EMEA WEBINARS

CONFIDENCE: HOW DOES IT WORK AND HOW DOES IT IMPACT OUR ECONOMIES AND SOCIETIES?

Thursday 01 July, 2021 15:00- 16:50 CET

Moderator(s): Prof. Rym Ayadi, President, Euro-Mediterranean Economists Association (EMEA) and Professor, The Bayes Business School (Former CASS), London

Speaker (s): Prof. Ian Robertson, Emeritus Professor of Psychology, Co-director, Global Brain Health Institute, Trinity College of Dublin

Discussant (s): Prof. Giovanni Ferri, Professor of Economics, Lumsa University

Rapporteur: Sara Ronco, Researcher, EMEA

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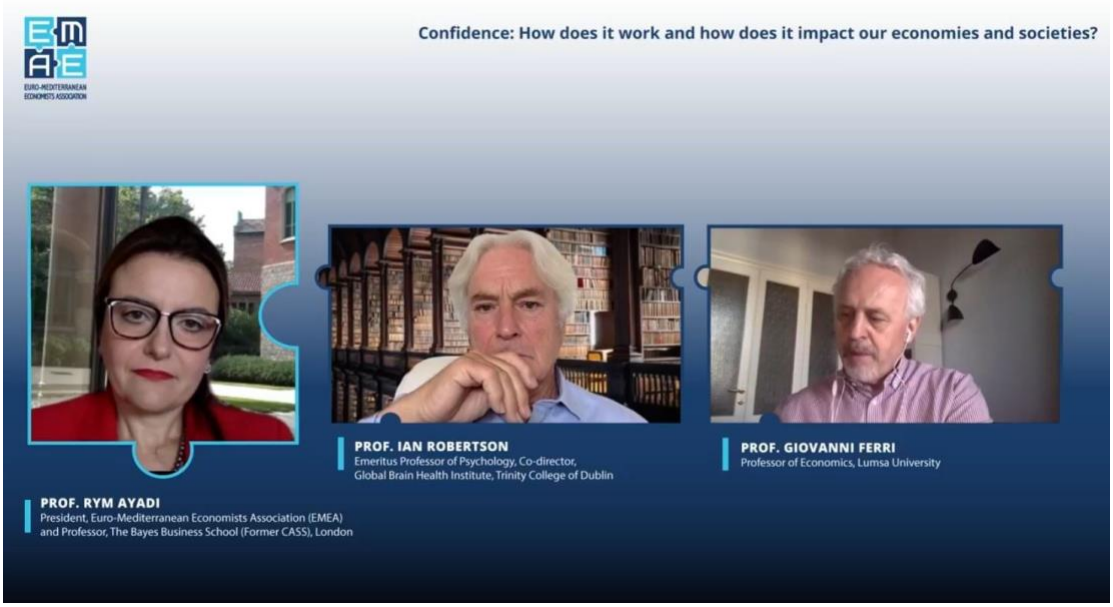

The COVID-19 pandemic has adversely impacted our health, economies, societies and behaviours. The Organisation for Economic Co-operation and Development (OECD) recognised, "With the COVID-19 pandemic continuing to threaten jobs, businesses and the health and well-being of millions amid exceptional uncertainty, building confidence will be crucial to ensure that economies recover and adapt". **EMEA participates in the** neuroscience-inspired policy initiative **part of the OECD new approaches to economic challenges.** The focus of the webinar is to explore how confidence works, how it impacts our economies and societies and how it is the cement for a resilient development and recovery path in a post COVID-19 era.

Prof. **Ian Robertson**, a clinical psychologist and neuroscientist, with a unique ability to apply his research to real life, is the author of the book "How Confidence Works: The new science of self-belief, why some people learn it and others don't", published in June 2021.

Prof. Rym Ayadi

She started by recalling that the COVID-19 pandemic that we are still living through has globally impacted general health and mental health. A paper published in 2021 by the Royal Society for Arts Manufacture and Commerce (of which Ian Robinson is one of the authors) argues that global confidence, central to national development, has fallen dramatically. The social and physical distancing imposed during the pandemic caused isolation for many people, particularly the ageing population, and reduced social support. Specific fragmented and incoherent policies that have been implemented since the beginning of the pandemic exacerbated anxiety, stress and fear. Recent scientific research also shows that COVID-19 is causing some brain

damage, leading to emotional disturbances and brain dysfunctions. We still know very little about the long-term consequences of the Covid-19 pandemic. She said that EMEA developed a COVID-19 policy monitor at the start of the pandemic (March 2020). A comparative analysis clearly shows that health care systems globally were not prepared to manage such a global pandemic**.** The long-term impacts of the pandemic on brain health are still unknown.

She said that, in order to face upcoming challenges, we need confidence and many other qualities to be sure that we can meet our societal challenges. Confidence is a multifaceted concept, and it's very complex, and the economic science does not have enough knowledge to understand it. The OECD forcefully recognsed that, with the COVID-19 pandemic continuing to threaten jobs, businesses, health and the wellbeing of many globally. Also, considering the high level of uncertainty society is facing, she said that building confidence would be essential to ensure that economies recover and adapt fast. She underlined that this critical issue is also being explored under the neuroscience-inspired policy initiative, co-led by the OECD and PRODEO Institute under the OECD overarching initiative on the New approaches to Economic Challenges. Finally, she welcomed the first speaker, Ian Robinson, author of a recently published book exploring how confidence works and why some people learn it and others don't.

Prof. Ian Robertson

He started by saying that, whilst the first half of the 20th century was characterised by physics and the second half by biology and genetics, he considers the 21st century the era of the mind. Therefore, he believes that the 21st century requires the fostering of psychological literacy, to enable people to understand their minds. He started his presentation by saying that confidence is the characteristic that distinguishes us the most from other species: no other species can envisage states of the world that do not exist and work towards creating these states. The essential fuel for this is confidence. He stressed that confidence is not optimism; the latter believes that things will turn out, thinking that somehow a solution will be found. Confidence is not self-esteem; the latter is your self-evaluation. He said that the critical aspect of confidence is that it empowers action. Confidence makes us do stuff. Then he said he was drawing on the work of the great and eminent psychologist, Albert Bandura from Stanford, on this; that there are two key elements for understanding confidence. One is the belief that you "can do" something, which in Bandura's terms, the jargon for this is self-efficacy. The second one is that things "can happen". From these concepts, emerge the four states of the brain. The first one is the state of "can't do, can't

happen," where you don't believe you can do something and, anyway, if you can do it, then it can't happen with a good outcome, i.e., I don't believe I could change my diet and, anyway, I don't believe that if I change my diet, I will lose weight. The second state is the state of "I can do it, can't happen": I do believe I can change my diet, but even if I change diet, I don't believe I will lose weight". The third state is "can't do, can happen", i.e., I don't believe I can change my diet, but I will lose weight if I could. The fourth one is "can do, can happen": I believe I can change my diet and, if I do that, I will lose weight. The first state described tends to lead to "apathy" that can also be visualised in the brain, characterised by a low imperative to act, a low belief that action will resolve itself positively. The second state described tends to lead to "anger" because there's a frustration there (i.e., I could get that college degree, but from where I come from, even if I get that degree, I'm not going to get a job - that is the anger of the Arab Spring). The third state described leads to "anxiety". The last state described leads to "activation". All these states affect different chemical message neurotransmitter systems in the brain. Atonic, apathetic people present low dopamine activity levels in the brain's reward network, with no motivation. Anger is fuelled by the fight or flight system of the brain, where you get increases in noradrenaline, and that's true also of anxiety because it's fight or flight. Anger and anxiety are two emotions that get mixed up with each other very easily. The activation system presents increased dopamine levels, and dopamine activity in the brain's reward network is a natural antidepressant, a natural anti-anxiety drug and a natural motivational enhancer. Therefore, he said, depending on the state of confidence, you can engineer the neurochemistry of your brain. One of the greatest corrosives of confidence is anxiety, which is why what Professor Ayadi said about the increase in anxiety and other problems during the COVID crisis is one of the big factors in the great decline in confidence we have seen. He said that confidence embeds itself in every brain cell and every cell in their body.

He showed a position emission tomography scan of the brain's reward, showing that the tonic activity in that particular reward network declines with age. Whilst one can think that it's an inevitable consequence of the biology of ageing only, he said it this is not the case. He mentioned the study, explaining that feeling confidence was associated with an increase in the reward memory and motor-related areas remember confidence and action that link, including the bilateral striatum and hippocampus. In addition, confidence switches on the brain's reward network, activating anti-depressant and anti-anxiety mechanisms and enhancing motivational events. On the other hand, less confidence was associated with an activation area linked with negative emotion, primarily anxiety and uncertainty, including the dorsomedial prefrontal and bilateral orbital frontal cortex. It is possible to measure people's attitudes to ageing their beliefs about ageing, by using this "ageing

perceptions questionnaire". He provided examples of people having positive/negative perceptions (i.e., I get depressed when I think it will get older / I get older I get wiser questionnaire). He wanted to focus on negative expectations about ageing. He presented an Irish longitudinal study on ageing, followed by more than 9000 people over two years. People with negative expectations of ageing began to walk more slowly (physical test). Furthermore, the more negative their perceptions of ageing were, the fewer words they could generate (cognitive test). The people with negative expectations of ageing began to walk more slowly, with cognitive function declining more significantly than those with positive expectations. He stressed that negative expectations about ageing have to do with your confidence, that you can have control over your life, so that you're not a passive victim of the biology of age. He moved to a different study from the USA, measuring the size of the different campuses, a critical part of the brain's memory system. Over a 10-year period, negative expectations of ageing go with a greater decline in hippocampal volume. He said we could not assume 100% cause and effect here, although both of these studies statistically allowed for all the relevant confounds that might have been alternative causes of this.

Then he moved to experimental data on the matter. He presented a study from England: "When the Age Is In, the Wit Is Out: Age-Related Self-Categorisation and Deficit Expectations Reduce Performance on Clinical Tests Used in Dementia Assessment" by Catherine Haslam et al. (2012). The study shows that confidence probably plays a significant part in preventing dementia, since the people who were told that ageing resulted in a loss of memory function which could be corrected using aids, gave them confidence that they could do something about their memory function. Therefore, it shows an enormous effect of internalising beliefs about your category, whether it is age, race, sex or class, or physical attributes or disability. All of these things can be internalised and can have a profound effect on your performance. This also results in the confirmation of the influence that stereotypes have on your performance. He showed an image of an FM functional magnetic resonance studying image, taken from Backman et al. 2012. The picture showed four areas with different levels of activation in old versus young people, when they're doing a working memory task (which is our ability to manipulate information in our brain and hold it there to perform whilst processing that information). This has been used to confirm the loss of cognitive capacity that happens with ageing, because working memory is central to all our current functions.

He said that looking at this study superficially, we have to accept that we lose our cognitive functions as we get older. But the study presents something that no one else had ever done before. They looked at positron emission, allowing them to visualise the dopamine activity in the brain's reward network. And they could then reexamine

the old-young differences in these cortical activations and working memory, whilst statistically partially work out the effects of dopamine activity in the brain's reward network. When they allowed for the levels of activity, in at least one network, most but not all old-young differences in the left frontal cortex, greatly reduced those in the right frontal and left parietal cortex. Age-related alterations in dopaminergic neurotransmission significantly reduce old-young brain differences in the working memory. Confidence activates these brain regions and, therefore, confidence will affect your cognitive function. Nevertheless, studies show that older people who were made to feel old and made to feel fatalistic about their content functions, suffered a collapse in confidence, which reduced activity in the brains reward network, which resulted in impaired function and making them much more likely to be diagnosed with a high risk for dementia.

He then moved the focus again on confidence. Confidence comes from some key factors: class/wealth, gender, positive stereotypes, success/the winner effect, culture/relationship, genetics, adversity mastered, handling anxiety, sense of control. In addition, confidence works through some key channels: mild delusion/overconfidence, compound interest, antidepressant/anti-anxiety effects, performance enhancement via boosted motivation, increased motivation, raised status, increased influence and endowing a feeling of control.He said that class (socio economic status) is a major determinant of confidence. He cited some studies, highlighting that higher perceived social status is associated with stronger dopaminergic activity in the reward network.

He moved to talk about a study, "Bullshitting", where the authors measure a person's overestimation of their knowledge or "Bullshitting". The study showed that boys bullshit more than girls; furthermore, the highest socio-economic status people will bullshit more than those of a lower socio-economic status; immigrants generally have a much higher tendency to bullshit than natives. Bullshit means being a "chancer" (a more risk-taking, entrepreneurial attitude) and there are huge advantages to being a chancer. They tend to persevere with problem-solving and they have a belief that if they are given specific tasks, of varying types, they have strong, positive views of their problem-solving ability. More over-confident people are the healthiest and the least likely to be -depressed. . Essentially, he said, confidence is what makes you get up in the morning, it makes you envisage the future state of the world and how to work through problems.

He then moved to the relationship factor, underlining that those who feel they have rich social support present with much higher activity in the brain network. Thus, social support can act as an antidote to the negative effects of unequal societies and that

may be one reason why Latin American countries have much higher levels of well-being than economists predict they should have, given that their economic, social and political factors are not normally associated with well-being.

He moved to ageing again, illustrating how some studies have shown that a dense social network disrupts the link between cognitive decline and brain pathology. Then, he went back to control also being a critical aspect of confidence. He said that studies confirm that choice is preferable to no-choice, which is valid for both animals and humans. Even if it means expending more energy than a no-choice situation, even if the outcome is the same as in the no-choice condition, it is inherently rewarding. Exercising choice had both psychological and biological effects. Perceived control, feeling you have control over your world, has an emotional impact on the brain; on the reward network, on the motivational network, and it protects you, helping you cope with stress, being resilient and dealing with stress. People of lower socio-economic status have lower life satisfaction, greater depression and lower life expectancy. So, the perception of control breaks the link between socio-economic status and mental wellbeing.

He then moved to values as a source of control. He mentioned the happiness gap in Eastern Europe. For instance, in Ukraine and Bulgaria life satisfaction is much lower compared with Latin America, with some exceptions, like Venezuela. Eastern Europe has this huge happiness gap which has profound economic consequences, as well as health consequences. Affirmation of values increases reward processing in the brain's central area and self-processing systems, although there are several antidotes to confidence undermining the effects of these significant variables, like socio-economic status, gender, age and affirmation of values. In terms of the collective confidence of countries and communities, values play a key role. Collective confidence and individual confidence positively affect the brain’s ability to lift moods, reduce anxiety and increase motivation, which all have economic benefits.

Concluding, he turned to economics, citing Roberta Desi, who wrote about over-confidence, stability and investments. She measured over-confidence and has shown that it is prevalent where there is a lot of social and economic change. Individual over-confidence is an asset and has both mathematically and empirically positive effects. It makes it more likely that someone will start a new project, which is probably necessary in times of change. She also showed that more stable countries (using an index of economic and social stability) have lower levels of self-confidence than countries with higher degrees of change.

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The world is changing and is going to increase exponentially because of technological, climate and other changes. Finally, he stressed that there is a need for confidence, both individually and perhaps more importantly, collectively, to deal with these increasing changes. Therefore, we need psychological literacy, of which confidence literacy is a critical part.

Prof. Giovanni Ferri

He started by talking about some important main economists who have stressed the role of confidence, in terms of choices and economic impact. He stressed that mainstream economics is based totally on rational decision-making and confidence is very limited in practice. However, he fully supported Professor Robertson's view on the need to invest in psychological literacy and understanding how our brain works. This is going to be crucial for different sciences and, particularly, for economics. The importance of psychological factors, such as optimism or confidence, played a key role 100 years ago in business cycle theories. During the 1920s, Arthur Pigou, the main rival to John Maynard Keynes, stressed the importance of changes in expectations as a determinant of business cycles and he quoted a small passage from his writings. "The very expectations of businessmen constitute the immediate cause and direct causes or antecedents of industrial fluctuations. In other words, we can say that, when people are confident about the future they may consume, they may invest and work more today".

The best-known economist of the last century was J. M. Keynes. He also argued that confidence played a large role in driving economic activity and in his 1936 publication he introduced the keystone of mother macroeconomic thinking "The general theory of employment interest and money". He advocated the concept of "animal spirits" as the main driver of economic choices to be made in situations of hidden risk or hidden uncertainties. He quoted from Keynes, as follows: "Our decisions to do something positive, the full consequence of which will be drawn out over many days to come, can only be taken as a result of animal spirits. A spontaneous urge to action rather than inaction and not as the outcome of a weighted average of quantitative benefits multiplied by quantitative probabilities".

Keynes wrote his PhD thesis in probabilistic theories and he was an advocate of subjective probability theory, which both also went well with his approach on how it is important to understand expectations and individual expectations, which may differ widely amongst individuals. Quoting again from Keynes' masterpiece: "The state of confidence as they turn it, is a matter to which practical man always pays the closest attention. But economists have not analysed it carefully and have been content, as a rule, to discuss it in journal terms". The situation has not improved dramatically since then, even though something has happened, said Professor Ferri. He then mentioned, "a piece on the conversation" which is a respectful blog of open discussion, where on April 20 this year, Eugenio Croto wrote a piece to celebrate the

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75 years since the death of John Maynard Keynes. He said that the title of his contribution to this blog is quite in tune with the object of the webinar: "John Maynard Keynes, unusually for an economist, did not think people were very rational". The prevailing views about Keynes pertain to the desirability of public spending and probability. Whoever is sufficiently informed about public debates on public policies knows that you don't need to be an economist in order to understand that I believe your public spending is something good in the Keynesian tradition, whereas it is something to be avoided for the free-market theories of Chicago.

Since Eugenio Proto is a behavioural economist, says: "I want to focus on another lesser-known aspect of games' legacy - his views on what he referred to as "animal spirits" or "human optimism". This represents an important part of behavioural economics today and has important implications for governments in their efforts to achieve economic recovery from the COVID-19 pandemic. Keynes argued that, during the depression, people's expectations contributed to keeping demand low, which is where his views on optimism and confidence come in. Consumers will buy less and entrepreneurs will invest less, if they expect that the economy will be depressed for the foreseeable future. In a radical shift from the view of most economists at that time and four decades later, Keynes thought that these expectations in people were not fully rational but were essentially based on their psychology or how optimistic they were feeling. With this in mind, Keynes saw government spending as crucial, not only to sustain consumer and business consumption, but to nudge individuals so that their confidence in the economy remained high, in order to avoid a collapse in their expectations. He clearly saw that individuals were not entirely rational and there were different possible outcomes from the current crisis. If you build confidence, if you invest in confidence, the way out is easier. Instead, if you just rely on rational decision-making, you might also really be delaying and provoking longer pain for the economy.

He moved on to talk about the Nobel Prize winners, George Akerlof and Robert Shiller, who wrote an important book in 2009, just a few months after the collapse of Lehman Brothers and the melting down of global financial markets that followed this particular major bankruptcy. The book was titled "Animal Spirits", and he personally found it very inspiring (there is even a part of the book that is called emotional economics). He quoted from the book: "Economic performance, it says, is largely mental, though not necessarily rational. Emotions have a strong presence in economic decision-making. Past economists all the way back to Adam Smith have almost ignored the role of the irrational in economic decisions. Instead, they explained economic events as being the result of people pursuing their rational self-interest. That explanation fails to account for massive economic dislocations. It says widespread unemployment should not exist because workers rationally pursue self-interest that would accept lower wages consistent with the value of production. Wages and prices would then adjust, the market would l stabilise, and unemployment vanish. However, unfortunately, that is not what happens. Keynes said a rational calculation could not account for such economic decisions, such as opening a mine, building a factory or constructing an office building. The data about the long-term return on such investments is insufficient to support the truly rational calculation, Keynes said that

such decisions can only be taken as a result of “animal spirits". Another part of the book is about animal spirits, confidence and fairness. The word confidence turns up often in business literature. Economists emphasise its predictive element - confidence means an expectation of a bright future - but that is not the only way people use the term confidence when discussing money. Common usage emphasises the worst implication of trust and beliefs.

Former General Electric CEO Jack Welch once said he had little use for rationally analytical business plans and projections. He said, "major business decisions come straight from the gut". In the economic crisis that started in 2008, an absence of confidence in the popular sense, paralysed credit markets when lenders could not be certain that they would be repaid. Lack of confidence can undermine economic policies that might otherwise have worked. The factors involved in setting wages and salaries in the real world seem very different from those specified in new classical economic theory, which is still mainstream. Classical economic theory tends, for example, to ignore fairness as being a crucial factor in financial decisions. Economic experiments show that perceptions about fairness affect what people will pay for items and that human beings will work against their personal, rational and economic self-interest to punish those they see as unfair. Fairness seems to influence confidence and cooperation. It also contributes to unemployment because businesses are actually unwilling to pay low wages that could be perceived as unfair, even if workers were willing to accept them.

He said that relevant economists nowadays seem to be in line with the fact that we need to open up our thinking about how individuals and societies form their decisions. Certainly, we need to learn more about confidence and, possibly, we need to learn more about other functions and properties associated with how our brain works. We need more empathy, which he said could probably be something that could be educated into humans. Indeed, he said to believe that emotional intelligence (which is a larger construct than simply empathy) is not fully inherited, but it can be changed over a human's lifetime, although if we start moving towards psychological literacy, we could then be better educated about how to use our brains more productively. .

He mentioned one project that he and his team are trying to do with psychologists at LUMSA University. It is a project where we try to demonstrate that people endowed with higher emotional intelligence tend to have consumption patterns that consume less energy, because higher emotionally intelligent people tend to demand more in material goods (like arts, creative culture, DVD's and relational goods) than those who are less emotionally intelligent. He said that, if we could one day build a large programme of educating people to upgrade their level of emotional intelligence, we could have a totally new class of policies to reduce environmental impacts and help the sustainable transition. This is needed to save the human species in the world. We cannot just rely on rational choices because that is only a tiny part of the whole picture.