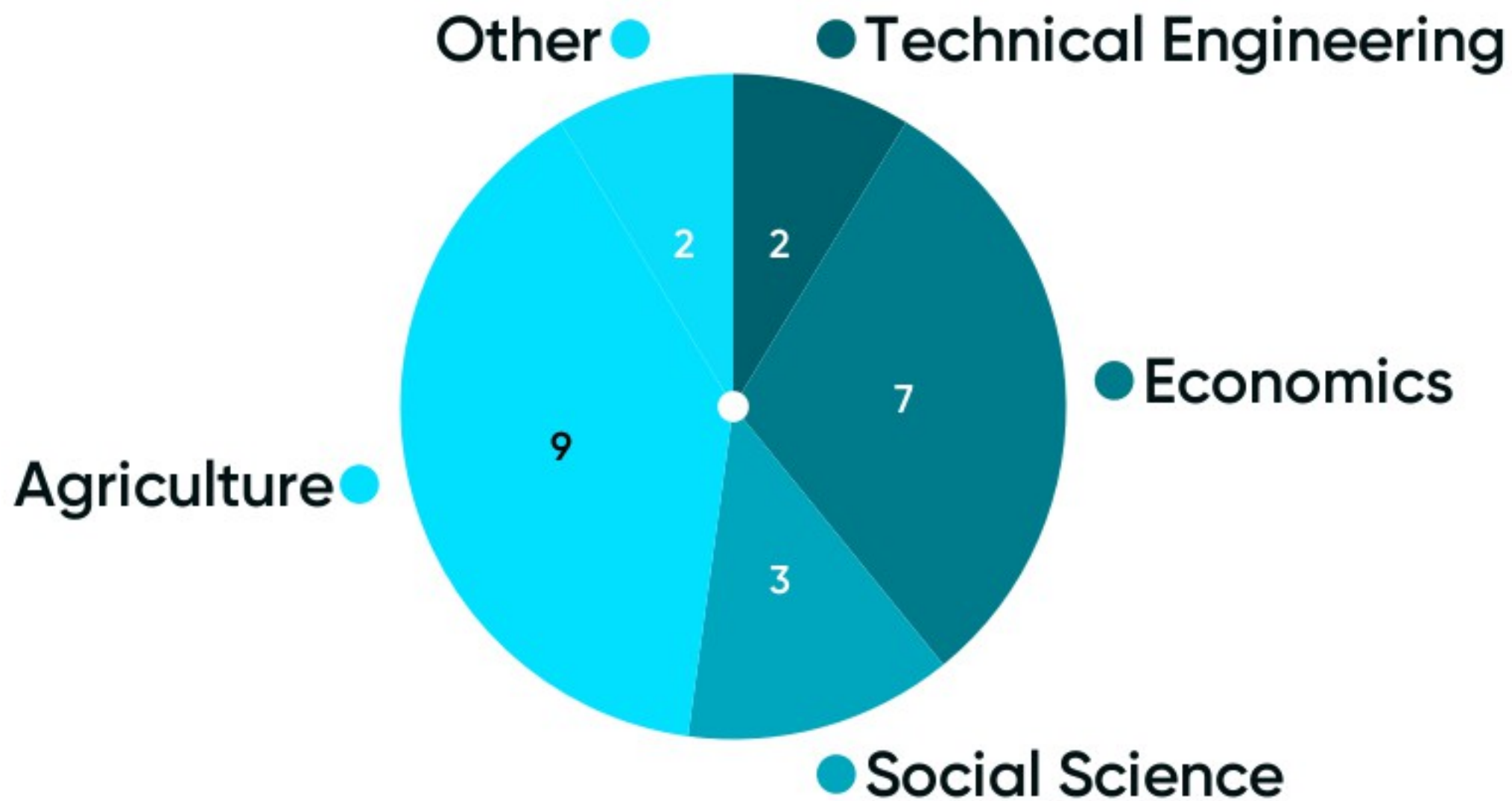


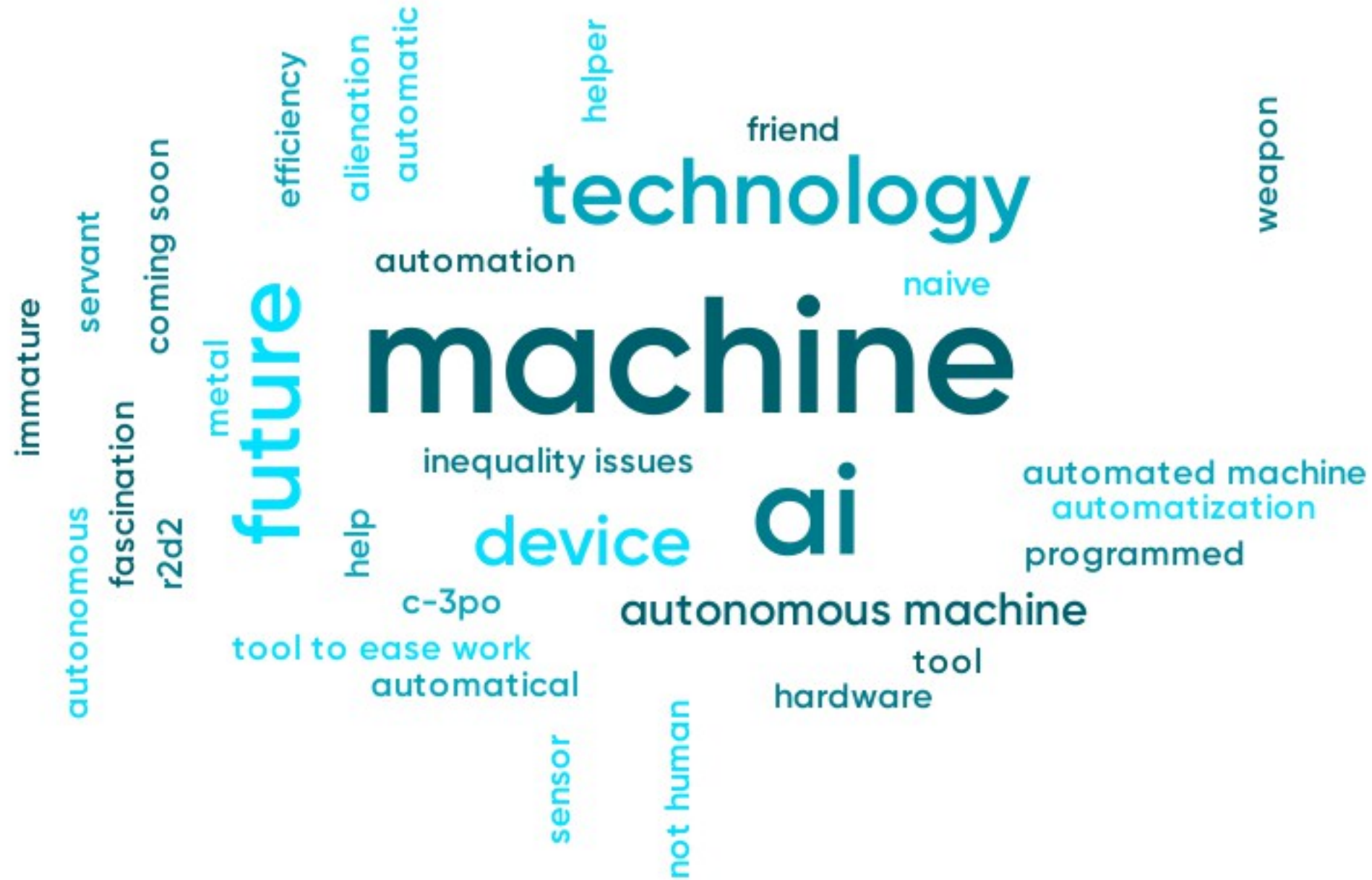
# What is your academic background?



# What is your cultural background?

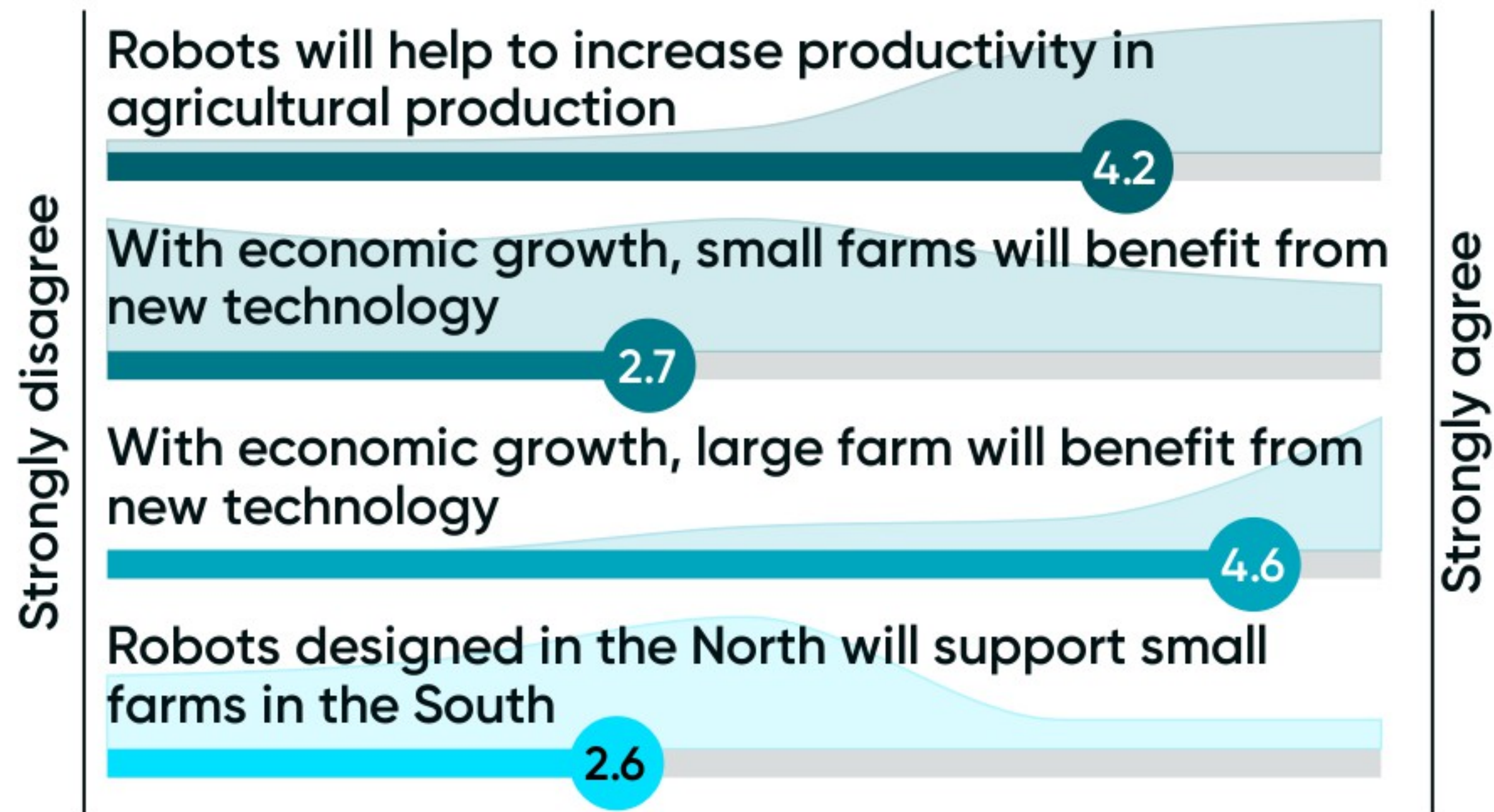


# What is a robot for you?





# Scales



# How does the implementation of agricultural robots affect productivity?

It depends on the context- we cannot compare the Americas with Northern Europe

It may not affect the sheer yield itself but it may increase the amount of crops that a farmer brings home.

Will for sure increase, at least in the large, established farms with money to spend. However, the productivity of small scale farms may decrease due to disability to keep up with progress in economy

It can help increase productivity to a certain extent. But what happens when we, hypothetically, reach 100% optimization of production?

There is no definite answer - while yields for highly productive farms may increase the productivity for small farms might drop because of the high input in terms of financial investment.

In general it could improve the productivity. In the context of developing countries specific aspects would need to be considered. Distribution, maintenance, knowledge of the use of the robots are key to guarantee the correct usage.

It depends on scale of farms. Large scale farmers would mainly increase flexibility and they would decrease inputs. Small scale farmers could rapidly increase their yield.

By hindering possible failures, mistakes or misuse of appliances of human labour that leads to losses, crop damage, etc.

depends on definition (if yield only - not that much), for large farms most likely yes (if not, why would anyone invest)





# How does the implementation of agricultural robots affect productivity?

Huge potential for highly mechanized farming system. But what about rural poor farmers? Problems of access, lack of knowledge, maybe even no electricity available.

Dexterity, flexibility, speed, etc of robots is poor in unstructured environments and with highly variable tasks, so productivity will drop..

**Proper implementation will probably increase yield per hectare**

R&D in robotics should strive for productivity overall but it wouldn't work the same when farmers are not all equal in size and income, as well as with products. You'll need as many different robots as agricultural task you seek to improve.

Productivity would increase in large-scale farmers specialized in cash-crops with reduced genetic and biophysical variability.

It could increase productivity in developed countries, but these technologies might face barriers in poor countries (e.g. Teaching farmers how to use them ?

I would expect productivity to grow, as one of the purposes to use robots is to use a land (scarce resource) in a more smarter way. However, uncertainty factor is always there. For ex, using robots will require educated people behind- otherwise ...?

The robots for agricultural purpose will increase the productivity. In terms of removing, the advanced technology will be more efficient and accurate providing better condition for plant.

**Productivity of industrialized farms goes up.**

# How does the implementation of agricultural robots affect productivity?

It can increase productivity by reducing the impact of pests on crops, since robots have the capability of detecting pests before they attack a crop.

Productivity with robots have no definite answer. Productivity in Labour -yes Productivity in yield - maybe Productivity in capital-maybe There is disparity between large and small farmers with the use of robot but there are opportunities with robots

Will definitely increase, for larger farmers. Others issues as income inequality, workforce training etc should be addressed



# How will small farms be affected by the implementation of agricultural robots?

If factory farms adopt robots, we'll see the continued assimilation of small farms and a decline of small farmers (and thus crop diversity).

It could be that they benefit productivity-wise but depending on the robot price and how well it can be adapted to their needs. If the robot was one-function only it wouldn't work in a small farm where several tasks must be performed.

Internally the effect will be minimal. The external effect, however, will probably result in decrease the profit of the small farmer. Unless he has a specific market share, that is difficult to roboticize.

Implementation of robots in small-scale agriculture could threaten livelihood strategies based on diversification, as robots might increase the specialization level in only one or few crops/livestock.

The size of robots will have an impact on small farms because usually small farms are very small and in other instances not in one area, so robots would not work on very small farms

The effect could go beyond the purely Agricultural and economic aspects. Externalities might arise regarding cultural aspects, rural networks, and even indigenous beliefs.

**Farms in developed countries are more likely to benefit than small farms in developing**

Thanks to the decreased size of machinery(robot), the productivity will increase since the use of huge size of machinery was not available for small farms

I think it could really depend on how and in what part of the entire agricultural supply chain such robotics are implemented. Maybe it could also benefit small farms in other ways than it does larger farms.



# How will small farms be affected by the implementation of agricultural robots?

Again, depends on the context. Generally, robots are applicable not only for big but also smaller farms, since the technology is scalable - you can just buy some few robots for a small farm. But again poor farmers will struggle: Financing, access,...

**Robots might represent a risk for culture and traditions of small farmers.**

Small farms in the global north will be able to stay in the Markt for longer because they can mend not finding workforce and having unattractive working conditions. Financial stability is a necessity for that though.

Small farms can suffer as for them mb it will be hard to afford robots without any kind of subsidies. I believe that there will be still certain demand for food produced in a traditional way, "made with love" and cultivated with the a human care

If the cost is low enough and the access to the latest technologies is fair for the small farms, they will definitely benefit from it.

If we consider that small farmers have already access to other contextual factors, in order not be marginalized from markets, access to inputs, etc. Robots may save labour hours/strenght and therefore keep farmers, farming

Negatively in case of increased competition from large farmers who can afford the robots. Also taking into consideration that a small farmer in a developing country might not even posses a smartphone, implementation of a robot can be difficult

Robots /= specialization. Eventually technological progress will produce robots that mimic human action, but saving the labour costs

If they have access to robots, it could lead to higher competitiveness on the world markets, on the other hand it demands high skills to keep it working. If they are not skilled enough the looses in case some problems can be significant for them.

# How will small farms be affected by the implementation of agricultural robots?

Small farms might be outcompeted by bigger farms.

Small farmers will benefit only if the robots are designed to meet their farming needs. The constraint for small farmers will be the cost of the robots. Forming co-ops could give them the hiring or purchasing power for robots.





# How do you think the development of robots in the Global North will affect the Global South?

Probably negatively, unless regulations are applied, for robot implementation.

It could enhance the software and technology dependency that already exists and create a monopoly of robotic related services in the north towards the south.

Depends on the readiness of the South to new technologies and readiness of the North to invest not only in robots but in educating people to use them to full capacity, maintain them etc.

It has a big chance of creating even more dependency, even more competition for resources and new types of "competition". The advantages of robots do not yet meet the needs of small scale agr. in the global south, which is dominant

As in all innovation processes, there are gonna be winners and losers. But as history has shown, technological adoption has massively improve the lives of the non inventors

Could result in remote exploitation of land resources. Disruption of human labor systems in the Global South.

It might perpetuate dependancy and inequitable trade of technologyXnatural resources since it has always been made. Through colonization, neoliberalism, etc.

There is a danger of increasing dependency of global South on North and also increasing gap between them, because north would probably have better access to robots.

It will affect it the same way as it has for the last centuries. Global north does not develop to improve global south. There is always one clear beneficiary.



# How do you think the development of robots in the Global North will affect the Global South?

I am afraid that robots development will worsen the situation and further increase the gap between norths and souths. Also cultural and mentality aspects might play the role

There is some much desparity. It will only continue to create more dependence for the global South. There should be regulations and the global sou

It will really depend on the flexibility and adaptability of the development of robots. Trade relations and political stability may also be important factors to consider.

It would have a negative impact because robots developed in the Global North are developed under conditions from the North, as such they might not be as efficient in the South. Again most farmers in the South are illiterate to operate robots.

1)are farmers in the south even ready to use robots? (education, interest) 2) robots will increase the technological gap. Not only differences in seeds, irrigation, or machinery, but also robot ownership

Competitiveness of Agriculutral industry in South will be diminished unless it adopts or develop the technology. The investment for the tech will be set by governemnt and foreign institution. it will be likely to damage employment of agriculutre in S

The Global South could be exploited more and the gap between the South and the North will become larger because the South may be more dependent.

Poor farmers in the global South will hardly be affected directly. However, big investors from foreign countries will use robot technologies and thus, reduce on-farm labour opportunities for people in DC. This could negatively affect the global S.

In many ways. First, technologies would face acceptance barriers and high costs for small farmers. The use of them by large companies might affect prices of food, leading small farmers not to be able to compete and to lose money.



# How do you think the development of robots in the Global North will affect the Global South?

If not participated along the process, it could pretty much be affected for lack of representation of our concerns.



# What do you take with you from this mini public?

Very nice to see a crossover of agriculture and innovation.

Having it in mind as a way to create great amounts of qualitative data

The scene is more diverse than I thought. What's good for one may not be good for the other.

The mentimeter for sure but also a lot of new information about how robotics is developing to play a substantial role in agriculture.

Thank u for the good session. really pleasure to hang out with knowledgeable researchers. Well organized, insightful session

Robots are the future to improve productivity and reduce production costs, save labor, time. Looking forward to robotic production 😊

Widely diverse expectations and valuations of the future. No discussion about natural resources used to produce robots/machines.

Different view on using robots and another possibilities how solve global issues. It's open new topic of interest for me. Thank you for organising

It is importance of having people with different cultural and academic backgrounds discussing the future of technological development.



# What do you take with you from this mini public?

It's been worth while, It's a good way of getting qualitative and quantitative data in a very limited time. A big thank you to the organisers and speakers and fellow colleagues.

More info needed beforehand about the organisation of the event. Missing discussion between experts and students!

It's interesting to see that people are pessimistic about the development of robots ( or technology in general).

An open discussion on the questions of high importance today and in the future - food security, new forms of farming and technologies, potential complications and effects

A glance of the possible appliances of robots in agriculture that I was totally unaware. I'm happy with the critical consciousness of all participants

It is hard to predict and try to expect the unexpected, but hearing the ideas and opinions of differing perspectives can really help make this task easier.

Your effort to collect a representative data is appreciable.

Very nice explanations, interactive and interesting. Shares news about particular argument and make it available for us

What about biodiversity?