

The global economy is influenced by two main changes: the technology revolution and climate change. Both these situations lead to uncertainty and pose significant challenges for the world's economy and for labour markets. For instance technological change, which shows up in the form of automation, artificial intelligence and robotics, is transforming the way in which goods and services are produced. This may make people more productive and efficient in their jobs, but it may also result in job losses in some sectors and occupations, especially those most exposed to the changes in question. A gap may therefore emerge between workers whose skill-set is closely aligned with technological change and those whose skills are rendered obsolete by it and whose jobs are now done by machines. Climate change also means that we need to transition towards a more sustainable, low-carbon economy, which may entail job losses in carbon-intensive industries such as mining and fossil fuel production.

With these changes there will be both winners and losers in the job market. On the one hand there will be significant growth, with demand for new skills, in emergent sectors and jobs. On the other, workers in industries and occupations which are in decline will have to adapt to changes and try to find jobs in sectors where there is growth. It is crucial for the public authorities to intervene with policies that can mitigate negative impacts on the most vulnerable groups, i.e. those for whom it is most difficult to find new jobs. Potentially helpful actions include (i) theoretical and practical training programmes to help workers acquire the skills needed for the jobs of the future; (ii) support for innovation and entrepreneurship, with incentives to foster the creation of new businesses and technological innovations which in turn can create job opportunities in emerging sectors; (iii) reinforcement of social protection systems to provide support for people who lose their jobs due to economic, technological and climate-related changes; and (iv) encouragement for employment in sectors such as renewables, energy efficiency and sustainable transport so as to foster the transition towards a greener economy.

But before it can be decided what actions must be taken, the strengths and weaknesses of each specific society need to be taken into account. Scientific evidence must be taken as a basis and frameworks for reflection must be set up as reference points for consensus-based measures, in this case for society in the Basque Country. This is precisely what the White Paper on Employment in the Basque Country set out to do. This White Paper was published in 2023 as a result of collab-

oration between the Basque Government Department of Employment and Fundación ISEAK. Its purpose was clear: to provide a framework for reflection that would encourage debate, discussion and consensus on potential specific measures for fostering productivity and quality employment in the Basque Country in the face of the challenges that the future has in store. The timing of the White Paper is particularly apt in view of the changes mentioned above. It is also set against the demographic context (not just in the Basque Country but in most developed countries) of an ageing population, giving rise to a shortage of people of working age. The economic context is one of change, but the political context may be even more worrying, with worldwide social disruption resulting from Russia's invasion of Ukraine and the Arab-Israeli conflict, which is leaving thousands dead and threatening to spread to other areas of the Middle East, with unpredictable consequences.

The White Paper looks at the following issues: the first chapter outlines the initial situation in the Basque Country in terms of the job market and economic activity, as the starting point from which technological and climate-related changes must be addressed in the context of an ageing working population. The next three chapters provide in-depth descriptions of the three major transformations – the demographic, the technological and the climate-related – that must be faced. Each chapter sets out the relevant causes and consequences and suggests possible channels for action that may be required to improve the quality of employment in the specific case of Basque society. These four chapters provide a basis for constructing proposals and setting up levers as guidelines for action in changing the future of the job market in the Basque Country to make it more developed and more inclusive. The final chapter of the White Paper then offers a number of specific proposals for lines of work considered significant on the basis of international experience in the channels for action detected. All these proposals seek to foster an agenda of inclusive prosperity that (i) increases job productivity; and (ii) reduces currently-increasing inequalities.

However, other points which are also of great importance for the future of employment in the Basque Country are not addressed in the White Paper. And that is precisely where this monographic issue of our journal comes in: it seeks to supplement the analyses in the White Paper with further analyses of future employment in our community. It thus extends the process of reflection to key points affecting our society and continues the task for which the White Paper on Employment in the Basque Country was drawn up, i.e. to provide knowledge that can help in reflecting on where potential actions can be based.

This supplementary process of reflection comprises eight articles. The first looks at the baseline situation in the Basque Country, supplementing the information contained in the White Paper with further indicators that provide an employment-related context for the rest of the articles. The second and third articles address issues concerned with the socio-demographic challenge, bringing new insights

on the intergenerational structure of society in a context of ageing and taking a close look at the highly numerous cohort of 60 to 70-year-olds, who are set to undergo far-reaching employment changes in the coming years. The next two articles look at the technological challenge from two very different viewpoints: Article 4 looks at the changes in legislation that accompany technological change. Knowing whether workers' rights are properly defended in the face of the technological changes taking place is an essential addition to the White Paper in terms of showcasing a different dimension of quality of employment. Article 5 looks specifically at Generative Artificial Intelligence (GAI) and its potential effects on employment. AI is a recent phenomenon which to date has generated more uncertainty than certainty, but a close look at it certainly adds value to the general process of reflection. The sixth article looks at a point not covered in detail in the White Paper: the situation and prospects in regard to the energy transition in the Basque Country, given its current sectoral specialisation and business fabric. The energy transition is unstoppable, and it offers clear opportunities for the creation of wealth and jobs in the Basque Country, but consideration must also be given to those businesses that use fossil fuels and now face a process of change that cannot be put off. Finally, of course, there is the issue of green jobs, which is not dealt with in depth in the White Paper. The articles here provide an interesting supplement for learning more about such jobs, which are sure to be created in the immediate future as our society tackles the challenges of decarbonisation. They are dealt with in the seventh and eighth articles in this monographic issue, which are written by institutions staffed by scientists who are experts in climate change and its links with the relevant facts and figures.

In short, this issue of our journal comprises eight articles that look at employment in the Basque Country from different perspectives and provide novel contributions that supplement the process of reflection undertaken in the White Paper on the Basque Country. The goal is to move forward in the process of sharing reflections and discussions to enrich knowledge, so that the actions taken are based on the expertise of numerous specialists on the matters in hand.

An outline of the main points and conclusions of each article follows.

The first article is “The Basque Labour Reality: Evolution of the Main Magnitudes”, by **Leire Ozerin Etxebarria** and **Arantza Unzurrunzaga Estefanía**. The authors set out the baseline situation in the Basque Country in terms of employment and unemployment rates along with other employment-related data such as hiring, placement and training for employment. The Basque Country stands out for its great industrial potential and its low unemployment rate, though the authors point out that there is a gender gap in the job market, with women being worse off in general in terms of job quality and prospects. The authors therefore stress the need to encourage more women to study subjects that can prepare them to go into sectors where the quality of employment is higher. Those sectors are currently mainly occupied by men.

In her article “Demographic Change and Transformations in the Generational Structure of our Population”, **Dolores Puga** highlights increased longevity as the demographic factor that has the greatest impact on generational structure. In the past, young people were the preponderant demographic group in the adult population, with the oldest age groups being relegated very much to a secondary position. In current structures and those expected in the future this situation has changed completely, and it is more and more common to find multiple overlapping generations coexisting in the adult population. This change has significant implications for the working lives of adults, with very different challenges and needs in terms of work/life balance depending on what stage of their long adulthood individuals are in.

The third article is “Population Change and Employment Demographics in the Basque Country: Focusing on Older Adults” by **Iñigo Calvo-Sotomayor** and **Ekhi Atutxa**. The authors take an in-depth look at the cohort of individuals between 60 years old and the age at which people cease to be independent in terms of health and living. They begin by drawing up a profile of the socio-demographic situation of this cohort than examine the need to rethink strategies to maintain productivity and sustainability in the fabric of business. In this regard, they suggest that there is a need for companies to adopt good age management practices and think about how to tackle business transitions, because when this large cohort retire many viable businesses may have to shut down if that transition is not properly handled.

In her article “Technological Change and Workers’ Rights”, **Edurne Terradillos** looks at the extent to which the rights of workers are guaranteed with the advent of new technologies. The use of ICTs in work may lead to breaches of fundamental rights to privacy, secrecy of communications and protection of personal data. AI also uses algorithms that could have highly negative effects on the well-being of workers. She presents a brief examination of current regulations with their strengths and weaknesses, seeking to detect points where there is a need for further development or for changes in current laws or their implementation.

The fifth article is “Perception and Disruption: The Impact on Employment in the Basque Country of Generative AI”, by **Manuel Hidalgo Pérez**. It focuses on Generative Artificial Intelligence (GAI) and seeks to analyse the scope of perception of and exposure to GAI in the context of employment in the Basque Country and in Spain as a whole. The analysis reveals big gender-based differences in exposure to GAI and an inverse relationship between education level and low exposure to GAI. The article stresses the need for education and continuous training if workers who are highly exposed to this new revolution but less equipped to deal with it are not to be left behind in regard to GAI.

José Ignacio Hormaeche is the author of “The Energy Transition and Job Creation in the Basque Country”, in which he looks at how the major investment associ-

ated with the energy transition is giving rise to great opportunities for the creation of skilled, quality jobs in the Basque Country by businesses operating in the energy value chain. He also addresses the major challenge faced by such businesses: the highly competitive nature of the fabric of business, particularly in industry, which makes it hard to access significant shares of the investment associated with these new opportunities. He presents an “impact matrix” which reveals that the energy transition is set to create 3000 new jobs directly by 2030 in the Basque Country. He also predicts that the make-up of these new jobs will be different, with around 55% of them being in the field of renewables.

The seventh article is “Green Jobs in the Basque Country: An Analysis Based on the Environmental Goods and Services Account”. Its authors are **María Victoria Román, Mikel González-Eguino** and **Iñaki Arto**. The article looks at the extent to which opportunities stemming from the ecological and energy transitions in terms of prosperity, economic activity and employment are actually materialising in the Basque Country. The results show that the ecological transition is having a positive impact on the Basque economy. The production of environmental goods and services increased at a rate of around 7% per annum from 2015 to 2021, generating Gross Added Value to the tune of 1,519 millions of Euros in 2021. Full-time “green” jobs were up by 5,5% per annum over the same period, totalling 21,384 in 2021. The article includes an assessment of the pros and cons of this statistic in terms of monitoring employment throughout the ecological transition.

The last article is “Different Approaches to Green Jobs in the Basque Country: From Environment-related Activities to the Green Potential of Occupations”, by **Juan Gamboa, Itziar García, Macarena Larrea, Jorge Fernández** and **Mikel Albi-zu**. It is based on a novel way of looking at the concept of green jobs: a bottom-up approach in which such jobs are classed on the basis of the tasks that they involve. The authors compare this classification with the more conventional top-down approach, in which jobs are classed on the basis of sectors of activity. They conclude that an in-depth understanding of green jobs requires a broad view covering both approaches. They also highlight that if a more environmentally sustainable society is to be attained, the proportion of people in green jobs or potentially green occupations needs to be ever greater.

Along with these eight pieces, this issue also features two articles in the *Other Contributions* section. The first is “The New Sustainability Directive. Identifying Environmental Information Practices that Need to be Improved at Spanish Businesses”, by **Eneko Pérez, Javier Corral, Ainhoa Saitua** and **Noemí Peña**. It highlights the importance of environmental disclosure by companies in the context of the climate crisis and the energy transition. The article analyses non-financial information statements from leading Spanish companies in three sectors with different environmental impacts: Electrical, Construction and Leisure, Tourism and Hospitality. The authors stress the importance of companies providing high-quality envi-

ronmental information and identify areas of improvement in terms of adapting to the new EU Directive.

The final article is “How to Evolve towards Organizational Ambidexterity: Lessons from Basque Small and Medium Enterprises in Customer-based Innovation Contexts”, by **Cristina Aragón**, **Cristina Iturrioz** and **Henar Alcalde**, which looks at the importance of organisational ambidexterity in the competitiveness of SMEs, and at the difficulties entailed by the process, via a case study of Basque companies. It presents an inductive investigation based on an in-depth analysis of four innovative Basque SMEs which have been able to develop organisational ambidexterity strategies in contexts of customer-based innovation (CBI). Three main lessons are drawn: the need constantly to reorient the strategic options of SMEs, the construction and formalisation of customer-based innovation and the usefulness of fostering a culture of ambidexterity.