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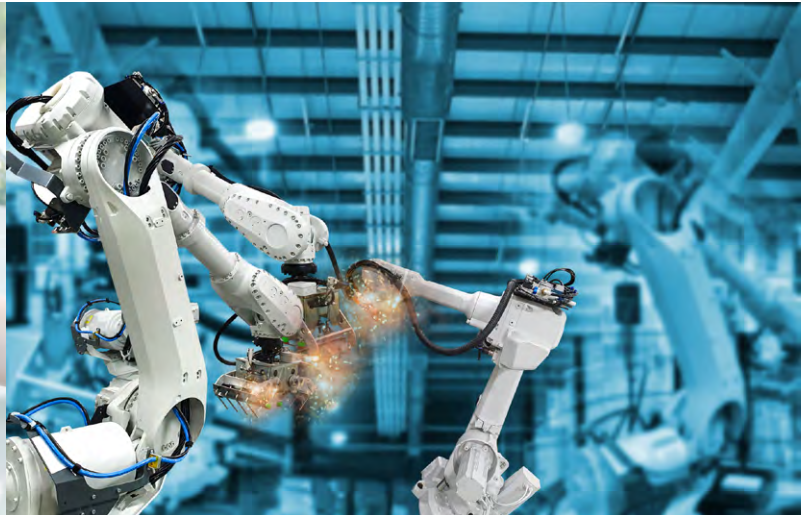
MSM ACADEMIC CONFERENCE

THE FUTURE OF WORK

Challenges and Opportunities in a Disrupted World

23 May 2024

THE FUTURE OF WORK

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23 May 2024

Dear participants,

I am pleased to welcome you at our online Academic Conference **The Future of Work: Challenges and Opportunities in a Disrupted World.** Tomorrow's work is driven by technological advancements, like digitalisation, robotisation and AI, in a context of climate change, globalisation, demographic shifts, and - increasingly - geopolitical tensions and disruptions. These disruptive developments are having a profound impact on workers, businesses, and societies around the world.

Throughout the conference, we will address key challenges and opportunities facing the world of work, unveiling new insights. We are privileged to welcome three keynote speakers during the online Academic Conference. Prof. Dr. Mark Levels will outline general trends in the future of work in relation to AI, while Mr. Sam Huckstep will provide insights into labour migration in the context of green transition. Prof. Tom Peter Migun Ogada will share his knowledge on AI and the future of work in Africa.

I am happy to announce that we have selected 32 valuable papers, divided over six different themes:
• Future of Work on the Workfloor
• Governance for the Future of Work
• AI and Digitalisation in the Future of Work
• Future of Work in the Vocational Training Sector
• (Agri)-Sustainability and the Future of Work
• Migration and Labour Mobility

I am looking forward to an interesting and fruitful conference.

Dr. Diederik de Boer
Director MSM Expert Centre for Emerging Economies
Associate Professor Sustainable Business

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The MSM Online Academic Conference
Future of Work: Challenges and Opportunities in a Disrupted World

Background

MSM with its Expert Centre on Emerging Economies (ECEE) is building recognition in the field of private sector development. Over the years, we organised academic conferences, produced articles and published a book on private sector development in emerging economies. Important scholars are taking notice, and donor agencies seek our input for agenda setting and policy advice. Collaborating with scholars within Maastricht University, we are establishing regional research groups focused on private sector development. Driven by technological advancements, globalisation, and demographic shifts, in line with market trends, MSM's efforts to contribute to capacity building of individuals, organisations and an enabling environment are undergoing a profound transformation. These forces are reshaping the nature of jobs, skills demands, and the way we work and interact. Amidst this evolving landscape, education plays a pivotal role in preparing individuals to thrive in the future of work. By equipping individuals with the necessary skills, knowledge, and adaptability, education can empower to navigate the changing landscape and contribute meaningfully to the workforce and private sector development.

Conference theme

In the light of these ongoing changes, MSM is organising the Academic Conference The Future of Work: Challenges and Opportunities in a Disrupted World, bringing together academics, experts, practitioners, policymakers and stakeholders from a variety of disciplines. The conference aims to discuss and address the key challenges and opportunities facing the rapidly changing world of work, driven by technological advancements, such as digitalisation, robotisation and AI, amidst the backdrop of climate change, globalisation, demographic shifts, and geopolitical tensions. These disruptive forces are having a profound impact on workers, businesses, and societies around the world. During the academic conference, we will actively highlight the pivotal role of knowledge institutions, namely universities and vocational training centres, in shaping skills and knowledge-gap development within the labour market, taking into account the future of work agenda. In the keynote addresses and the paper presentations, the conference will address the following six themes:
• Future of Work on the Workfloor
• Governance for the Future of Work
• AI and Digitalisation in the Future of Work
• Future of Work in the Vocational Training Sector
• (Agri)-Sustainability and the Future of Work
• Migration and Labour Mobility

JOIN THE CONFERENCE VIA ZOOM

To join the online Academic Conference, please use this Zoom link:

HTTPS://ZOOM.US/J/98717333311 →

Please note that this is the Zoom link for the whole conference. In case you do not use Zoom yet, make sure you create a (free) Zoom account before the event takes place. Please create the account/login with the same email address that you have registered for the parallel sessions where the papers are being presented.

House rules

We are expecting a large number of attendees. That is why we would like to ask you the following:
• Keep your microphone muted. Your microphone will be put on mute by default when you enter the session.
• Use the Q&A box to ask questions during the keynote speeches: if questions pop up during the keynote speeches, don't hesitate to ask them right away but make use of the Q&A functionality. The speaker will answer your question during the live Q&A.
• Use the Chat box to ask questions during the paper presentations: If questions pop-up during the paper presentations in the breakout room, please ask them by using the Chat functionality. The paper presenter will answer your question after the presentation during the live question and answer session.
• Raise your hand button. If you prefer to ask a question verbally during the Q&A or paper presentation directly to the keynote speaker or paper presenter, click Raise Hand in the webinar controls in Zoom. The host will be notified that you have raised your hand. If the host allows you to talk and if time allows, you may be unmuted by the meeting host.
• Switch on your camera. Non-verbal cues are an essential part of communication that gets left out without the ability to see someone. Turning on your camera during a conference allows you to maximise the communication channel adding more sentiment and expressions that spice up the discussion.

Please note
The plenary sessions of the Academic Conference will be recorded, the parallel break-out sessions will not be recorded.

Conference keynote speakers

Prof. Dr. Mark Levels

Professor of Sociology of Technology at Maastricht University, Programme Director at the Research Centre for Education and the Labor Market (ROA) of Maastricht University, Dean of Maastricht Academy for Lifelong Learning

Keynote: Uncertainty about the impact of AI on work and how to reduce it?

Professor Mark Levels (1977) is a Dutch sociologist. He uses quantitative, qualitative and experimental sociological methods to study how governments can best solve pressing societal challenges, and works with governments, corporations, social partners, and other scientists to create evidence informed policies that instigate social change necessary to address these challenges. Levels is university dean for lifelong development of Maastricht University, professor of sociology of technology, and program director of the Research Centre for Education and the Labor Market (ROA) of Maastricht University. He is a member of the ROA management team and a fellow of the Berlin Social Science Centre (WZB) and the Graduate School of Business and Economics (GSBE) of Maastricht University. He teaches sociology at University College Maastricht (UCM). Levels' fundamental research programs explore the causes and policy solutions of pressing societal challenge. One of his most prominent research lines explores how governments can mitigate the impact of AI automation on labor markets and societies. His work has been published in books and top-tier journals, has received prizes for scientific excellence and societal impact. His work is supported by grants from highly competitive grant competitions from the NWO, NRO, DFG, JSPS, ANR, and H2020, as well as direct contributions from governments and corporations. Levels serves as an advisor to local and national governments, international organisations, and various large corporations, labour unions, and NGO's. Professor Levels has held visiting positions at the EUI (2005), Oxford (2008, 2014-2020), and Harvard (2013). Before being appointed as full professor in 2018, Levels was a postdoc (2011-2016), a senior researcher (2016-2017), and an associate professor (2018) at Maastricht University, an assistant professor of sociology at Radboud University (2010-2011), and a junior researcher with the Interuniversity Centre for Social Science Theory and Methodology ICS (2006-2010).

Sam Huckstep

Research Associate at Center for Global Development

Keynote: Skill Needs in the Green Transition: The Role and Management of Labour Migration

Sam Huckstep is a Research Associate within the Center for Global Development's Migration, Displacement and Humanitarian Policy programme, where he leads CGD's work on the relationship between climate change and migration. His current research focuses are on labour migration in the context of the green transition, and the management of migration for climate adaptation. Prior to joining CGD, he worked at the Institute of Development Studies; the European Parliament; and the French Red Cross. He holds an MA from the Institute of Development Studies, and an MA (Hons.) from the University of St Andrews.

Prof. Tom Peter Migun Ogada

Executive Director African Centre for Technology Studies

Keynote: AI or Jobs? What is the way forward in Africa?

Tom Ogada has over 30-year experience in teaching, research, policy, administration, private sector, IGO and civil service. Since 2018, he is the Executive Director of the African Centre for Technology Studies, which is an intergovernmental STI think tank mandated to support African countries and institutions to harness STI for sustainable development. He is also the Chairman of the Board of Kenya National Innovation Agency (since July 2023), and the immediate former chairman of the Board of the National Commission for Science, Technology, and Innovation Commission (2017-2020), a former County Minister for Trade, Industrialisation, and Investment (2013-2013 and a former Managing Director of the Kenya Industrial Research and Development Institute (2006-2009). Between 1988-2006, I was Lecturer, Head of Department and Dean, at the School of Engineering, Moi University.

Prof Ogada has been a consultant of the World Intellectual Property Organisation (WIPO) since 2000 on issues of intellectual property (IP), technology transfer and commercialisation of R&D outputs. On this, he has supported several African countries to put in place National Intellectual Property Policy and Strategies including Kenya, Uganda, Tanzania, Ghana and Nigeria. He has also supported several universities and Research Organisations in Kenya, Uganda, Rwanda, Ghana, Zimbabwe, and Namibia to formulate institutional Intellectual Property Policies. He was also the Chair of the expert panel that developed guidelines on commercialisation of R&D outputs in universities and research organisation and coordination of the innovation hubs in Kenya under the OACPS Policy Support Facility in 2022. Prof. Ogada holds an MBA strategic Planning, PhD degree in Chemical Engineering, and MSc degree in Mechanical Engineering.

THE FUTURE OF WORK

Academic Conference programme

23 May 2024

10.00 **Opening and Introduction Academic Conference**
Dr. Diederik de Boer, *Director MSM Expert Centre on Emerging Economies / Associate Professor Sustainable Business Development*

10.10 **Welcome remarks**
Mr. Meinhard Gans, *Director MSM*

10.15 **Keynote: Uncertainty about the impact of AI on work and how to reduce it?**
Prof. Dr. Mark Levels, *Professor of Sociology of Technology at Maastricht University / Programme Director at the Research Centre for Education and the Labor Market (ROA) of Maastricht University / Dean of Maastricht Academy for Lifelong Learning*

10.35 **Keynote Q&A**

10.45 **BREAK**

11.00 **Parallel session 1 | Paper presentations | Breakout rooms**
Breakout room 1: Future of Work on the Work Floor
Breakout room 2: Governance for the Future of Work
Breakout room 3: AI and Digitalisation in the Future of Work
Breakout room 4: Migration and Labour Mobility

12.30 **BREAK**

13.30 **Keynote: Skill Needs in the Green Transition: The Role and Management of Labour Migration**
Mr. Sam Huckstep, *Research Associate at Center for Global Development*

13.50 **Keynote Q&A**

14.00 **BREAK**

14.15 **Parallel session 2 | Paper presentations | Breakout rooms**
Breakout room 1: Future of Work on the Work Floor
Breakout room 2: Governance for the Future of Work
Breakout room 3: Future of Work in the Vocational Training Sector
Breakout room 4: (Agri)-Sustainability and the Future of Work

15.45 **BREAK**

16.00 **Keynote: AI or Jobs? What is the way forward in Africa?**
Prof. Tom Peter Migun Ogada, *Executive Director African Center for Technology Studies*

16.20 **Keynote Q&A**

16.30 **Closing speech**
Prof. Dr. Alexander Grigoriev, *Vice-dean for Research at Maastricht University School of Business and Economics*
Professor of Data Science for Business and Economics

16.40 **Final conclusions and closing remarks**
Dr. Diederik de Boer

17.00 **End of Conference**

Paper presentations
Parallel session 1 | 11.00-12.30 hrs CEST

Breakout Room 1: Future of Work on the Work Floor
Facilitator: André Dellevoet

Quiet Quitting is About Bad Leadership - Investigating How Leadership Behaviors Influence Quiet Quitting Behaviors of Employees, *Erasmus Keli Swanzy, Mercy DeSouza, Rita Berger*

Digitalisation of Onboarding A Case Study to Investigate the Impact of Virtual Reality Technology on Employees Social Interactions and Information Seeking during Job-Onboarding, *Ewenam Gbormittah*

The Future of Work, AI and the Impact on Women in the Technology Sector, *Nilanjan Raghunath*

Why Soft Skills Matter in Dynamic and Unstable Work Environment - example of national and multinational organizations in Egypt and Middle East, *Riham Moawad*

Breakout Room 2: Governance for the Future of Work
Facilitator: Gigi Limpens

Platform Work and the Regulatory Regime in India, *Abhishek Nemuri, Neha Arya*

The Future of Work: Impacts of its Challenges and Opportunities on Emerging Economies *Adebowale Meroyi*

More Bullshit Jobs or A Right to Meaningful Work? – Predicting Technomoral Changes Surrounding Meaningful Work in the Age of AI, *Donovan van der Haak, Annemijn Kwikkers*

Safeguarding Future Indonesian Online Ride-Hailing Workers: Financial Literacy and Participation in Predatory Online Lending and Gambling, *Jonathan Nahum Marpaung*

Breakout Room 3: AI and Digitalisation in the Future of Work
Facilitator: Adriana Seclaman

The Future of Training: A Case Study of AI-Assisted Customer Service Coaching in a Large Financial Organisation, *Danique Eijkenboom, Marie-Christine Fregin, Sander Dijksman, Evie Graus, Andries de Grip, Mark Levels, Raymond Montizaan, Sanne Steens*

Workers Preferences for AI-induced Task Changes: A Discrete Choice Experiment in the Manufacturing Sector, *Lara Fleck, Marie-Christine Fregin, Andries de Grip, Sanne Steens*

Neurodivergent Employees AIs Role in New Work Challenges, *Mareike Victoria Keil, Dominic Ketzer*

Impact of Emerging Artificial Intelligence Technological Innovation on Global South Work Practices during Current Large Scale Global Urbanisation, *Peter G. Rundle, Jeremy Novak*

Breakout Room 4: Migration and Labour Mobility
Facilitator: Aad van Mourik

New Job Opportunities in support of Africa's Energy Transition: TVET Institutions in Egypt and Morocco Preparing for Work in the Green Hydrogen Value Chain, *Jeroen van Wijk, Antonella Anastasi*

Skill Needs in the Green Transition: The Role and Management of Labour Migration *Sam Huckstep*

Opportunities and Challenges of International Labour Mobility, *Huub Mudde, Stefano Locatelli, Rahwa Yemane*

Future of work in Africa, *Julius Gatune Kariuki, Diederik de Boer*

Parallel session 2 | 14.15-15.45 hrs CEST

Breakout Room 1: Future of Work on the Work Floor
Facilitator: Julius Gatune Kariuki

Impact of Demographic Factors on Healthcare Workers' Professional Lives - Case of South Asia *Yumna Ali, Syeda Farhana Kazmi*

The Influence of Visual Connection on Productivity in Workspaces *Srishti Sarkar*

Dairy Plants: An Insight in the Integration of Fully Automated Plant *Tariq Amer Al Hakmani*

The Future of Work and the Problem of Quiet Quitting *Sandra Terfah Korveh, Patrick Martens*

Breakout Room 2: Governance for the Future of Work
Facilitator: Harald Sander

The Future of Work is informal, *Andre Dellevoet*

The Different Effects of the Digitalisation and Automation of Work in relation to Economic-Political Systems of Advanced Globalization, *Orazio Maria Gnerre*

Understanding Influence: The Imperative of Impact Assessment in Emerging Market Institutions, *Gigi Limpens*

Breakout Room 3: Future of work in the Vocational Training Sector
Facilitator: Diederik de Boer

The Challenges to Vocational Training in Sudan, *Ebtihalat Elshikh*

Preparing TVET Graduates for Future Work A Comprehensive Approach in the case of Agricultural Sector, *Mitiku Demissie*

The Role of Education and Training in Preparing Workers for the Future of Work - Assessing Agri-preneurship Trainings Impact on Entrepreneurial Skills for Self-Employment, *Ishak Shaibu, Camillus Abawiera Wongnaa, Kwadwo Amankwa, Margaret Aba, Sam Hagan, George Agana Akuriba, Dadson Awunyo-Vitor*

The Role of Education and Training in Preparing Workers for the Future of Work in Law and Political Sciences, *Omorou Zackaria Toure*

The Success of a Partnership between the Private Sector and a TVET Institution in Rwanda, *Veerle Barten, Meine Pieter van Dijk*

Breakout Room 4: (Agri)-sustainability and the Future of Work
Facilitator: Hans Nijhoff

Adopting of the Digitalization in Indonesia Agriculture Sectors: Challenging and Outlook, *Said Achmad Kabiru Rafiie, Hamdi Harmen, Zainal Putra*

Future of Better Rural Non-Farm Work Depends on Innovation and Technology, *Subrata Dutta*

Exploring the Future of Biodiversity Impacts of Digitalization AI and Robotics, *Ariel Toh*

Applied Research to promote the Development and Implementation of Innovations with Private Sector in Rwanda's Agricultural Sector New Entrepreneurial Opportunities, *Meine Pieter van Dijk*

Abstracts
Presented papers

Quiet Quitting is About Bad Leadership - Investigating How Leadership Behaviors Influence Quiet Quitting Behaviors of Employees
Erasmus Keli Swanzy, Mercy DeSouza, Rita Berger

The aftermath of the COVID-19 pandemic has ushered in a workplace trend known as "Quiet Quitting," where employees subtly reduce their efforts to avoid being fired. This phenomenon poses a critical challenge for organizations, threatening overall performance and success. Despite growing awareness and potential ramifications for organizations, empirical studies on its root causes and preventive measures, particularly regarding the influence of leadership are lacking. Drawing on the Job Demand-Resource model and Conservation of Resource theory, this study aims to address this gap by investigating how transformational and abusive leadership behaviors impact employees' quiet quitting behaviors via positive affect, role stress and burnout. Through a three-wave time-lagged approach, we surveyed 234 Ghanaian employees across diverse professions, over a six-month period. The study findings indicated that transformational leaders enhanced employees' positive affect and decreased role stress, which in turned reduced burnout, subsequently reducing quiet quitting. On the contrary, abusive leaders diminished employees' positive affect and increased role stress, which contributed to increasing burnout, resulting into increasing quiet quitting. Our study further enlightens us on how positive and negative leadership styles influences quiet quitting. This enlightenment can serve as a guide for organizations to invest in transformational leadership development programs. Also, implementing interventions that enhance positive affect and address role stress and burnout, particularly for employees under abusive leadership, becomes imperative. Overall, our study provides actionable insights for organizational leaders aiming to foster positive work environments and reduce the prevalence of quiet quitting behaviors among their workforce.

Digitalisation of Onboarding A Case Study to Investigate the Impact of Virtual Reality Technology on Employees Social Interactions and Information Seeking during Job-Onboarding
Ewenam Gbormittah

Because of the effects of the pandemic, companies are focusing on the future of work arrangements for their employees. This includes adapting to a remote or hybrid working model. It is important that employers provide those working remotely or in a hybrid mode a rewarding onboarding experience and opportunities for interaction. Although, Information & Communication Technologies (ICT) have transformed the ways organisations manage employees over the years, there is still a need for a platform where organisations can adjust their onboarding to suit the social and interactive aspects of their employees, to facilitate successful integration. This study aimed to explore this matter by investigating whether Virtual Reality (VR) technology contributes to new employees integration into the organisation during their job-onboarding (JOB) process. The research questions are as follows: (1) To what extent does VR have an impact on employees successful integration into the organisation, and (2) How does VR help elements of new employees Psychological Contract (PC) during the course of interactions. An exploratory case study approach, which consisted of a semi-structured interview was conducted on 20 employees, split from two different case organisations. The results of the data were analysed according to each case, and then a cross-case comparison was provided. The results have generated 8 themes, presenting in excess of 7 sub-themes for CS1 and presented 7 themes, in excess of 7 sub-themes for CS2. The cross-case analysis has revealed that VR does have the potential to support employees integration into the organisation. However, the effects were shown to be stronger for employees in CS2, compared to employees in CS1. The results highlight practical implications for onboarding psychology and strategic talent solutions within recruitment. Such strategy this research particularly outlines, involves providing insights on how to manage the PC of employees from the recruitment stage to creating successful employment relationships.

The Future of Work, AI and the Impact on Women in the Technology Sector
Nilanjan Raghunath

In the midst of rapid technological innovation reshaping the global economy, the future of work presents a complex picture, especially for women. This paper takes a sociological approach to understand these changes. It argues that while technology can open up new job opportunities and break down barriers for women, it also has the potential to worsen existing gender inequalities. Through a thorough review of sociological research, case studies, and data analysis, this study examines how automation, particularly Artificial Intelligence (AI), will affect women's employment and their presence in STEM fields. The main argument is that without specific efforts, technological progress could make gender disparities worse. Using sociological theories like the 'leaky pipeline', the study aims to understand the different impacts of technology on women's job prospects. It highlights the importance of policy, corporate practices, and societal norms in shaping how AI affects women's employment opportunities.

Why Soft Skills Matter in Dynamic and Unstable Work Environment – example of national and multinational organizations in Egypt and Middle East

Riham Moawad

Background: The workplace nowadays is becoming more and more challenging due to irregular and severe internal as well as external triggers. Though there are many research tackling the topic of soft skills development and its impact on performance, yet few were identified as empirical research that address soft skills development and its impact on team effectiveness and performance in the Middle east. Thus, the present study examined the actual experience of business leaders across Egypt and Middle East during 2023 evolving and uncertain environment as relevant to their organizational performance, challenges, achievements, teams' capacities, and applied development mechanisms.

Method: The author applied a qualitative research methodology in which semi-structured online and face to face interviews were conducted during November and December 2023. During the interviews, business leaders of six national and multinational organizations (N=6) operating in five different business and service sectors in Egypt, Kuwait and Saudi Arabia reflected on their experience during 2023 in forty-five minutes to one hour. Content analysis of interviews' transcripts was done through coding data chunks and recognizing relationships between different concepts and themes.

Results: Upon analyzing the content of the interviews' transcripts, forty-eight themes were identified that were eventually categorized in nine labels. A cross-cutting themes that were emphasized by all interviewed leaders were teamwork and soft skills major impact on performance.

Conclusion: Soft skills development was perceived by business leaders as an instrumental tool in enhancing teams' capacities and consequently achieving organizational strategic goals especially in dynamic and unstable work environment. Furthermore, additional emphasis and thorough development are highly recommended with respect to creating and implementing wide range of organizational policies and procedures that regulate talent acquisition, team formation, performance management and benefit schemes.

Platform Work and the Regulatory Regime in India

Abhishek Nemuri, Neha Arya

Informal, non-standard, and flexible work arrangements are increasingly becoming the norm globally. The future of work is likely to be highly impacted by technological developments. One important example of this is 'gig', or 'platform' work. Literature is limited on this in the Indian context, especially at an aggregate level. This paper contributes to the literature by studying India's platform workers, using a national level dataset for the first time. We find that platform work adds to the trend of increasing self-employment and informalisation of the India labour force. Platform workers work nearly as much as other urban workers, are relatively older, and overwhelmingly male. These findings have implications for policy action directed at targeting welfare of platform workers.

The Future of Work: Impacts of its Challenges and Opportunities on Emerging Economies

Adebowale Meroyi

The future of work has taken a new trend immediately after the Covid-19 pandemic, and its overwhelming effect on our reactions to it impact in various economies is of diverse form. For emerging economies the future of work has two phase on the life of the people; one phase is the opening of new opportunities to the economy and the other phase is the interpretation and challenges of tackling its impacts on the workforce that cannot access or use technology advancement to enhance productivity. This research paper examined the issue of lack of access to advance technology by emerging economies to boost their teeming youthful population to the world of AI and other high tech as well as the interpretation of the opportunities in the use of AI to harness digital jobs, digital skills, digital economy that will far overrule the challenges currently faced by the emerging economy. The paper highlighted the challenges and the opportunities inherent in the use of AI applications and automation in the production process. It further shows the steps government and stakeholders have taken in introduction of AI use in the education sector to build the skills in the youths for preparing them to tackle the challenge of the future of work and enjoy the positive opportunities it will bring to the economy through improvement in digital skills that is a positive for the emerging economy when fully gained. *The acquisition and use of Digital skills via AI, automation process, high-tech programming all uses more of common sense than strength*. This research work align with the opportunity of AI to emerging economies and proffer solutions as well as recommendation that the government can use to mitigate the negative interpretation, so as to create an enabling environment that embrace a digital economy.

Abstracts
Presented papers

More Bullshit Jobs or A Right to Meaningful Work? – Predicting Technomoral Changes Surrounding Meaningful Work in the Age of AI
Donovan van der Haak, Annemijn Kwikkers

Recent technological developments surrounding Artificial Intelligence (AI) have reaffirmed the belief that AI will have a significant impact on the job market in the future. In line with these developments, more literature on the relation between AI, ethics and the future of meaningful work has recently begun to emerge (Bankins & Formosa, 2023; Lysova et al., 2023; Wulff & Finnestrand, 2023). The specific impact that AI will have on our moral perceptions of meaningful work has, however, not been thoroughly investigated. We seek to contribute to this literature by uniquely studying the impact of AI on meaningful work from the perspective of "technomoral change": the influence of technology on people's moral actions, perceptions and comprehension of what is morally good and right (Danaher & Saetra, 2023). In their thought-provoking article, *Exploring Techno-Moral Change: The Case of the Obesity Pill*, Swierstra, Stemerding & Boenink (2009) develop a method that enhances our moral imagination with regard to future technomoral change. The core of their theory is NEST-ethics, the analysis of ethical discussions about New and Emerging Science and Technology (i.e., NEST). Investigating the meaningfulness of work in the age of AI from a technomoral perspective uniquely gathers insights about how our moral perceptions of meaningful work could change. We use NEST-ethics in combination with trend analyses and forecast studies on the future of work to make controlled, technomoral speculations about AI's impact on moral perceptions surrounding meaningful work, answering the following research question: *Through the lens of three predictive scenarios, how will the employment of AI on the job market lead to technomoral changes surrounding meaningful work by 2050 in Europe?* The paper starts by providing a clear definition of 'meaningful work' from a societal and individual perspective (Lysova et al., 2023). Drawing on literature on moral supererogatory acts and analysing existing (neo-liberal) argumentative patterns surrounding meaningful work, we argue that the current, implicit moral assumption in European societies is that achieving meaningfulness in the job market is morally supererogatory. In other words, creating meaningful jobs is morally desirable and good, but it goes beyond what is morally (and legally) required (Yeoman, 2014; Archer, 2018; White, 2022). Additional evidence is provided by referencing literature on so-called 'bullshit jobs' and studies on employees' perceptions on the meaningfulness of their work (Bailey et al., 2018; Graeber, 2018; Tan et al., 2023). Subsequently, an overview is provided of existing trend-analyses and forecast studies about AI's impact on the European job market in 2050, followed by three scenarios in which we sketch potential technomoral changes surrounding meaningful work. We end by discussing the implications of our research, arguing that the value of these technomoral scenarios is located in their ability to help us reflect on the kind of technomoral futures that we do and do not find desirable. We advocate for heightened measures aimed at realizing a desirable, technomoral future of meaningful work.

Safeguarding Future Indonesian Online Ride-Hailing Workers: Financial Literacy and Participation in Predatory Online Lending and Gambling
Jonathan Nahum Marpaung

The rise of online gig platforms and the change in the workforce demographic contribute to the global adoption of the gig economy. The gig economy enables individuals who may not possess a high level of skills and education to enter the workforce and perform part-time jobs, such as online ride-hailing and food delivery, not available to them before as the barrier to entry is higher. The presumed lower level of education and constant exposure to online smartphone applications and services, however, threaten these gig workers' well-being. Two threats that the Indonesian government has declared to be a national crisis are predatory online lending and gambling. This study seeks to find online ride-hailing and food delivery gig workers' financial literacy levels and participation in predatory online lending and gambling services. The findings of this study can inform both private and public entities in shaping policies that can protect gig workers from cyber threats, specifically predatory financial and gaming products and services.

The Future of Training: A Case Study of AI-Assisted Customer Service Coaching in a Large Financial Organisation
Danique Eijkenboom, Marie-Christine Fregin, Sander Dijksman, Evie Graus, Andries de Grip, Mark Levels, Raymond Montizaan, Sanne Steens

This paper examines employee perceptions of AI's role in deep performance monitoring and skill gap identification at a large financial organisation in the Netherlands, focusing on a customer service centre where AI assists human coaching. Current research on employee perceptions of monitoring does not adequately address the human-machine context in which coaches use monitoring data within an AI-enhanced human coaching framework. To assess the impact of AI-supported coaching, our study employs a mixed-methods approach that combines qualitative and quantitative research techniques. We conduct semi-structured interviews with

coaches and customer service workers to gather in-depth qualitative insights. Additionally, we use a discrete choice experiment to quantitatively evaluate job satisfaction among customer service workers. Preliminary results reveal complex employee reactions: while quantitative data shows no clear preference for AI-based coaching, qualitative feedback strongly highlights perceived benefits. Workers recognise the transformative potential of AI but emphasise the importance of human interaction in their professional environment. The study suggests that effective integration of AI into workplace practices requires a holistic approach that includes employee perceptions in decision-making processes, communication, and change management. This strategy will ensure that AI enhancements are both effective and well received within professional environments.

Workers Preferences for AI-induced Task Changes: A Discrete Choice Experiment in the Manufacturing Sector
Lara Fleck, Marie-Christine Fregin, Andries de Grip, Sanne Steens

This study explores workers' preferences for working with AI in their job. We employ a discrete choice experiment in a multinational manufacturing firm implementing AI in the jobs of quality control workers. This AI transforms their core working task of visually inspecting and classifying electronic components in two stages: (1) complementary AI merely offering decision support for the workers and (2) autonomous AI leaving only complex classification tasks to the workers. In the discrete choice experiment, we include these AI stages in terms of their consequences for workers' job content (i.e., changes in their main task). We ask workers to choose between jobs that differ in five characteristics, namely, the AI-induced changes in their work task, break schedules, autonomy, training opportunities, and a relative salary increase. We obtain responses from 436 quality control workers from eight countries, amounting to a response rate of 69 percent. We find that workers have a higher preference for the task changes induced by each AI stage compared to the initial task without AI. However, workers' preference for complementary AI is significantly higher than for autonomous AI. We also find that workers scoring low on technology acceptance and self-efficacy do not have a lower preference for the two AI stages. This suggests that workers' general reluctance towards new technologies does not necessarily lead to a lower appreciation for their job when they experience how AI changes their job content. This study is part of the research project ai:conomics (https://aiconomics.eu/en) funded by the German Federal Ministry of Labour and Social Affairs (BMAS / Denkfabrik Digitale Arbeitsgesellschaft) by resolution of the German Bundestag.

Neurodivergent Employees AIs Role in New Work Challenges
Mareike Victoria Keil, Dominic Ketzer

Disruptive change has driven the digitalization and transformation of work structures in the wake of the Covid-19 pandemic, with new types of work models increasingly finding their way into familiar work structures with lasting impact. This has triggered a rapid development as part of the New Work megatrend, which, alongside challenges such as teleworking, has created great opportunities such as better integration of individuals and certain groups of people, e.g. people with disabilities, into the primary labour market. Neurodiverse teams face particular challenges due to the changing workplace, especially in terms of communication, self-organization and working practices. This paper addresses these challenges and proposes solutions based on Artificial Intelligence (AI) to ensure the competitiveness of companies in the implementation of New Work methods and models and to counteract the shortage of skilled workers.

Impact of Emerging Artificial Intelligence Technological Innovation on Global South Work Practices during Current Large Scale Global Urbanisation
Peter G. Rundle, Jeremy Novak

This paper considers the future of work in developing or emerging economies due to the impacts of Artificial Intelligence (AI) and related Machine Learning and Autonomous Robotics. It was only in 2007 that the world's urban population finally reached numerical equilibrium with the globe's previous predominantly based rural inhabitants. By 2100, it is predicted that 85% (= 7.7 billion) of the world's projected 9.0 billion population will live in an urban environment (EU 2020). The paper posits that although every country should look for ways to respond to the effects of AI roll-out, it's especially critical for developing nations, which will be hit hardest and have the fewest resources to cushion the blows. These advancements have ignited fears that technology will create mass labor displacement, increase technological unemployment, and continue to widen inequality and polarize the labor market into good jobs (stable jobs with benefits), on the one hand, and precarious ones, on the other. The future of work affected by emerging AI advances, on Global South economies through the lens of rapid worldwide urbanization. The research looks at the two disadvantages of AI which are (i) The pitfalls of AI surveillance technology to collate an individual's data and (ii) International Monetary Fund research

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suggests that the possibilities for economic development are vastly different in the USA, and for instance in Tanzania. As automation advances, capital has been shown to shift more toward developed countries, negatively impacting developing world economies caused by lack of financing. Nevertheless, there are advances in tiny efficient devices developed for AI use known as TinyML, which is the opposite approach to high-demand resource servers, currently adopted in highly industrialized countries. TinyMLD is a network of over 40 academic institutions launched in 2021, which spans the Global South working in coordination with the UNESCO Centre of Theoretical Physics and Harvard University. Several excellent practical sustainable initiatives have been developed in areas such as malaria control; aquaculture water monitoring and low-cost medical solutions for heart monitoring. Finally, research has been undertaken on the training of unskilled workers with little opportunity for AI industry engagement, to become a valuable human asset in the construction of urgently needed urban infrastructure, as rural workers flock to the city. The paper concludes that the key to AI providing timely economic development in the Global South is education from grade school level in IT and institutional strengthening to be able to support AI development through a mixed economy of government and private industries. International Funding Agency finance should focus on Aid for Trade for developing countries to boost exports and lower barriers to entry of AI importation.

New Job Opportunities in support of Africa's Energy Transition: TVET Institutions in Egypt and Morocco Preparing for Work in the Green Hydrogen Value Chain
Jeroen van Wijk, Antonella Anastasi

The EU aims to be climate-neutral by 2050. Green hydrogen, i.e. hydrogen being produced from renewable energy sources, is to play a significant role in the European energy transition. Under the 2022 RePowerEU plan, a response to the energy market disruptions caused by the Russian invasion into the Ukraine, the European Commission emphasized the role of green hydrogen in Europe's future energy mix by quadrupling the 2021 hydrogen targets from 5 million tonnes (MT) by 2030 to 20 MT. Half of this amount of hydrogen needs to be imported. In this context, the EU has great interest in North Africa, particularly in Egypt and Morocco, because of their proximity and potential for renewable energy production (European Commission, 2020a). Both countries have abundant solar and wind resources, and large parts of desert land available, which make it suitable for production of renewable energy. They have already started generating solar and wind energy and they are developing facilities for green hydrogen production. The production of green hydrogen offers Egypt and Morocco an opportunity of industrial upgrading and moving up the value chain of renewable energy. However, whether or not Egypt and Morocco are going to benefit from their potential to become green hydrogen producers and suppliers of the European Union depends to a large extent of the government efforts to steer the production of green hydrogen and to support the domestic industry. This paper addresses the question as to what extent Morocco and Egypt prepare the domestic workforce for a future in which renewable energy and green hydrogen play a key role in the economy. Technical and vocational education and training (TVET) institutes are especially responsible for preparing the workforce. As the current labour context is rapidly changing, it is crucial that the TVET curricula are reformed and made suitable to prepare tomorrow's workforce with adequate skills and knowledge. TVET systems are fundamental in this process to help countries ensure a smooth job transition and tackle youth unemployment rate. The paper describes the current situation in the TVET sector in both countries and observes what progress have been made in the field of renewable energies (and green hydrogen), addressing the challenges and obstacles to meet labour market needs. The value chain in question is long and comprises various specialized stages: solar and wind energy generation, water desalinization, electrolysis, and storage and transportation. These activities hold the potential of creating hundreds of thousands of theoretical and practical jobs for the local population in a promising industry. Assuming that technical knowledge in practical jobs is importantly developed in TVET institutions, the focus of this paper is on the Egyptian and Moroccan TVET education in renewable energy.

Skill Needs in the Green Transition: The Role and Management of Labour Migration
Sam Huckstep

This paper sets out to answer two questions: firstly, 'What role will labour migration have in the EU's green transition?', and secondly, 'How should this migration be managed?' Over the coming decades, countries must reduce their emissions at an unprecedented pace. This requires the rapid development of low-carbon -'green'- technologies, and the workers to operate them. This 'green transition' must occur everywhere, simultaneously. EU countries must achieve net zero carbon-equivalent emissions by 2050, with stringent benchmarks in the intervening decades. This transformative shift is already underway, but it will require many more workers if it is to occur at the scale and pace needed. The green transition's job creation potential is both an opportunity and a major challenge: implementation depends on an adequate workforce. This workforce may not be present. Domestic channels appear insufficient to meet workforce needs in the timeframes required, especially in the context of an ageing population. This shortfall is extremely important. The green transition's timeframes are exogenously imposed by atmospheric conditions, and any labour bottlenecks will

jeopardise delivery of a crucial global public good. High-emitting EU countries will need to use migration policy to supplement their domestic workforce supply. This could be undertaken through permanent migration, or through long-term temporary migration. Given, however, that the shortage of skills needed for the green transition is global, conventional loosening of visa policy may not be equitable or efficient: there is a risk that countries of origin are left unable to undertake their own green transitions. Instead, countries of destination should support training in the country of origin alongside migration. This could be managed through Global Skill Partnerships, formally connecting training with migration, or through increased investment in training alongside any international recruitment. This requires adequate knowledge of labour market needs –often on the basis of reliable green industrial strategy— and a sharp focus on qualifications and visa provision at the occupational level. Several relevant examples of similar programmes exist in other sectors. In green sectors, a new migration partnership between Germany's national solar association and India's Skill Council for Green Jobs offers an instructive example. 'Green' training and migration programmes have multiple benefits: (i) employers in the country of destination gain necessary workers, alleviating domestic shortages; (ii) migrant workers gain new skills, experiences, and earning opportunities; (iii) the country of origin reduces labour market pressure, alleviating unemployment, and gains remittances; (iv) everyone, everywhere, benefits from reduced carbon emissions. Migration partnerships can thus make an important contribution to the green transition.

Opportunities and Challenges of International Labour Mobility
Huub Mudde, Stefano Locatelli, Rahwa Yemane

The objective of this study is to explore the challenges and opportunities for international labour mobility in the agricultural sector between Africa and Europe with a focus on circular mobility. The agricultural sector is transforming to become more sustainable, which goes hand in hand with a growing need for higher-skilled workers to cater and safely handle smart precision farming systems. Many people will need to be reskilled or upskilled, including attention for transferable, cross-cutting skills for employment and self-employment. For a successful implementation of the Green New Deal, 18 million people will need to be reskilled in the EU (ICMPD, 2024). This labour market demand occurs in the context of an aging population in Europe, reducing the size of the labour pool, in combination with a dire shortage of well-trained workers in Africa. In response to these challenges, international labour mobility and skills development programs have been set-up. We will use a case study design to deeply understand the intricacies of international labour mobility. The 'MOBILISE: Circular Talent Development for Climate-Smart Agriculture' project is a 4-year project financed by the European Commission and implemented by Maastricht School of Management – Maastricht University and Aeres University of Applied Sciences. The main objective of the project is to contribute to the Migration Partnership Facility (MPF) Program of the European Commission by setting-up a scalable, institutionally embedded circular talent development program between the Netherlands and Egypt, Ethiopia, and Tunisia in favour of strengthening climate-smart agriculture, both in Europe and in the participating countries. A mixed method research will be carried out comprising of qualitative and quantitative methods to allow for triangulation. Data will be collected from the most important stakeholders involved: 200 companies (est.), 120 students (est.) and 80 experts (est.) using structured (online) questionnaires, document review, in-depth interviews, and participatory observations. The study will be carried out from May 2024 until May 2027 and aims to result in an evidence-based framework for analysing labour mobility and in recommendations on legal migration pathways.

Future of work in Africa
Julius Gatune Kariuki, Diederik de Boer

The world is now at the cusp of a new revolution. Recent breakthroughs in Information and Communication Technologies (ICTs) are unleashing new capabilities and fundamentally changing the nature of work through automation. Increasingly, machines are available to replace or complement workers at all levels. At the same time Africa has huge jobs challenge. Of Africa's nearly 420 million youth, ages 15–35, a third are unemployed, another third are in vulnerable employment, and only one in six is in wage employment. The 4IR is seen as a technology which is likely to benefit the developed countries that are dominated by formal economic sectors and significant manufacturing sectors that can be automated as opposed to developing countries that have economies dominated by agriculture and informal service sectors. However, the 4IR technologies have the potential to help drive transformation of economies of developing countries especially African countries for instance 4IR technologies can help improve productivity of agriculture through better crop surveillance by drones, and the 4IR technologies can help formalize the informal sector by using the platform business model to link service providers to buyers and also to provide a way to rate services, pay for services etc. Indeed it has been argued that the new technologies can be more beneficial to less developing countries by providing leapfrog opportunities, for example the case of Mobile telephony. Countries can jump to 5G technologies without putting expensive broadband infrastructure.

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The 4IR is essentially digitalizing economies. Therefore the key to success in the 4IR world is building effective digital platforms. These platforms put services at the centre of economies as platforms really help coordinate various sectors more effectively. Building platform to help deliver services not only help "formalize" the sector but also improve productivity of the sector. A stronger service sector can also help improve the crucially important agricultural sector e.g. machinery can be easily made available. However, capturing the promise of 4IR is however not straightforward. Improving readiness of countries will be key. As of know many perform poorly in key measures of readiness especially in skills, regulatory framework and innovation ecosystems. Getting the strategy right will be crucial. The four pillar (skills, infrastructure, innovation systems and regulation) must be strong. The benefit will come from the strategies built on those pillars. Beyond the pull policies, there is also need for complementary push policies to create awareness of the 4IR by both business organizations and young people. Developing 4IR stakeholder forums can be crucial in bringing key stakeholders together. Countries should learn from others. In Africa, Rwanda is leading the way in showing how to navigate the 4IR and many can learn from Rwanda's many initiatives. Much can also be learned from the EU approach as it seeks to defend its manufacturing leadership in the wake of threats posed by the 4IR. The EU unveiled the "Digitizing European Industry" initiative, which is part of the Digital Single Market strategy (DSM). It aims, among other things, to promote and interlink these Member State initiatives, and to give SMEs access to technology and information about new production processes.

Impact of Demographic Factors on Healthcare Workers' Professional Lives - Case of South Asia
Yumna Ali, Syeda Farhana Kazmi

Aim: To test group differences of age, gender income levels marital status in assessment of stress management skills among health care workers in hospitals of Pakistan
Study Design: Survey design; purposive sampling.
Methods: Sample of 400 health care workers were drawn from major hospitals. Stress management skills instrument (ISBF) was administered (Wirtz, 2012).
Results: Age, gender and marital status differences significantly contributed to stress management skills in health care workers using descriptive statistics, t-tests and multivariate analysis of variance tests. Younger health care workers (18-39 years of age) managed stress better than the middle aged health care workers (40-59 years of age);(p=.006). The female health care workers managed stress better as compared to their male counterparts (p=.000). Unmarried healthcare workers exhibited greater stress managed skills as compared to married health care workers (p=.000).Personal income levels do not carry a main effect for healthcare workers' professional lives.
Conclusion: The study is integral to have in the field of occupational health psychology and to make sure that healthcare workers across groups employ stress management skills for healthy well-being

The Influence of Visual Connection on Productivity in Workspaces
Srishti Sarkar

This research addresses the vital yet underexplored aspect of visual connectivity within contemporary workspaces and its profound influence on productivity. In the context of increasingly prevalent open layouts, understanding how architectural elements shape visual connections and subsequently impact occupants' work performance is paramount. By investigating spatial configurations and their effects on visual connectivity, alongside developing measurable productivity metrics, this study aims to provide insights applicable to diverse workspace typologies, including offices and culinary environments. Furthermore, drawing from an affordance perspective, this study examines the relationship between spatial visibility and organizational identification in open workspaces. Through interviews and surveys conducted in a Finnish organization post-transition to open workspace, the research reveals that spatial visibility amplifies organizational identification by emphasizing similarities among workers' facilities and enhancing exposure to company branding. However, it also unveils how visibility can underscore perceptions of inequality, thereby diminishing feelings of inclusion among certain individuals. The findings of this research contribute to the development of design strategies aimed at optimizing visual connections within workspaces, fostering environments conducive to enhanced productivity and occupant well-being. By elucidating the intricate dynamics of spatial visibility and its implications for organizational identification, this study offers valuable insights for both theoretical understanding and practical application in workspace design and management. In conclusion, this research underscores the importance of considering visual connectivity as a crucial aspect of workspace design, particularly in open layouts. By acknowledging the nuanced effects of visibility on productivity and organizational identification, designers and managers can implement strategies to create more inclusive, engaging, and productive work environments. This holistic approach to workspace design not only enhances individual well-being but also contributes to overall organizational success.

Dairy Plants: An Insight in the Integration of Fully Automated Plant
Tariq Amer Al Hakmani

The Dairy industry landscape has seen significant modernization in recent years, fueled by exciting developments in automation and robotics. Automation techniques have been implemented to ensure intense quality and safety for the desired food product. This work explores the future of work within dairy processing facilities, with a specific focus on the possibilities and obstacles presented by the integration of automated systems. As various industries are increasingly implementing automation, it is essential to evaluate the downstream effects on the workforce, output, and efficiency.

The Future of Work and the Problem of Quiet Quitting
Sandra Terfah Korveh, Patrick Martens

The world of work has gone through numerous phases of development and still undergoing transformation (Cascio, 2009). Several events from the past two decades have changed the world of work drastically in various ways (Cascio, 2009). From the emergence and discovery of technology, digitalization, telephones, the inculcation of technology in the way of work, social media, the pandemic, the great resignation, and quiet quitting (Gößling et al, 2020). The emergence of the pandemic and its aftermath created some strange phenomena the world of work is still grappling with now; the great resignation and quiet quitting (Harter, 2023). Business organizations seem to be the most directly affected group by the occurrence. The new trend, quiet quitting can be viewed as an aftermath of the pandemic. Quiet quitting can be generally defined as the refusal to give one's best to one's organization at the workplace and intentionally reducing one's responsibility to their employers by doing the bare minimum; only what is expected of them (Ahmed et al., 2023). The recent 2023 workplace Gallup report reveals that fifty-nine percent of the world's workforce is quiet quitting. Interpreting that over half of the world's workforce is currently disengaged from their work mentally, emotionally, and psychologically (Garfinkel, 2023). Also, according to the timely report of the Wall Street Journal article and the 2023 Gallup workplace report, the phenomenon has already cost the world's economy over three trillion dollars just in 2023(Gallup Inc, 2023), 9.9 percent GDP loss, and predicted to be more detrimental to the future of work if the phenomenon is not curbed or managed appropriately (Formica & Sfodera, 2022). Although the phenomenon is a recent discovery, this paper contributes to the already existing literature on the phenomenon, by conceptually defining quiet quitting, investigating the causes of quiet quitting, and an addition of some proposed solutions to businesses on how to potentially curb and manage quiet quitting at the workplace (Mahand & Caldwell, 2023). The study also addresses the potential consequences of the phenomenon to businesses if left unattended (Mahand & Caldwell, 2023). Drawing on the Conservation of Resource theory (COR), this study established the following among others, as the major causes of quiet quitting behavior among employees (Nguyen et al., 2022). The leadership effect, the Generation Z effect, a failure to inculcate diversity and inclusion in organizations, culture, and personality traits, workplace culture, and workplace stressors are some of the well-documented causes of quiet quitting behavior among employees at the workplace in this paper (Yildiz, 2023). This paper also conceptually documents several proposed solutions for businesses to curb or manage the recent quiet quitting trend in organizations (Nordgren & Anders, 2023). Employee autonomy, adaptation of a more communistic leadership style such as servant leadership, systematic inculcating of diversity and inclusion, improving workplace culture to focus more on employee wellbeing, and prioritizing employee training and development to enhance employee self-awareness, and engagement at the workplace are the way to go (Nordgren & Anders, 2023). Although arguably archived as an old phenomenon that has resurfaced after the pandemic, the mere existence and re-emergence of this trend at the workplace and its cobweb threats to the future of work calls for immediate action. There is a dying need to follow a measurable means to curb the situation once and for all (Atalay & Dagistan, 2023). In light of that, this study also outlined the repercussions on businesses regarding the dangers quiet quitting poses to the future of the world of work if the necessary attention is not given to it. (Ozturk et al, 2023).

The Future of Work is informal
Andre Dellevoet

This paper is a literature study on informal work. It is based upon the fact that informal work is prevalent in most parts of the world, especially in the Global South, where more than 80% of humanity lives. The paper first looks at work relations in the past and present in the Global North with special attention to the existence of a dual system where workers rights are less guaranteed for certain groups such as migrant workers or racial minorities, as well as the Global South, where workers rights have never been fully respected. The paper then turns to the rationale for informal work, grounded in four theories; the neo-liberal/dual economy school, the

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Neo-marxian/ structuralist school, the legalist/institutional school and the voluntarist school. These theories also provide some insight into the business rationale for informal work, which seems very strong. The final chapter takes a look into the future and provides six reasons why the future of work will likely be more and more informal. It also makes suggestions for a new paradigm that is based upon recognition of the realities of worker rights in the Global South and how people actually cope with that. This may form the basis for more effective ways to promote workers rights.

The Different Effects of the Digitalisation and Automation of Work in relation to Economic-Political Systems of Advanced Globalization
Orazio Maria Gnerre

The 21st century will be remembered as the period that brought about the artificial intelligence revolution, which followed the great technical revolutions of the 19th and 20th centuries. All these previous revolutions have had a notable impact on the productive sphere and, above all, on the methods of work. Proceeding with a more in-depth analysis of an economic-political nature, they have also produced different formulations of labor relations and production methods. In fact, each type of technical revolution tends to trigger differentiated modes of social organization, just as different social organizations react to each technical revolution in differentiated ways depending on the ideas and theories that guide their action. We can trace these teachings right to the heart of classical sociology (think of the work of Max Weber), as well as in the socio-economic study set up by Marx and Engels, and constitute the first awareness of the intellectual category towards the great mutations techniques that were reformulating the face of social relations within a completely changed reality, such as that of industrial capitalism first, and that of the large political agglomerations of national states and colonial empires subsequently, with their bureaucratic and organizational part.

We need to start from this type of lesson to consider the great transformations that are already taking place and will continue to take place due to the great impact that artificial intelligence is already having and will continue to have on the world of work (in this case, especially but not only with regards to intellectual work). Added to this, to "exacerbate" the situation, is a progressive improvement in automation. In this sense, automation is aided by the progress of artificial intelligence, which makes machines more and more effective and capable of producing increasingly better results. If machines, in the most dramatic of hypotheses, can more or less "replace" the human being, this would not therefore abolish the human being in itself, but society will necessarily take on new relational models and new power relations, based precisely on the mode of production that will be established or has been established upstream by the decision makers of the state political units that will deal with the problem. We see here how the question of work, according to the lessons of the great authors of the 19th and 20th centuries, is central to any type of social transformation we will encounter. In fact, work is the more or less scarce resource that would be replaced or "completed" by automation and the improvement of artificial intelligence, and production methods as well as social relationships and all social expressions are structured around it. The introduction of new ways of working, through technical development, signifies the dramatic impact of transformation on society, but only through the reformulation of working relationships. This happens in the West through that clearinghouse that is the labor market, which evaluates the "usefulness" of workers based on the demand for labor force and particular work skills. However, there is no single model of political organization, but a plurality of them. This model of analysis of political-social differences also has a specific relationship with the economy, since politics often presents itself as a fundamental decision when faced with the possibilities that technology and the economy produce. Specifically, the problem of redistribution takes on a value of profound importance within political formulations and practices. It establishes different political perspectives and different social organizations, and poses itself in a problematic way with respect to the world of work. Work and distribution of the product or earnings are two closely linked areas, and they correspond to one of the fundamental elements of the conceptual space of politics. This is how the question of politics arises within the labor problems of the contemporary and future world.

The question we want to answer, investigating the possibilities of the near future based on the technical, organisational, social and political data present, is: how society will transform in the face of these great changes based on the socio-political models that it will adopt? Furthermore, this perspective must not be related to a universalistic dimension, but must be produced within an exclusively localized perspective, keeping in mind the asymmetries of the various political, social and cultural systems that animate advanced globalization. The analysis models we intend to adopt are those of the study of the global economy from a political point of view, as well as the sociological analysis of the impact of advanced technologies on the world of work. To this we must add a so-called "institutionalist" perspective, which allows us to keep in mind the theoretical factors, and how they influence the aforementioned sphere of politics, which will then have a highly dividing role within a completely changed socio-economic scenario.

Understanding Influence: The Imperative of Impact Assessment in Emerging Market Institutions
Gigi Limpens

This exploration examines the evolving role of impact assessments in supporting sustainable development for emerging economies. Traditionally focused on environmental concerns, impact assessments now encompass social, economic, and institutional factors, providing a holistic view of development interventions. With the initiation of the IATI agreement, organisations and nations are compelled to collect, analyse and report on developments in their projects and programs. For project and program development in emerging economies this has resulted in more transparency on the utilisation of external funding, effectiveness and efficiency and cooperation between institutes working on similar objectives. The unique challenges faced by emerging economies are highlighted, including institutional weaknesses, inequality, environmental vulnerability, and integration into the global economy. These challenges hinder progress towards sustainable development goals and economic development of a nation and a region. Robust Monitoring and Evaluation (M&E) frameworks coupled with rigorous impact assessments are proposed as integral component of effective project management as a counter-balance for overcoming these challenges. Data-driven insights can inform decisions, enhance accountability, promote innovation, and attract responsible investment. However, this does require an alignment between M&E requirements set by funders and the capabilities of the emerging economies to implement these systems. A common downfall is the lack of investment in customisation of these models and systems to local situations, pushing western ideas and methodologies. As such there is a need for capacity building in emerging economies to build monitoring and evaluation systems and conduct effective impact assessments tailored to their unique situations and the context. Investments in training, data collection systems, and institutional frameworks are crucial for maximizing the benefits of this development tool. This research contributes to the field by underlining the importance of adapting impact assessments to address the specific needs of emerging economies, ultimately fostering sustainable practices and a brighter future for these nations.

The Challenges to Vocational Training in Sudan
Ebtihalat Elshikh

Vocational training is supposed to offer the availability of work to labors and aiming to achieve this will require to go through challenges like Absence of strategies and planning, Lacks of resources, Effectiveness in serving the community. For each of these challenges an important effect to be considered as the following

Absence of strategies and planning | Strategies and plans might be easy to set when a good platform of knowledge is available behind them. Knowledge like researches and statistics are providing facts and putting us on the reality to change towards the better and developing. Knowledge also give hints to start solving problems and innovating creative methods. Strategies and plans are important to secure future of occupations, jobs and professions in Sudan, but this must be done through regulations and laws. Many issues concerning the classifications of professions, how can they be certified by the authority, whether they are enough to meet the requirement of labor market?

Lacks of resources | Lacks of resources like Lack of qualified instructors, lack of materials, lack of training materials, unavailability of curriculums, poor infrastructure and taking into consideration the interfering between all of them. The unavailability of curriculums can appear in that the labor market and vocational education are not doing compatible work with each other, there is no strategies to explain for students the most important skills preferred in the labor market to be well studied in the vocational education. The lack of instructors affects the learning process due to that they deliver it to the students, and also they need to be well trained and well qualified to do this. The lack of training materials will lead to bad quality training and the lack of materials might lead to training failure due to that the materials is the things that I consume and use during the learning process.

Effectiveness in serving the community | Vocational training institutes around Sudan, need to be more interacting with other institutes in the country, we need to advertise about us, and plan for projects with Sudanese corporations for mutual benefits. In SUDAN all educated people are outside, joining jobs outside SUDAN because of SUDAN problems like political conflicts.

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Preparing TVET Graduates for Future Work A Comprehensive Approach in the case of Agricultural Sector
Mitiku Demissie

Where it is deemed necessary to enable the nation's agricultural production & agricultural trade have a competitive and enduring organizational set up through the employment of trained manpower, the Agricultural Technical and Vocational Education and Training System would assist the younger generation to be prepared psychologically,have discipline and the potential to work competent employee and creator of work. Technical and Vocational Education and Training (TVET) plays a crucial role in preparing individuals for the workforce, particularly in the agricultural sector. With the rapid advancements in technology and the changing nature of work, it is essential to adopt a comprehensive approach to equip TVET graduates with the skills and knowledge required for future agricultural jobs. This abstract presents a comprehensive framework that encompasses various aspects of TVET programs to ensure the preparedness of graduates for the evolving agricultural industry. The framework begins with a strong foundation in core agricultural skills, including cultivation techniques, animal husbandry, and crop management. These fundamental skills serve as the building blocks for specialized areas within the agricultural sector. Additionally, it is vital to incorporate knowledge of sustainable farming practices and environmental stewardship to address the increasing demand for eco-friendly agricultural methods. Furthermore, the framework emphasizes the integration of technology into TVET programs. Agricultural technology has revolutionized the sector, enabling increased productivity, precision, and efficiency. TVET graduates must be proficient in utilizing modern tools such as precision farming equipment, remote sensing technologies, and data analysis systems. Therefore, incorporating modules on digital literacy, data management, and emerging technologies is crucial to equip graduates with the necessary skills to thrive in the agricultural industry of the future. Moreover, a comprehensive approach to TVET in the agricultural sector should also emphasize entrepreneurship and business management skills. The ability to identify market opportunities, develop business plans, and manage agricultural enterprises is essential for graduates to succeed as entrepreneurs or contribute effectively to existing agricultural businesses. By integrating modules on business fundamentals, marketing strategies, and financial management, TVET programs can empower graduates with the skills needed to create and sustain successful agricultural ventures. In addition to technical and business skills, the framework recognizes the importance of soft skills development. Effective communication, teamwork, problem-solving, and adaptability are critical traits for success in any industry, including agriculture. Incorporating experiential learning opportunities, group projects, and industry collaborations can help cultivate these essential skills in TVET graduates. Lastly, the framework acknowledges the significance of lifelong learning and continuous professional development. The agricultural sector is constantly evolving, and graduates must stay abreast of the latest advancements and industry trends. Encouraging graduates to engage in lifelong learning through professional workshops, seminars, and online courses can enhance their adaptability and ensure their skills remain relevant throughout their careers. In conclusion, a comprehensive approach to preparing TVET graduates for future work in the agricultural sector involves a multi-faceted framework that encompasses core agricultural skills, sustainable practices, technological proficiency, entrepreneurship, soft skills development, and a commitment to lifelong learning. By implementing such a framework, TVET programs can produce graduates who are well-equipped to meet the challenges and seize the opportunities presented by the dynamic agricultural industry of the future.

The Role of Education and Training in Preparing Workers for the Future of Work - Assessing Agri-preneurship Trainings Impact on Entrepreneurial Skills for Self-Employment
Ishak Shaibu, Camillus Abawiera Wongnaa, Kwadwo Amankwa, Margaret Aba, Sam Hagan, George Agana Akuriba, Dadson Awunyo-Vitor

The agricultural sector plays a pivotal role in global economies, contributing significantly to employment and sustenance. With the aim of fostering self-employment and enhancing entrepreneurial skills within the agricultural domain, agri-preneurship training programs have gained prominence. This abstract delves into the assessment of the impact of such training initiatives on individuals' entrepreneurial skills and their subsequent pursuit of self-employment in the agricultural sector. This paper examines the effectiveness of agri-preneurship training in developing the capacity of graduates from agricultural colleges to pursue self-employment opportunities. The study employs a mixed-methods approach, combining quantitative analysis and qualitative exploration to comprehensively evaluate the effectiveness of agri-preneurship training programs. Data was collected from 386 past students of four agricultural colleges in Ghana, and Structural Equation Modelling (SEM) and Importance-Performance Analysis (IPA) were used to analyze the data. The results indicate that there are significant gaps between the performance and importance of the Agri-preneurship training program in all six areas investigated, including curriculum, teaching methods, assessment of learning, institutional support, stakeholders and administrative support, and skill development. The agricultural sector in Ghana is an essential component of the country's economy, contributing to food security and employment opportunities for many. However, most Agricultural college graduates still remain unemployed, with a 12.9% unemployment rate for youth between the ages of 15 and 35. A recent study in Ghana revealed that over 70% of the graduates from the Agricultural Colleges were not employed and less than 4% were self-employed.

High graduate unemployment still persists across many countries in Sub-Sahara Africa. To address the challenge of limited job opportunities for graduates, many agricultural colleges in Ghana have introduced Agri-preneurship training programmes to equip students with skills and knowledge to engage in self-employment activities. However, the actual effectiveness of agri-preneurial training programs in developing the capacity of students to pursue self-employment opportunities after graduation is not well understood. Empirical studies on the effectiveness of agri-preneurial training programs in developing the capacity of students to pursue self-employment opportunities are limited. Some studies have investigated the impact of entrepreneurship education on the entrepreneurial intentions and attitudes of agricultural students in Ghana, and their findings suggest that entrepreneurship education can positively influence students' entrepreneurial intentions and attitudes, and that graduates who participate in entrepreneurship education are more likely to engage in self-employment activities. The initial findings reveal a positive correlation between agri-preneurship training and the enhancement of entrepreneurial skills among participants. The study's findings show that there are notable gaps between the Agri-preneurship training programme's importance and performance in each of the six areas that were looked at: curriculum, teaching strategies, learning outcomes evaluation, institutional support, stakeholders, administrative support, and skill development. To enable and encourage students to begin their own enterprise both during and after the training, there is a need for a review and restructure of the curriculum and the other components of the training respectively to support and enhance student's capability to start their own entrepreneurial ventures during and after the training. Government, stakeholders and College management should pay particular attention to administrative support needed to boost entrepreneurial activities of the trainees.

The Role of Education and Training in Preparing Workers for the Future of Work in Law and Political Sciences
Omorou Zackaria Toure

The university of the future is one that integrates new trends in higher education into its training policy. This is reflected in a five-year development planning tool, which focuses its missions on supporting professional integration and establishing a framework for dialogue with the socio-economic and professional circles. The first mission of the university dates back to the early 1980s, in response to the difficulties of integration to the public function created by structural adjustment programs in Africa. This is achieved by adapting training offers to the needs of society, teaching methods and practices to the demands of the contemporary world, and a sound professional integration policy. The second mission is the establishment of a partnership with the socio-economic and professional sectors, in the form of pedagogical, intellectual and professional collaboration, and collaboration in terms of the placement of young graduates. It's a vast undertaking that requires everyone's attention to achieve a triple objective: job-creating, economic growth, improved labor productivity and decent work for all.

The Success of a Partnership between the Private Sector and a TVET Institution in Rwanda
Veerle Barten, Meine Pieter van Dijk

A rapidly changing world, driven by climate, technology, and globalization, demands a transformed workforce. This paper examines how Rwanda's SEAD project equips its agricultural sector, particularly the private sector, for this evolving future. By prioritizing relevant education and training, Rwanda, like other developing nations, can navigate this shift and ensure economic success. Rwanda aims to transition from a low-income, agriculture-based economy to a knowledge-based, service-oriented one by 2030. Currently, public investments drive growth more than private investments, and job creation is lagging. To address this, Rwanda seeks to transform its agricultural value chain through innovation, partnerships, and closer collaboration between education, business, and government. Recognizing the importance of education in preparing workers for a changing job market, the SEAD project was implemented in Rwanda for eight years. Funded by the Dutch, SEAD aimed to strengthen the agricultural value chain and achieve food security. It brought together universities, vocational institutions, government entities, farmers, cooperatives, and agribusinesses. This collaboration fostered practical, market-driven education and research initiatives to improve food security, support thriving agricultural livelihoods, and benefit both Rwandans and the national economy. The project focused on five key agricultural value chains: poultry, dairy, potato, horticulture, and agri-tourism and employed four main strategies:

1. Curriculum Development: SEAD addressed the gap between education and employment by creating market-driven curricula with up-to-date knowledge and technologies, equipping graduates with practical skills.
2. Research and Innovation: SEAD supported collaborative research projects to find solutions to pressing issues faced by farmers and communities.
3. Outreach Services: SEAD strengthened the capacity of institutions to deliver training programs on modern agricultural techniques, empowering farmers to improve production.

Abstracts
Presented papers

4. Service, Training and Innovation Centers (STICs): SEAD facilitated public-private partnerships where educational institutions and the private sector collaborated to promote and implement innovations.

The SEAD project served as a foundation for Rwanda's ongoing efforts to prepare its agricultural workforce for the future. By prioritizing market-responsive education and training, Rwanda can ensure a competitive agricultural sector that contributes to national prosperity.

Adopting of the Digitalization in Indonesia Agriculture Sectors: Challenging and Outlook
Said Achmad Kabiru Rafiie, Hamdi Harmen, Zainal Putra

This paper aims to evaluate the Indonesia rural transformation trough digitalization of agri-food sector. Adoption internet of thing and modern technology is a change in agriculture sector to meet with demand of the Indonesian domestic market for food. With having 260 million people, Indonesia has to import some crucial agriculture product such as rice, corn, soybean and vegetable from oversea suppliers. This literature research would like to gather the challenging of implementation of digitalization in agri-food sector such as the factors of human resources, infrastructure, geographical location, fund allocation, capacity building of the farmers' association and cooperatives, and regulation and policy. Moreover, this paper will provide an outlook for prospect digitalization of agriculture such as productivity, effectiveness and efficiency, and the role of higher education in preparing the students.

Exploring the Future of Biodiversity Impacts of Digitalization AI and Robotics
Ariel Toh

Both positive and negative scenarios are coming of age for evaluating the impact of technology advancement on biodiversity and ecosystem services. This paper analyzes global scenarios with reference to several literatures, as well as comparing to social behavioural dynamics. The results given here reveal that a digital-based economy and advancement in technology have critical impact to the level of perception of society in biodiversity conservation.

Future of Better Rural Non-Farm Work Depends on Innovation and Technology
Subrata Dutta

In a country like India, while as a result of shift in sectoral structure the contribution of agriculture sector has come down to only around 14 per cent of GDP, 47.5 per cent of the country's workforce is still found to be engaged in the agriculture sector (Thomas, 2015). This indicates that shift in output structure (considerably towards services sector, led by software services) has not been significantly translated into corresponding shift in employment structure. This leads to prevalence of underemployment (in terms of both disguised unemployment and seasonal unemployment) in the agriculture sector. In search of a livelihood, the poor, surplus, unskilled rural labour-force are often found to migrate to other regions, or to engage in the informal, rural, non-agricultural activities or rural industrial activities. This is agricultural activities or rural industrial activities. This is the reason for why these activities assume immense importance for the developing countries which have long been facing the problem of surplus agricultural labour. Let us compare two Indian states - one is a relatively industrialised state (Gujarat) and the other is a deindustrialising state (West Bengal). In terms of annual GVA per "rural" small manufacturing enterprise, Gujarat has been very far ahead of West Bengal. While West Bengal has a much larger number of "rural" small manufacturing enterprises than Gujarat, it lags behind in terms of both GVA per enterprise and GVA per worker. This indicates that a large number of small manufacturing enterprises in rural areas in West Bengal make a very nominal contribution in terms of value added. The secondary data suggests that Gujarat's annual GVA per unorganised manufacturing enterprise (rural) is much higher than that of West Bengal, while Gujarat has much fewer manufacturing enterprises than West Bengal. Despite having a much larger number of manufacturing enterprises, West Bengal has very low GVA per enterprise compared to Gujarat (and compared to the national level). The same is the case for GVA per worker. At this backdrop, the research is: "What kinds of rural industries will further grow in future? Is it distress-driven growth induced? How can growth-induced rural small enterprises grow? Does new technology help in this regard? As regards the methodology, the study uses secondary data and information for detailed analysis. Some background data (e.g., rural small enterprises data) is presented. Finally, a conceptual framework has been built up. Thus, this paper is a conceptual paper. The secondary data, as seen above, suggests that the future of work in rural West Bengal is bleak. Isolation of rural industries from the rest of the economy (mainly large industries) is a big problem area. This is in contrast with the rural industries in Gujarat. An integrated-cum-inclusive (labour-intensive) approach is required in West Bengal, through which better employment will be generated in the non-agricultural sector. Mountjoy (1982: 16) argues that large-scale industrialisation alone is not synonymous with development; the concept of progress applies to all sectors of an economy and, thus, an integrated as well as comprehensive approach needs to be adopted. In this regard, as we think, rural small-scale industries need to be prioritized as a significant part of the engine of growth of

domestic economy. It is to be particularly noted that the state policies have significantly failed to promote ancillarisation or sub-contracting of rural small firms and cottage industries by large firms in India (Bhalla 2004: 58), which has long been practised in countries in East Asia (United Nations, 1979). Since large firms prefer to innovate frequently, rural small firms have to cope up with such phenomenon if they want to enter into the sub-contracting arrangements and, for that, the issue of technology (in other words, technology-related research) needs to be paid proper attention. The roadmap is as follows: For the sake of developing indigenous technology, the government has to formulate new R&D and technology policy that would make provisions for engaging universities, research institutes, technological institutes and R&D laboratories which would produce innovations that would be cheaper and must be accessible to poor rural producers. New technology-induced rural industries would provide better employment to rural workers.

Applied Research to promote the Development and Implementation of Innovations with Private Sector in Rwanda's Agricultural Sector - New Entrepreneurial Opportunities
Meine Pieter van Dijk

The focus of this paper is on a project in Rwanda where innovations were introduced in agricultural value chains and implemented through a partnership between educational institutions and private firms to produce seed potatoes, or chicklets and eggs. What was the role of the applied research financed under the project? The paper looks at two public private partnership in agriculture with educational institutions and identifies factors contributing to their success. The project created Service, Training and Innovation Centers (STICs) for the collaboration between the educational and private sectors. The Netherlands Ministry of Foreign Affairs financed two projects in Rwanda, the Strengthening Education for Agricultural Development (SEAD) and the SEAD West project, supervised by the Nuffic and executed the Maastricht School of Management (SEAD West). The projects covered respectively the period 2015 to July 2021 and 2019 to mid-2023. The main objective was to support capacity building for food security through sustainable agricultural value chain development. Other objectives were promoting applied research and stimulating cooperation between the public sector (the Polytechnics) and the private sector.

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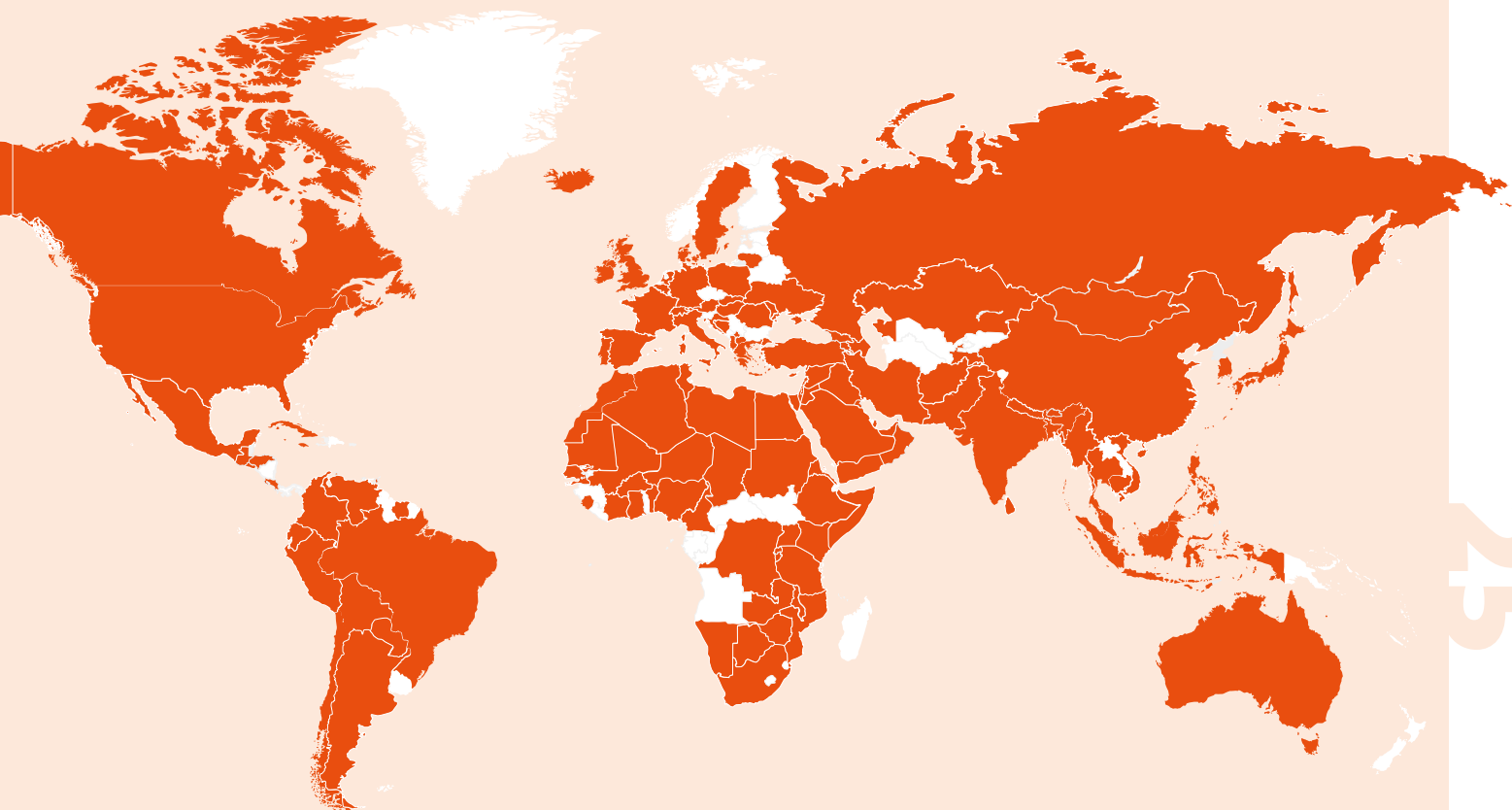E: msm-executiveprogrammes@maastrichtuniversity.nl
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