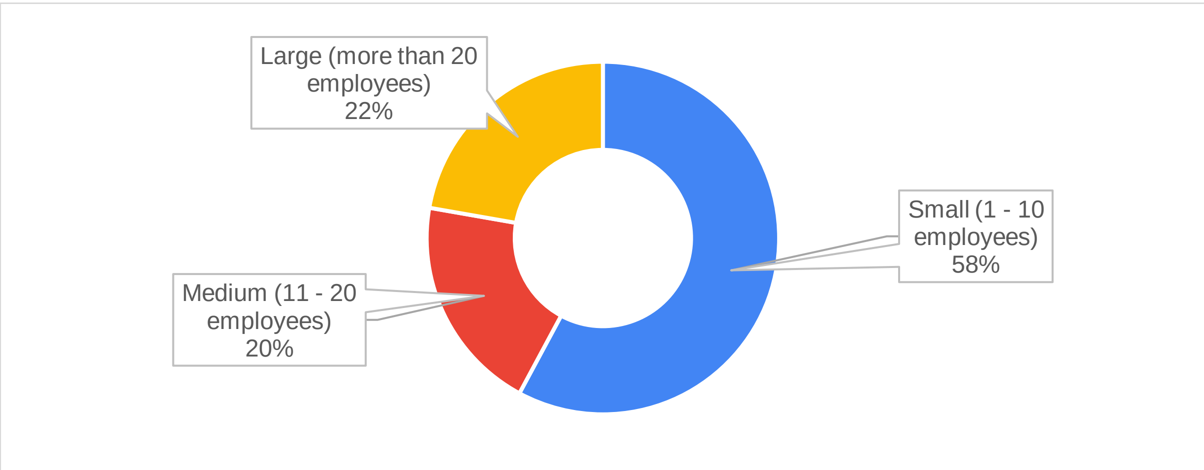
According to respondents, 328 (36%) report that they work for companies that conduct formal training. However, the majority (41%) of respondents state that their companies do not conduct formal training while 24% are unsure about whether the companies that they work for conducts formal training.

In comparison to 2020, 3% more survey respondents stated that the companies that they work for do not conduct formal training combined with a 1% decline in respondents who work for companies that do conduct formal training.



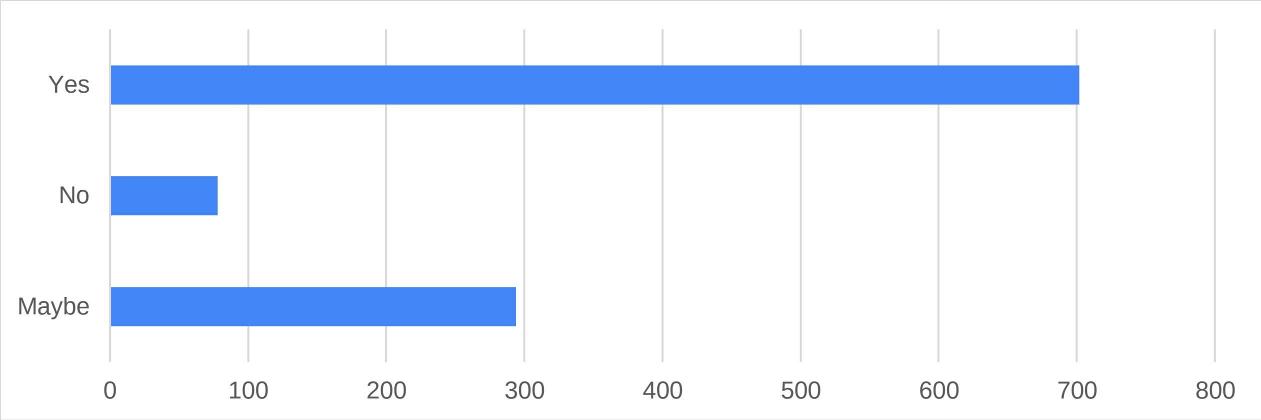
Graph 20: Training and participation by company size

Graph 20 shows that 58% of respondents working for small companies indicate that they their companies participate in formal training. There is a 3% decrease in this quantity since 2020. 20% of respondents working for medium companies say that their employers participate in formal training. 22% of respondents employed at large companies employing more than 20 employees say that their companies participate in formal training



Graph 21: Would you or your company participate in formal plumber training with the support of IOPSA?

The majority (65%) respondents would participate in formal training with the support of IOPSA. 7% respondents would not participate in training despite the support of IOPSA. The level of respondents who would not participate in formal training with the support of IOPSA remains the same from 2020. 28% of the respondents would consider in participating in formal training with the support if IOPSA.

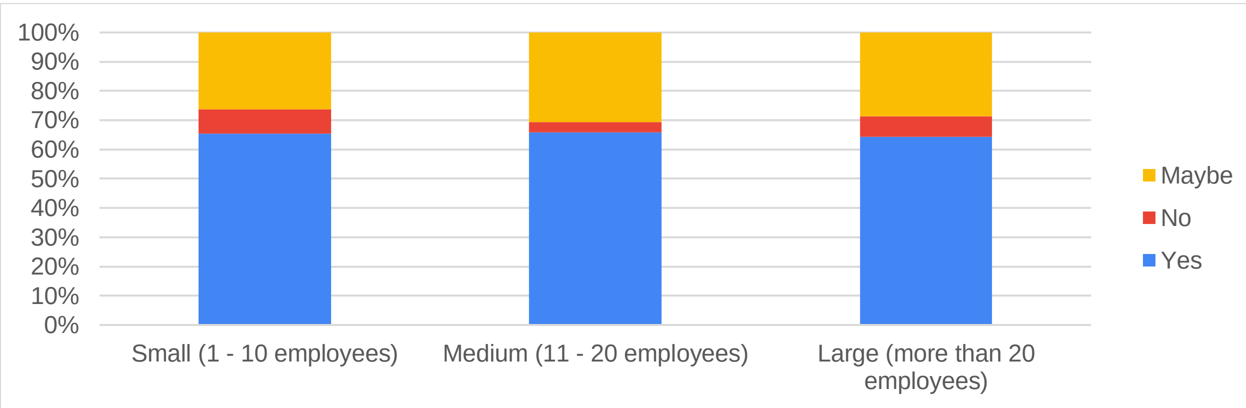


Graph 22: Would you or your company participate in formal plumber training with the support of IOPSA, by size of business?

Graph 22 shows that with regards to small companies, 65% of the respondents would participate in training with the support of IOPSA, while 8% would not participate despite support from IOPSA. The remaining 27% would consider participating.

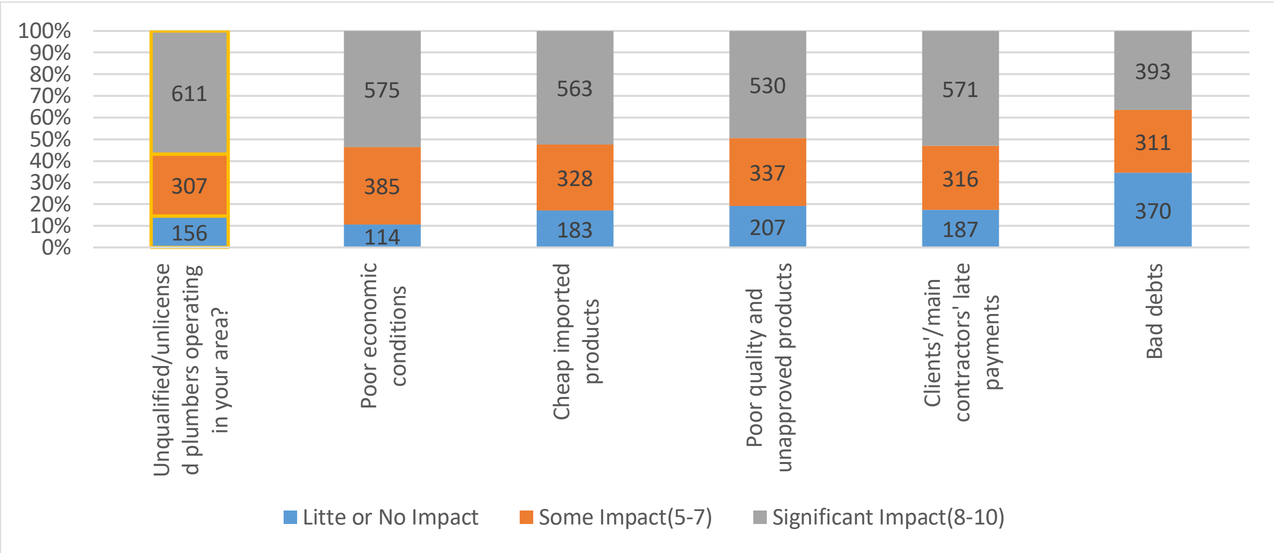
66% of all respondents working for medium sized companies would participate in training while 5% would not participate despite support from IOPSA. The remaining 29% would consider participating.

Plumbers and apprentices working for large businesses indicates that 64% of them would participate in training, 7% would not participate despite support from IOPSA. 29% would consider participating.



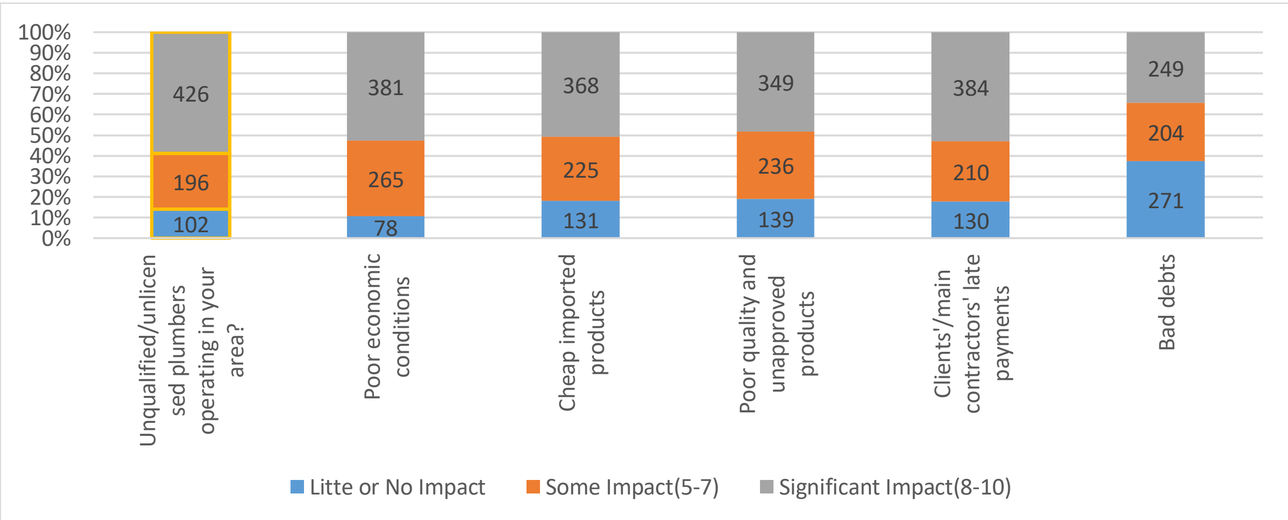
Graph 23: What impact do the following items have on your business' ability to be successful?

From the survey, respondents were asked to rate the level of impact different items affected the success of their businesses. The results from graph 23, unqualified plumbers operating in the area, clients/contractors' late payments, poor economic conditions and unapproved products /cheap imported products had the most significant impact on plumbing businesses' ability to be successful, while bad debts had the least impact on the businesses' ability to be successful. Similar to the 2019 and 2020 surveys, the biggest impact on plumbers' business success still remains unqualified plumbers operating in the market. Thus, there is growing concern that there are many plumbers operating in the market without any certification or qualification. Not only do unqualified plumbers drive down market prices and undermine prices for plumbing work of a standard quality, they also pose a huge risk to customer safety resulting from leaks, flooding and contamination of clean drinking water among other issues.

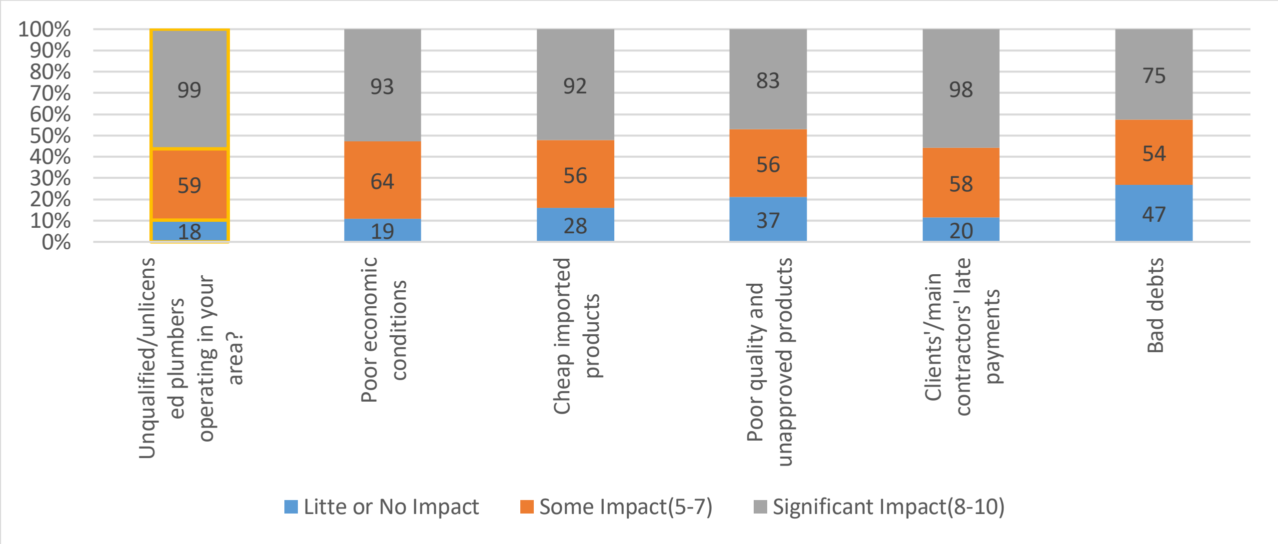


Graph 24: What impact do the following items have on your small business' ability to be successful?

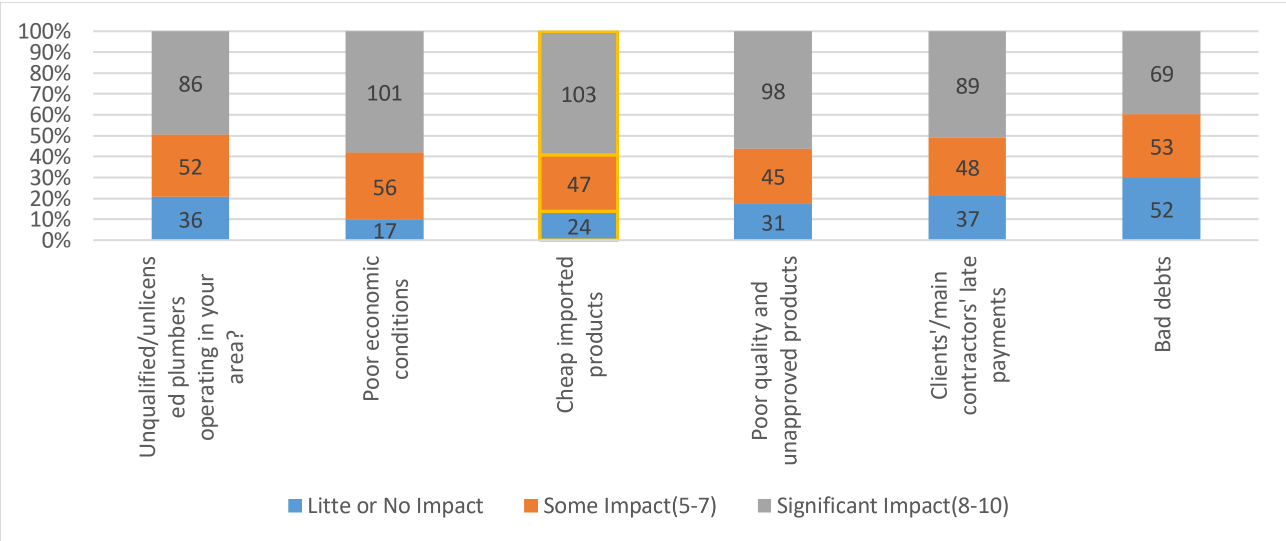
The results from graphs 24 to 26 present, that as companies grow in size, the more likely they are to be affected by poor economic conditions, poor quality and unapproved products. No single impact variable is shown to be significantly more impactful than the other. For companies of all sizes, the impacts of these business challenges are more or less spread across all five areas. This has remained consistent since 2019.



Graph 25: What impact do the following items have on your medium business' ability to be successful?

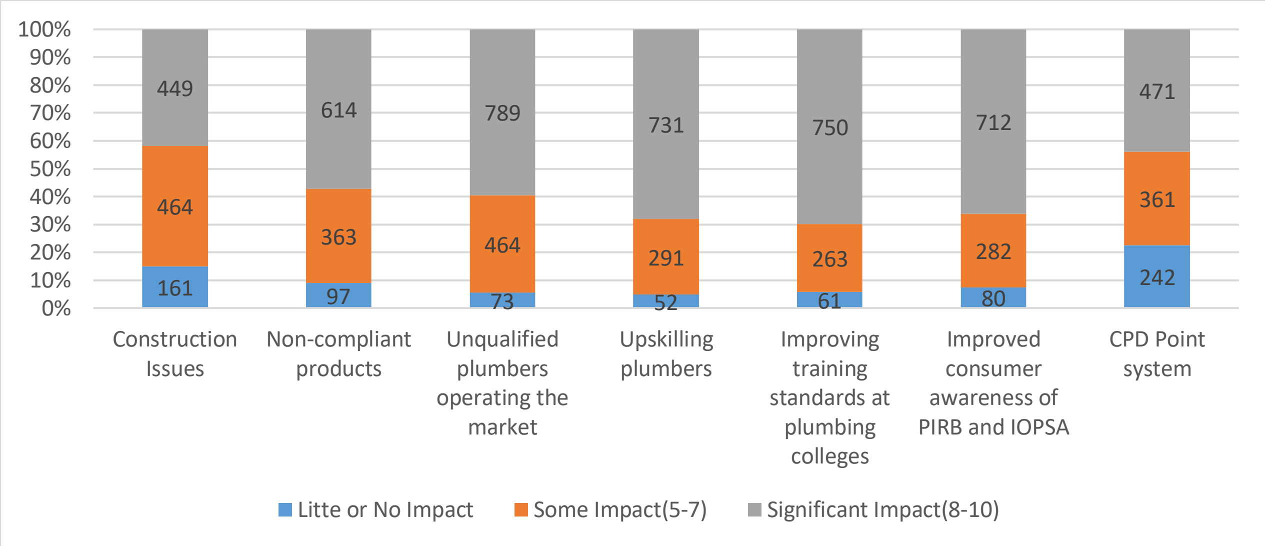


Graph 26: What impact do the following items have on your large business' ability to be successful?



Graph 27: What area would you like IOPSA to focus on?

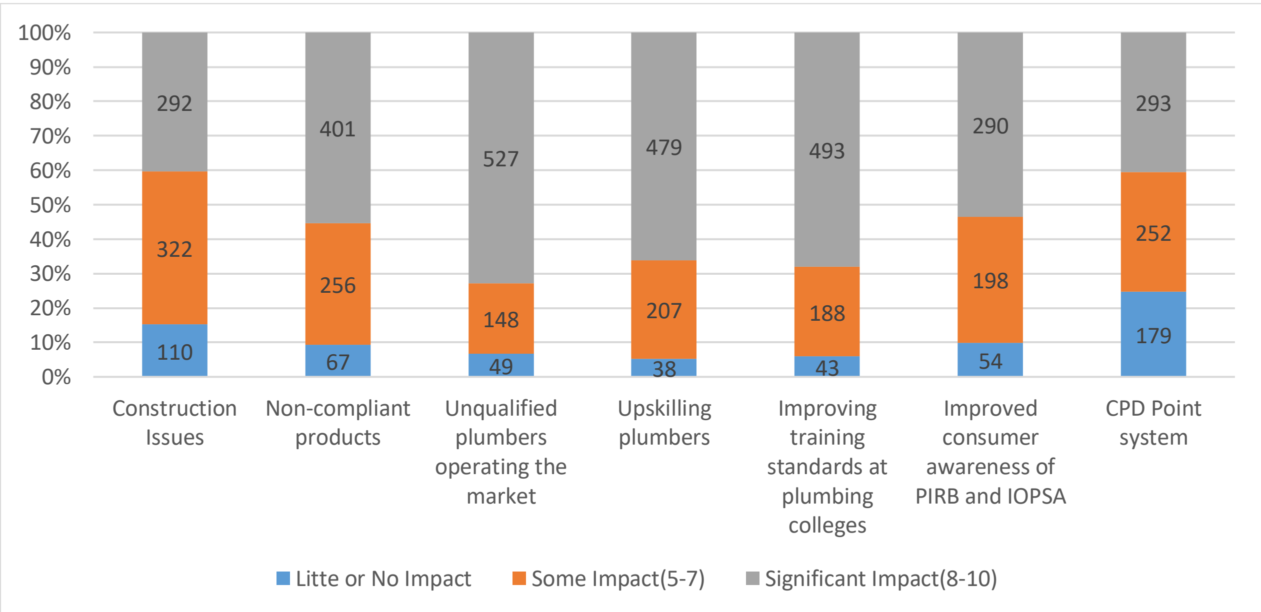
Graph 27 exhibits that according to the plumbers and apprentices surveyed, the main areas requested for IOPSA to focus on are spread across unqualified plumbers operating in the market, improving training standards, upskilling plumbers and improved awareness of PIRB and IOPSA. The areas that seem to be the least of the concern on the respondents are the CPD point system and construction issues.



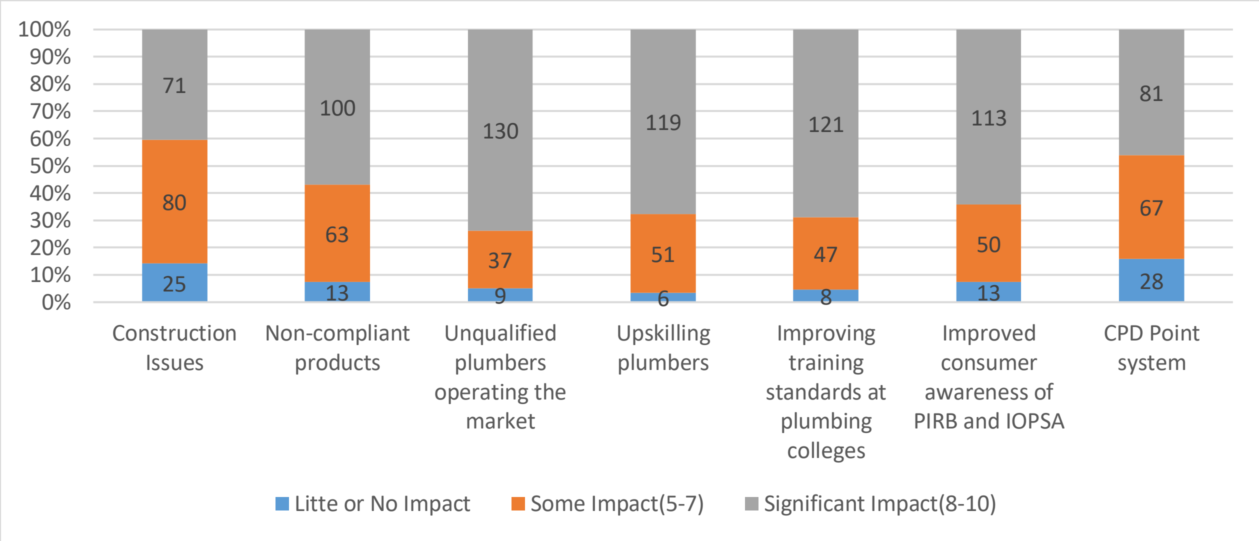
Graph 28: What area would you like IOPSA to focus on for small businesses?

Graphs 28 to 20 show the areas that the participants in the survey would like IOPSA to focus on dependent on the size of the enterprise. The results of these graphs are similar to that of graph 27. Respondents across all enterprise sizes have highlighted the same areas namely, unqualified plumbers operating in the market, improving training standards, upskilling plumbers and improved awareness of PIRB and IOPSA that they would like IOPSA to focus on.

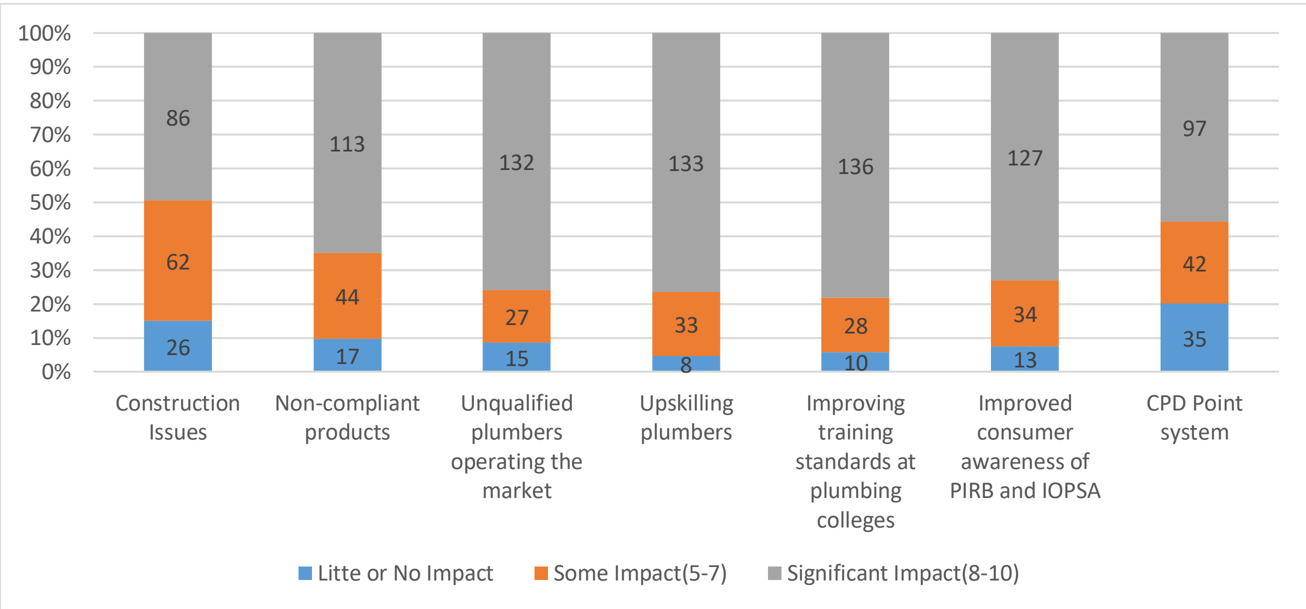
For small, medium and large businesses, the top 3 areas of focus seem to be unqualified plumbers, improving training standards and upskilling plumbers.



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

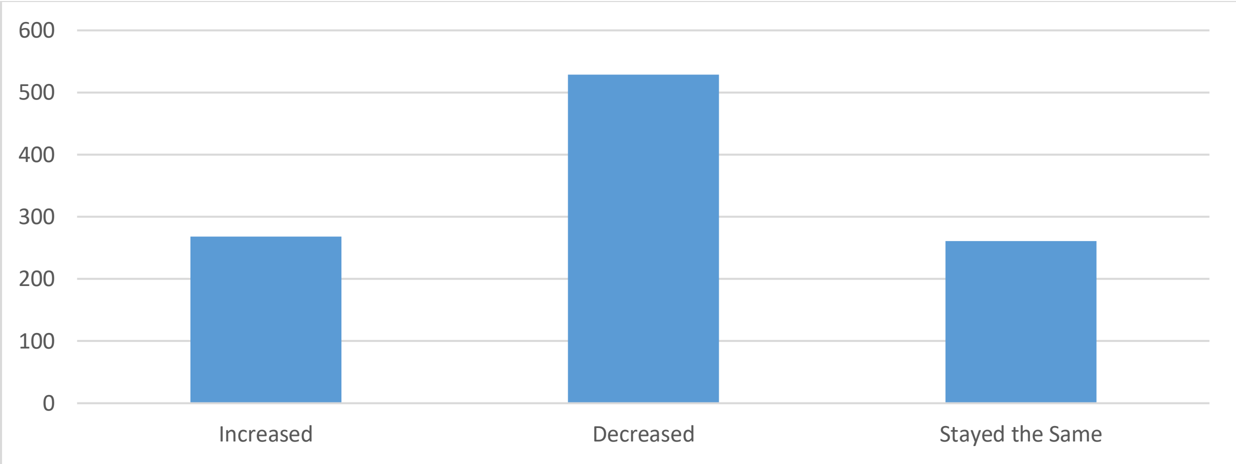


Graph 30: What area would you like IOPSA to focus on for large businesses?



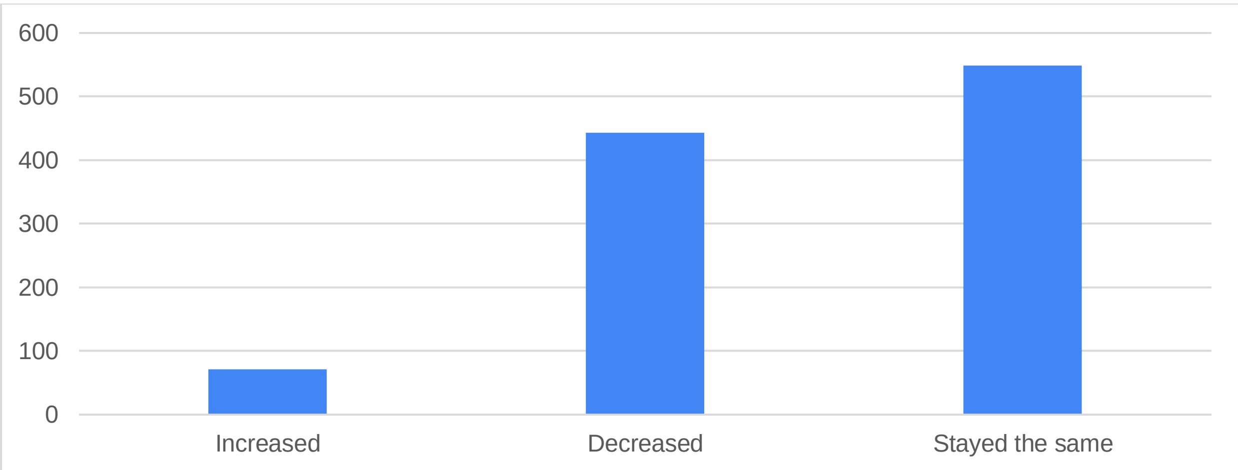
Graph 31: What has happened to your turnover since lockdown?

As a result of the national lockdown, a decline in turnovers has been experiences across South African industries. Despite plumbing being an essential service, half of the respondents have witnessed a decrease in their turnovers, while there has been an increase in the turnover of 25% of respondents. The remaining 25% claim that their turnover has remained the same. A positive observation is that in comparison to 2020, 16% more respondents have seen an increase in their turnovers for 2021.



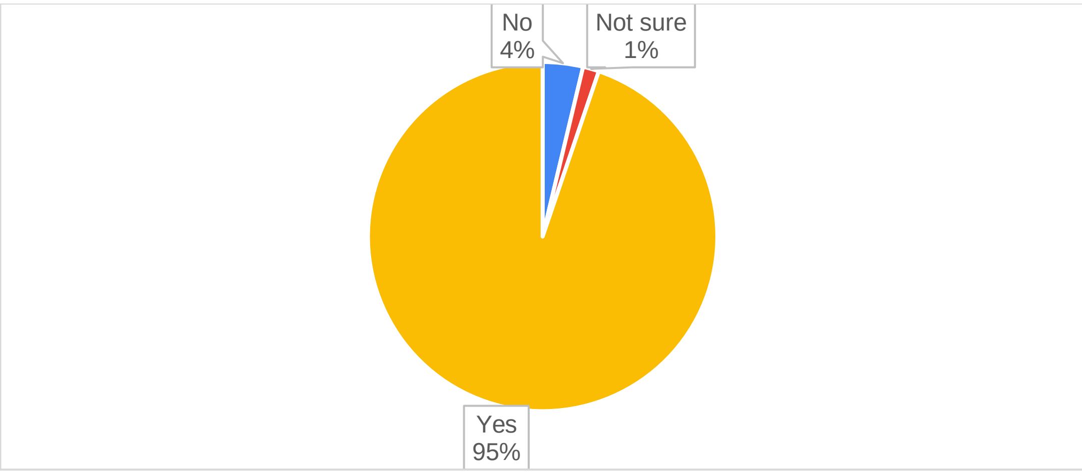
Graph 32: What has happened to your staff complement since lockdown?

Results from Graph 32 show that staff complement since the national lockdown has mostly stayed the same for a significant share of respondents (52%) while 42% of respondents reported a decrease in staff complement. The 42% decrease in staff complement could be explained by the 50% of respondents who witnessed a decrease in turnover and possibly had to reduce their staff complement through retrenchments or layoffs to remain financially viable. Only 7% of respondents said their staff complement increased.



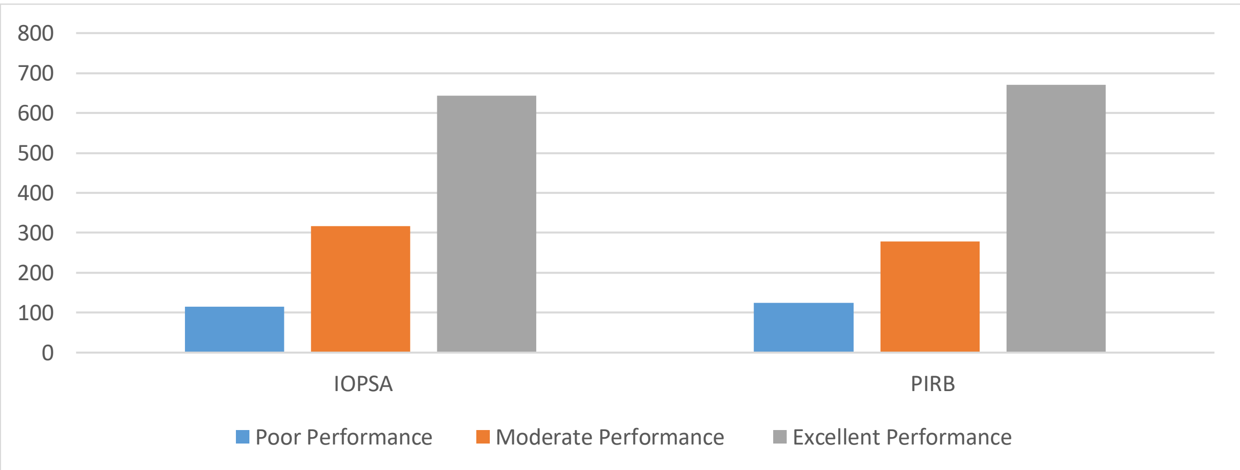
Graph 33: Are you registered with PIRB?

From all the respondents that were surveyed, 95% of them are registered with PIRB while 4% are not and the remaining 1% is unsure. A 2% increase in registered respondents has taken pace since 2020.



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

From the 1074 respondents, 60% rated the service they had received by IOPSA as excellent. 29% rated the service as moderate while 11 respondents stated that they have received poor service. PIRB had a 62% excellent performance with a 26% moderate performance rate. 12% of the respondents experienced poor performance from PIRB. Since 2020, there has been a decline in the respondents who have received excellent service from both IOPSA and PIRB. More respondents report that they receive poor service from PIRB, compared to those who receive the same level of service from IOPSA. This has remained the same from 2020.



Key findings from the 2021 survey:

- According to StatsSA there has been an overall decline in employment in the plumbing sector of around 15,5 percentage points . This may be due to the impacts of COVID-19 but likely also reflects the difficulties faced by the construction industry as a whole.

- The IOPSA survey results from 2021 follow the general trends in the plumbing industry in terms of gender and age, as well as years of experience and location. The number of female plumbers shows that there is room for gender diversity in the plumbing industry. The survey results indicated that 63% of respondents are White while StatsSA data has indicated that Africans make up 85% of the plumbers and apprentices in the industry, therefore the data is heavily skewed.

- The majority of plumbers (66%) are between the ages of 30 and 50 years while only 3% are between the ages of 20 and 29 years. The survey indicates that the plumbing industry is an aging one and therefore a possible concern that stems from this observation is the potential shortage of plumbers in the future.

- Since 2020, an increase in the number of plumbers in the North West, Free Sate and Eastern Cape occurred. According to the survey results, Gauteng still remains the province where the majority of plumbers and apprentices operate, while plumbers and apprentices operating in Kwa Zulu Natal and the Western Cape have decreased. A decrease in self-employed plumbers occurred since 2020. There has also been a 2% decline in the number of plumbers employed by small companies and 1% increase in the share of those employed by both medium and large companies.

- Unqualified plumbers operating in the market has been a long-standing issue and was highlighted in the 2019 and 2020 surveys. Unqualified plumbers drive down market prices and undermine prices for plumbing work of a standard quality. Respondents have also indicated that the top 3 areas that they would like IOPSA to focus seem to be unqualified plumbers, improving training standards and upskilling plumbers. It is therefore rather surprising that despite the concern of unqualified plumbers operating in the market and the issue of needing to upskill plumbers, there are respondents who say that their companies do not participate in training, and even if IOPSA was to offer training support, they would still not participate.

- There is no considerable difference between the service that survey respondents have experienced from IOPSA and PIRB. Majority of the respondents have experienced moderate to excellent service. However, some respondents have experienced poor service and that should not be overlooked. It should also be noted that since 2020, there has been a decline in the respondents who have received excellent service from both IOPSA and PIRB.