

Submission to the EU consultation

14/June/2020

We do appreciate the opportunity to share our view in your consultation.

We would like to submit the following results of our numerical model.

We assumed that branches are going to be using more advanced AI applications in industries such as Financial services, Health care and medical, IT, Business services, Telecommunications.

We also assumed that AI applications cause a significant improvement in productivity and that the increasing profit will be shared in-between stakeholders including industries on the demand side.

We also assume a competitive market.

Numerical modelling was done based on the data of Ireland; the model obviously works with any other country.

Parts of the results regard to

- industries without the use of AI (in the model),
- industries with the use of AI;
- and the government's partnership with the private sector.

1. Industries without the use of AI

(1) In the short-term industries benefit even without the use of AI (while other industries use AI).

Receiving benefits has preconditions.

Benefits can be realized if

- i) industries that are applying AI lower their prices due to the productivity increasement;
- ii) the buyer industries are price sensitive (negative price elasticity;

iii) there are no production capacity barriers in any industries.

(2) The main reason for this benefit is that the production level (of industries purchasing from other industries that are applying AI) require more inputs from every other supplier (including industries that are not applying AI) in the short- term (i.e. there is no change in the technology).

On the long-term these companies may see a decrease in the amount of orders if they don't increase their productivity (e.g. via the use of AI).

(3) Industries without the use of AI can realize an increase in both in the return on capital and wages, without any structural changes, the increase happens on the 'business as usual' manner.

2. Industries with the use of AI

(4) The industries with the use of AI will realise their benefits in cost reduction. The increased productivity makes it possible to maintain their revenue while reducing the unit price and increasing wages, however the application of AI results in staff reduction. (NB: Of course, it is possible to assume unchanged staff numbers, in this case, the level of orders must increase correspondingly. These two cases are identical, we chose the first option in our numerical model for the comparison).

(5) The industries with the use of AI see a significant increase in profit due to the application of AI. The increase rate depends on a number of factors (such as material costs, labour cost, allocation of productivity enhancements' benefits in-between stakeholders). As an example: in our numerical model a 2% increase in productivity may raise the profit by 4% in a normal business case.

(6) The use of AI results in a positive long-term effect. Enhances short-term profit makes it a possibility for a vertical integration.

3. Partnership with the private sector

(7) As the application of AI is a world-wide trend in many areas, it is creating challenges to EU countries' businesses and governments.

Therefore the application of AI is unavoidable, but it does make a change in the labour market. It causes structural changes within industries and between industries.

Our model reports it on a general level but it is clear that there will be jobs that are not going to be needed any more, and others that are going to require an extended knowledge in a certain field.

(8) It means educational and training challenges to both the government and private sectors. Furthermore, mobility on the labour market is necessary both in geographical terms and in-between professions. Co-operation in between the government and private sectors may reduce the overall cost.

(9) Since there will be industry branches and worker groups that are on the losing side of these changes (and since they are also tax-payers) the government's actions shall focus on supporting these groups on a sustainable matter: re-trainings, providing career possibilities (even in a co-operation in between government and businesses).

It is a strong requirement that these programmes must be self-sustained solutions in financial terms.

Once again, we do appreciate the opportunity to share our view in your consultation.

Tibor Toth
numereco.eu
Ireland