



**TPC Electronic Industry
Coronavirus Impact Survey**

February 18, 2020

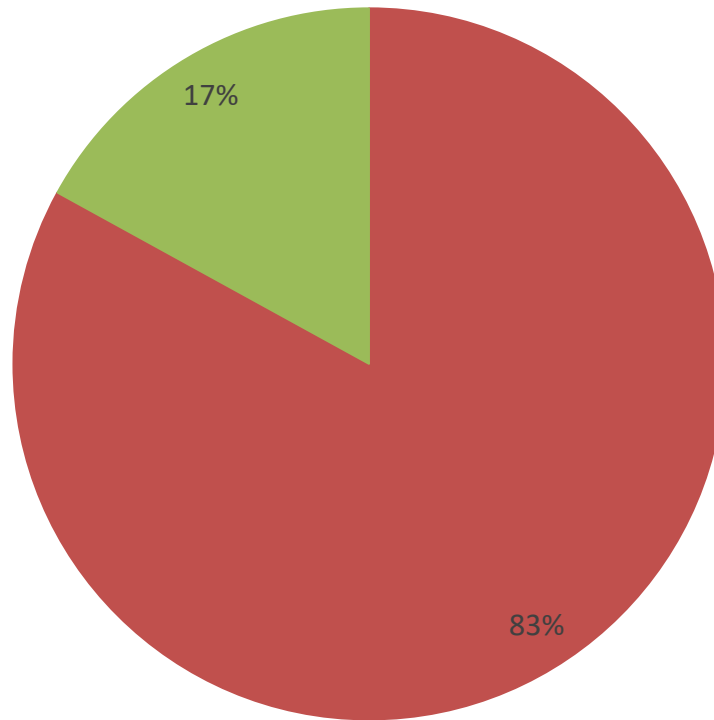
TPC Electronic Industry Coronavirus Impact Survey

Survey Date: February 11-15 Respondents: ~6000 Location: Worldwide/China focus (~85% China) Who: Active Electronics Industry Professionals

As a follow up to our ongoing research on the impact to the electronics supply chain in China from the Coronavirus; we did a special survey. The survey had ~6000 respondents with ~85% located in China. Our key findings along with our supporting on the ground checks are as follows:

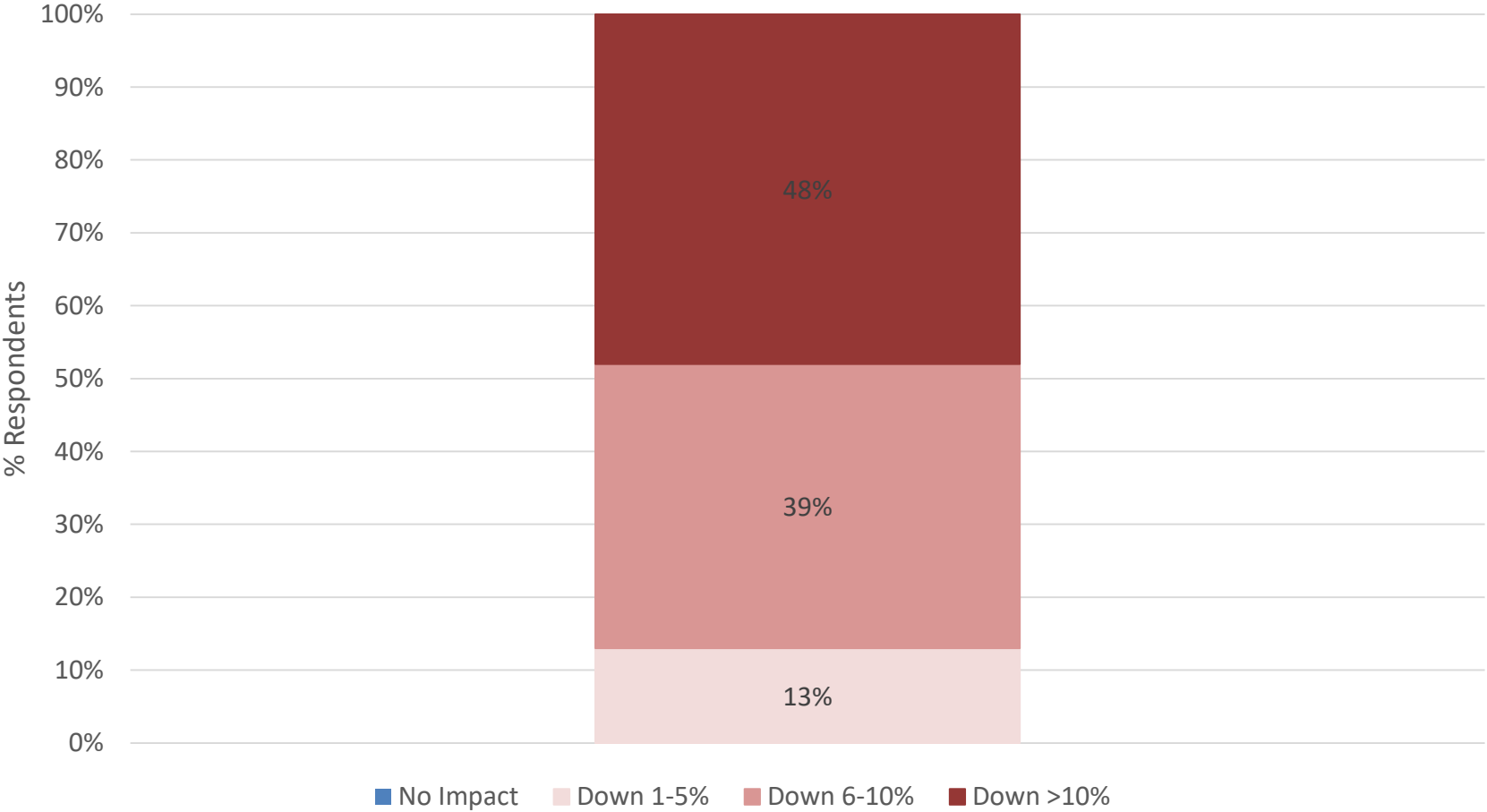
- 83% of the respondents are seeing a negative impact to demand and/or production from the virus.
- Roughly half of the respondents see production down more than 10% for C1Q due to the virus' impact and another 40% see it down 6-10% vs. previous plans.
- 44% think this shortfall in C1Q will not be made up in C2Q.
- Regarding the C2Q shortfall, ~70% of these responses believe there will not be enough workers back by C2Q to make up the C1Q production deficit; while ~65% believe there will not be enough components available in C2Q to make up the shortfall. Only ~25% see any demand being destructed because of production shortfalls in C1Q.
- We are seeing evidence that only ~50% of the workforce at the major manufacturing sites have returned.
- China Gov't officials are not available at factories to approve their reopening.
- ~40% of China based suppliers have still not given a return to work date to their workforce.
- Non-China based components that do ship in February in a lot cases cannot be received in due to lack of workforce.
- We believe that the increase to C2Q's manufacturing schedule and requirements will further tighten supply chains resulting in shortages and some allocation.

Have you seen a negative impact to component demand and/or production due to the Coronavirus?

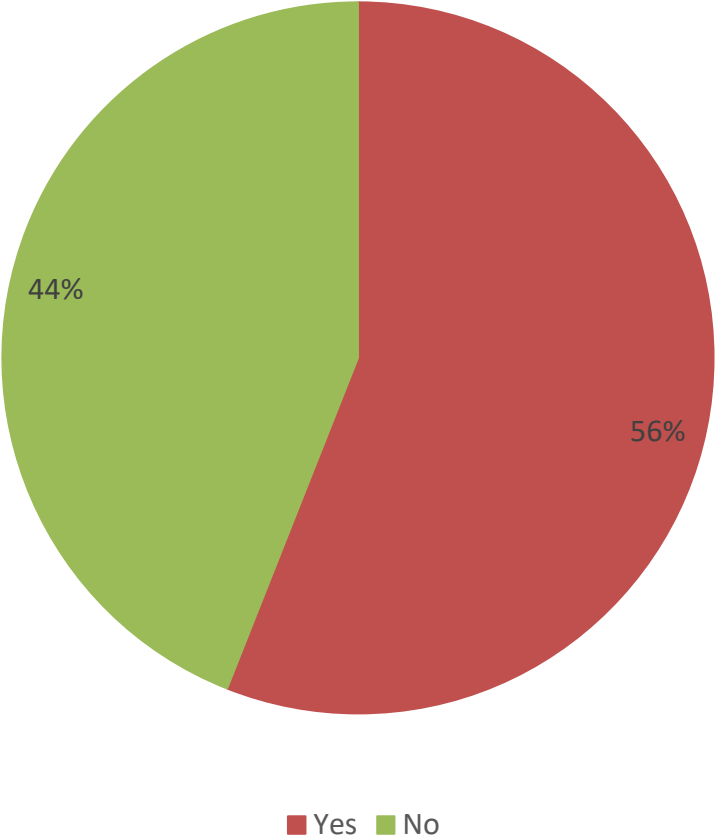


■ Yes ■ No

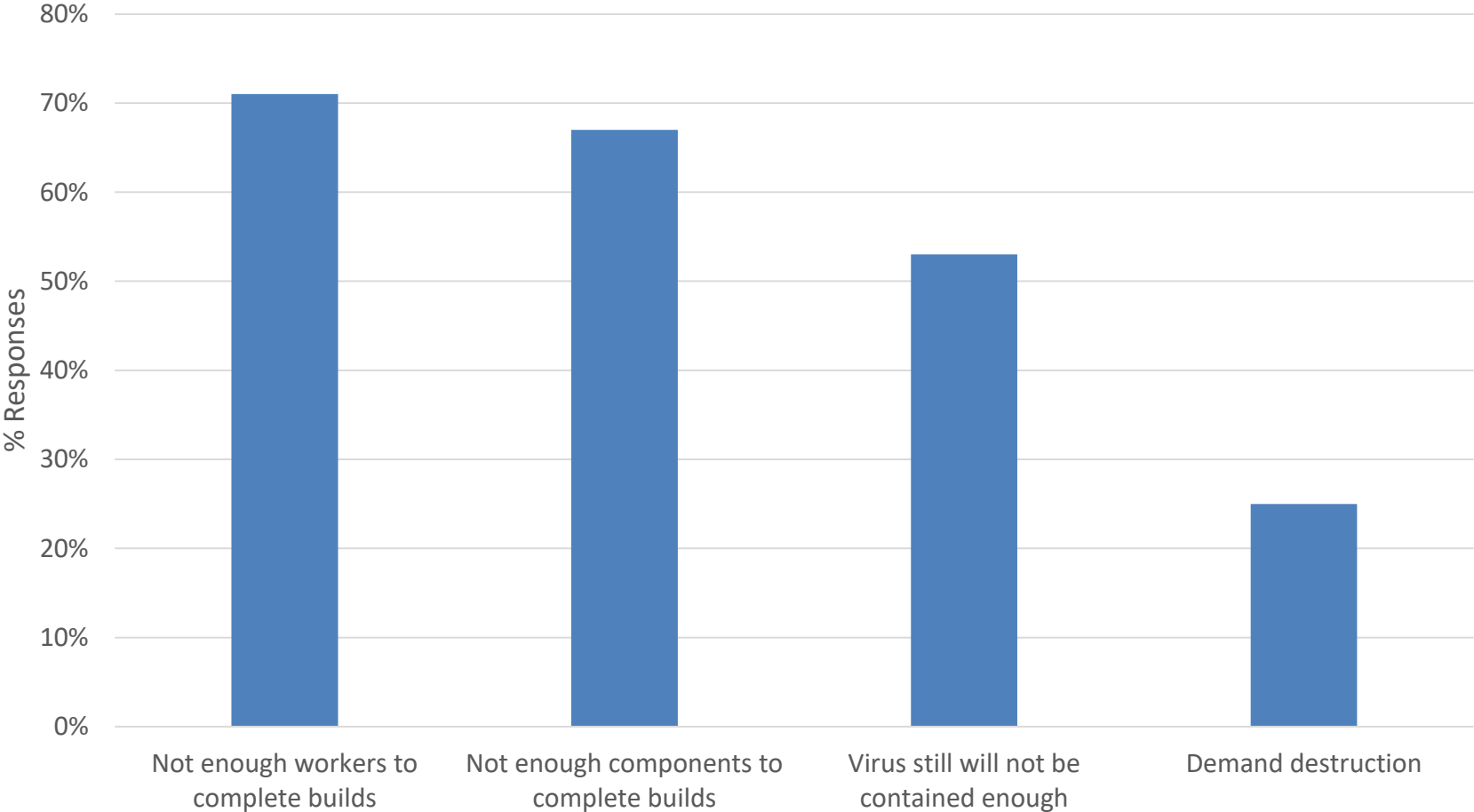
What % do you think this will impact C1Q's electronics production vs. previous plans?



Do you think this production delta will be recovered in C2Q?

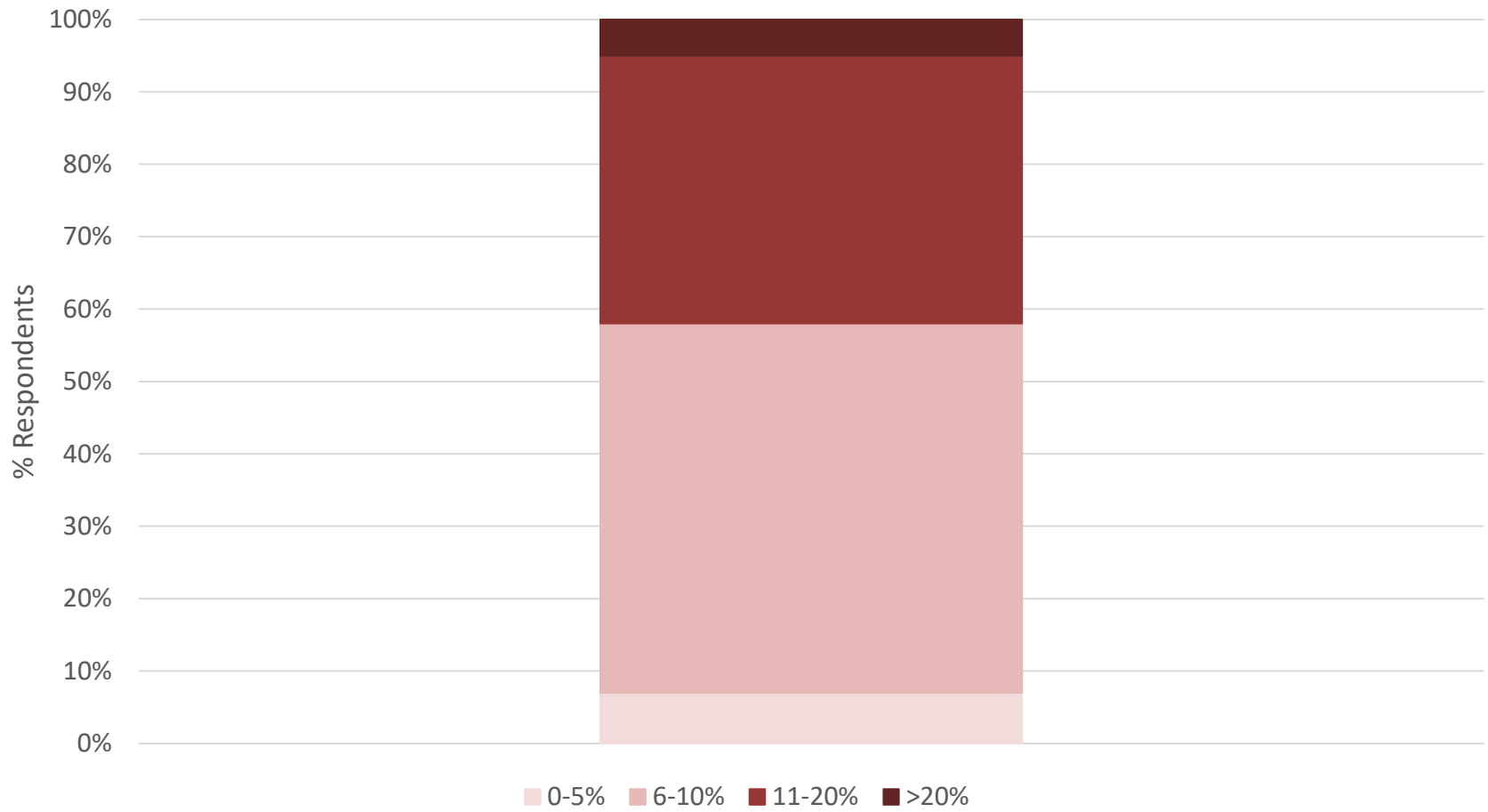


If production delta will not be recovered in C2Q, why? (multiple answers OK)

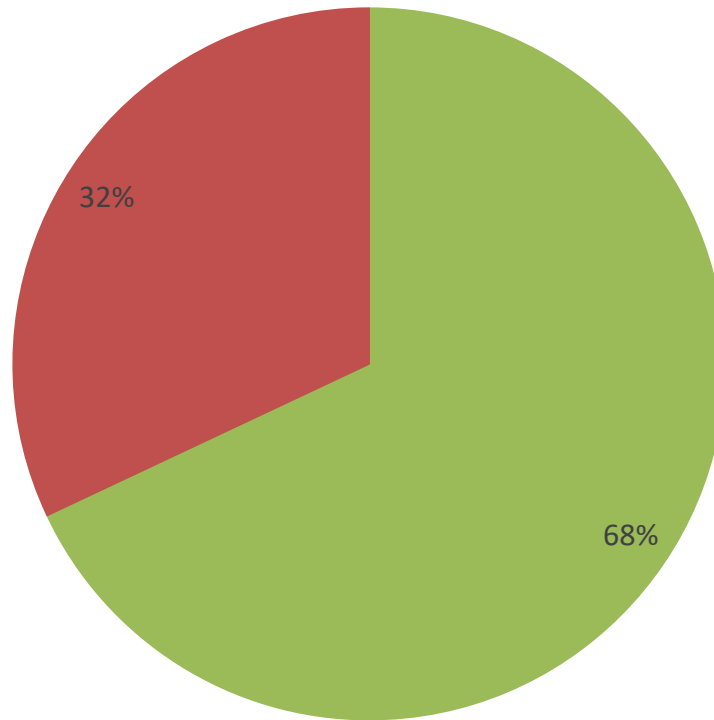


What is the % of total electronics manufacturing that has left China for other areas over the past 12 months due to tariffs?

(From December '19 Survey)



Will this reverse once a trade agreement is reached? (From December '19 Survey)



■ Yes ■ No