No circular panacea

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FIFTYFOURDEGREES

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Managing the Skies

Tackling the problems of our congested airports.

In this issue...

Foreword

Welcome to the latest edition of Fifty Four Degrees, your chance to gain an insight into the research taking place at Lancaster University Management School.

For those of us who fly, one of the greatest frustrations can be unexpected delays and cancellations. Holidays and business plans can be thrown into turmoil in an instant by problems at the airport.

Over the last decade, researchers in our Centre for Transport and Logistics (CENTRAL) have been working with air traffic control networks and other key players in the flight industry to look at ways in which slots at airports can be assigned. These slots determine which airlines fly from where, to where, at what times.

By using their logistics expertise, and mathematical modelling, the CENTRAL team have undertaken work on the OR-MASTER project to devise a fairer way of airports allocating slots to airlines.

Konstantinos Zografos leads both CENTRAL and the OR-MASTER project, and his article is a fascinating insight into the work they have undertaken, and the hopes for the future. It is not an easy task – as with anything that requires major alterations of an existing system, there is always politics involved, and entrenched positions to overcome – but the research has important industrial partners, and it has the potential for positive practical impact on the airline industry – and on us passengers too.

This kind of real-world influence is what we strive for within our School. We recognise the importance of using our knowledge and skills to make a difference to business, policy-makers and society as a whole.

You can see that also in the work of Professors Kostas Selviaridis and Martin Spring. They have been working with the UK National Health Service to look at the ways in which huge public and governmental organisations can bring more innovation into their operations.

As a patient on a ward, in surgery, or visiting a GP, we rely on the NHS to have the best technologies and practices available to ensure our safe care. But if these technologies are being developed by small businesses, how do they get into the national framework in the first place? Kostas and Martin's work looks at how intermediary organisations can bridge the gap between the huge and small organisations, speeding up innovation adoption and removing obstacles. Their analysis and feedback to the NHS – as well as work with the UK Ministry of Defence – provides a platform for positive change.

You can see further evidence of our work with external partners in the article from FareShare's Carl Hawkes. FareShare is the UK's national network of charitable food redistributors, who take good quality surplus food from across the food industry and supply nearly 9,500 frontline charities and community groups.

They have been working with researchers in the Department of Management Science, as well as members the STOR-i Centre for Doctoral Training, to analyse and add value to their operational decision-making. This can affect people across the country relying on the likes of foodbanks, and you can see from Carl's article that Lancaster's input has already made a difference.

Hopefully, there will be similar positive effects from the I-Connect project. Eden Project Morecambe offers the potential to bring huge benefits to the town, the community, and the wider region. Radka Newton explains the importance of looking beyond the site itself, and has been working with local councils and businesses to bring the voice and insight of the public to the processes.

These articles provide just a handful of the examples of impactful research and engagement taking place across the School – as well as a mere taste of the contents of these pages. I know that we will be able to bring you more tales of practical solutions and transformational work in future issues of Fifty Four Degrees.

Until then, enjoy this edition.

Professor Claire Leitch
Executive Dean
Lancaster University Management School

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Managing the Skies

Demand for flights from the world's biggest airports is sky high. In coming years, it is only expected to increase. But airports have only so many arrival and departure slots they can fill. How do they use these slots to the best efficiency? ***Professor Konstantinos Zografos*** **explains how his** ***OR-MASTER*** **project is using mathematical models and algorithms to seek an optimised approach. Find the answer, and they can help allocate efficiently scarce airport capacity to benefit airlines, airports, and the travelling public.**

More than 5,000 airlines operate globally. They transport people and freight across countries and between continents. Every year, ***billions of passengers take to the skies on commercial flights***. The skies are becoming more and more crowded, and airports only have so much capacity to deal with arriving and departing flights.

There are around three million arrival and departure slots at UK airports alone every year. At Heathrow, the UK's largest airport, for instance, they had ***more than 9,000 slots a week*** in 2023 with which to meet the needs and desires of all their airline customers. That may sound like a lot, but demand is greater than supply.

Heathrow is just one of many airports worldwide where airline demand for arrival and departure slots exceeds airport capacity for considerable hours of the day. In 2023, 205 airports worldwide were overly congested. These airports are called coordinated airports. ***The majority – 107 – of the coordinated airports were in Europe,*** with Heathrow one of eight in the UK.

The ***International Air Transport Association*** (IATA) are forecasting air passenger growth of 1.5%-3.6% in the next 20 years. Bearing in mind that the increase of demand will outpace the expected increase of supply, the already acute demand-supply imbalance will be exacerbated, affecting airlines, airports, and passengers alike. Therefore, in the short to medium term there is a need to find ways to optimise the allocation of the scarce available airport capacity.

It is this issue that we have been looking to address on EPSRC-funded OR-MASTER Programme Grant.

Our ***OR-MASTER*** team – made up of a core team of operational research and air transport experts here at Lancaster, along with computing science researchers at the University of Leicester, and members from Queen Mary University London and Bangor University – have designed mathematical models and algorithms to help improve decision-making for how capacity is allocated to airlines at an airport, and at a network of airports.

CONTRIBUTING TO A NEW SYSTEM

As it stands, independent authorities allocate these slots at overly congested (coordinated) airports around the world. Airlines cannot simply pick and choose to operate their flights in these airports, and therefore they submit requests to the independent authorities

(coordinators) who allocate slots for arriving and departing flights.

Each airport must decide how much capacity it has – which is translated to how many slots are available, for both arrivals and departures, in an hour and sub-intervals of an hour, e.g. 15 minutes. The balance will vary during the day – at certain times, more slots will be available for flights to land than take-off, and vice-versa.

Airlines then request slots for their flights. Passengers have their own preferences for when they want to fly. This affects demand for slots and their distribution in time, e.g. during the day, and throughout the days and weeks of a season. Taking into account these requests and the available capacity, coordinators allocate slots. Airlines' requests may have to be moved by so many minutes either side of their desired slots, others will get exactly what they want. It is a mammoth task.

There is a complex framework determined by ***international guidelines*** that dictates how capacity is allocated. These guidelines introduce criteria, priorities, and constraints on how the various categories of requests placed by the airlines should be accommodated. Our task has been to develop mathematical models taking into account the slot allocation decision-making environment, and associated solutions algorithms. We need to provide the decision-makers with information, which will lead to greater levels of efficiency, fairness, and transparency.

Both airports and airlines have goals and desires, as do the air traffic control organisations who look after airspace, and there are different groups within those larger sets. For instance, the requests of airlines that have historical slot usage rights (referred to as grandfather rights) at an airport, have a priority over the requests of airlines that are seeking to enter the market.

Any change to the status quo is likely to meet resistance. However, even within the existing decision-making framework changes that do not radically challenge the fundamental assumptions of this framework, i.e. grandfather rights, can bring about improvements in the quality of airport slot allocation.

Discussions on potential changes have been going on for decades. It is impossible to satisfy everyone completely, though it is necessary for all stakeholders (airlines, coordinators, airports, and air traffic service providers) to agree a roadmap for the implementation of a new system. With a level of compromise, there can be benefits in certain areas for everyone.

We are looking for an optimal setting of capacity and delays, at single-airport and network levels. We created models that incorporate the preferences of all stakeholders for multiple objectives. Our models can help decisionmakers to find a commonly acceptable airport schedule that balances the preferences.

The mathematical models developed within the OR-MASTER project provide the capability to support a more objective decision-making process. We can provide facts and data to back-up the generated solutions. Sacrifices must be made, and the models and methodologies can show decision-makers where this can happen most effectively while ensuring all the airlines obtain slots as close as possible to those they want.

ADVANCE PLANNING

Airports must declare their slot capacity six months in advance, and major scheduling decisions are made based on these levels.

Airports have a maximum capacity level based on everything running smoothly. If they were to use this for scheduling purposes, they might be able to make more airlines happy by giving them the slots they want; but it is not practical. It does not allow for issues with weather or other delaying factors. There must be some slack built in for it to be workable, and to avoid major delays that deteriorate the level of service provided to the travelling public.

Our research looks at the potential levels of capacity and the likely levels of delays which would result. It is about finding a schedule that considers the need of the airlines getting slots as close as possible to what they want and the need to be able to depart and arrive on time.

The mathematical models we have created can help generate optimal airport schedules and shed light on the trade-offs necessary to accommodate slot allocation objectives. This means those airlines which miss out on the slots they want can see how the process works.

The proposed models can be applied to coordinated airports. Each airport is an individual case and will need to appropriately set the parameters of the models reflecting their operating conditions and local needs.

Our work will help to manage the demand-supply imbalance, through the optimal allocation of the available capacity. This will result in efficient schedules and will support a fairer playing field for everyone.

Konstantinos Zografos is Distinguished Professor in the Department of Management Science, and Director of the ***Centre for Transport and Logistics*** (CENTRAL) in Lancaster University Management School.

Professor Zografos leads the Engineering and Physical Sciences Research Council (EPSRC)-funded ***OR-MASTER*** (Mathematical Models and Algorithms for Allocating Scarce Airport Resources) project. Researchers at Lancaster involved in OR-MASTER include Professor Kevin Glazebrook (Co-Investigator), Dr Nihal Berktas, Dr Burak Boyaci, Dr Jamie Fairbrother, Dr Kamyar Kargar, Dr Fotios Katsigiannis, Dr Merve Keskin, Theodoti Kerama, Davood Mohammadi, Professor Stefanos Mouzas, Dr Aleksandr Pirogov, Dr Robert Shone, Dr David Torres-Sanchez, and Dr Jiang Yu.

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Don't cut out the middle man

Innovation intermediation in supply chains

We want public services to have the best tools at their disposal. But businesses with the products to solve problems often lack the ability to bring their services to the attention of these public organisations. Professors ***Kostas Selviaridis*** and ***Martin Spring*** explain their work with the UK National Health Service, examining how the use of intermediary organisations can speed up and improve access to innovations, leading to better processes and new technologies being employed for the betterment of patients.

If you are taken into hospital in England, you rely on the National Health Service (NHS) to provide the best care available.

As a publicly-funded organisation, the NHS is responsible for hospitals, general practitioners, and many other forms of healthcare across the country. In 2021/22 alone, there were an ***estimated 570 million patient contacts*** with doctors, hospitals, mental health services, ambulances and other NHS outlets.

For these millions of contacts to be as successful as possible, the NHS must continue to innovate. Surgeons and nurses need the most up-to-date technologies, products with the greatest chance of ensuring a heart operation is successful, that a transplant goes well, that diagnoses are accurate.

The NHS spends more than £1bn annually on research and development, and healthcare is the largest area of government procurement spending in the UK. In 2018/19, the UK Department of Health and Social Care (DHSC) spent just under £70bn, most on behalf of the NHS in England.

This money is spent, among other things, on purchasing innovations that fulfil as-yet-unmet healthcare needs – they are looking for innovators to create something that can be applied across their organisation.

But if this all sounds nothing but wonderful and straightforward, it is far from it.

THE SMALL BUSINESS PROBLEM

The slow uptake of innovations within the NHS has long been an issue, related to multiple institutional failures. A culture among medical professionals of organised scepticism leads them to require substantial clinical evidence of efficacy before adopting a technology or innovation. Coupled with labyrinth bureaucracy, this slows down adoption.

Many of the firms who can address the innovation needs of the NHS are technology-based SMEs. Their presence is key to stimulating change and development, to introducing the types of technology that keep the NHS at the cutting edge.

The NHS – and other large public organisations – will know they have a need, but they are not always sure what the solution is, or what shape it will take. But SMEs do not find it easy to access the NHS. These firms may have the most effective products, solutions to problems that the larger organisation has yet to begin to tackle, but the essential connections between the SMEs and the NHS can be hard to establish and maintain.

This is where intermediary organisations can come in.

In the NHS, our research involved analysing the work of the Health Innovation North West Coast. Health Innovation Networks (formerly known as Academic Health Science Networks) are regional bodies established by the NHS in 2013 to support the identification and spread of innovations with the English NHS at pace and scale.

Health Innovation Networks (HINs) bring together various NHS organisations – such as hospitals and commissioning bodies – with industry and academia, with the aim of improving patient outcomes while generating economic growth. They create a key point of reference for health innovation.

They work with industry to scope problems and jointly develop solutions to key health challenges. They raise awareness of innovative firms and their technologies and coordinate NHS organisations on the demand side to accelerate the adoption of solutions that are new to the NHS. Essentially, they bridge the gap between supply and demand.

IT TAKES THREE TO TANGO

Our expertise is in supply chains. We know how innovation can flow through them, and if this is improved – if processes and structures are optimised, and obstacles are removed – then there are grand possibilities at the end of the rainbow for patients.

Beyond this, we look at procurement. How do you write specifications for what you want to achieve? How do you contract for it? In the case of the NHS, how do you identify suitable SMEs out there doing smart things?

It might be that what the NHS is looking for does not yet exist, or it might exist but the buyer does not know about it. The needs are not always radical, looking for something totally new. Articulating demand is crucial to identifying unmet needs and translating them into specific requirements. Intermediaries can support this demand articulation process.

But it works both ways. The SMEs can look at the NHS and see this huge organisation and not know where to go, who to talk to. When we look at the NHS as an entity, we are talking about lots of different organisations. It could be a hospital, it could be an integrated care board, it could be a primary care network of GPs. They have their own challenges, and are looking for solutions to particular issues.

The situation is exacerbated by SMEs' lack of market reputation and NHS procurement rules and practices. SMEs do not speak the same language as the bureaucracy of the NHS. They could fear they have a lack of credibility. Within the large organisations, there can be aversion to risk, and SMEs can be risk-averse too, lacking incentives to try something new.

As intermediary organisations, HINs can ease the relationship and help to resolve these issues. They can address some the challenges and act as a catalyst for change.

They learn about what works and what does not and change how the system operates over time. They can seek to create new processes and structures, or adjust existing ones, to support innovation implementation. They transform how public organisations such as the NHS ask for, procure, and adopt innovations.

We found that early in the process intermediaries identified institutional failures specific to SME firms, notably the weak connectivity to hospitals, and their limited ability to participate in NHS contracting.

They promoted locally proven innovations as candidates for fast-tracked nationwide adoption and lobbied senior NHS executives and policy-makers regarding the challenges facing SMEs in accessing the NHS and finance.

Health Innovation North West Coast ran educational workshops targeting clinicians and NHS staff to foster a climate of innovation and openness to working with innovators, and tackle risk aversion among them. They also ran workshops for SMEs to educate them on how the NHS works.

In sum, the intermediaries promote institutional change by exposing problems, imagining future ways of accessing innovation, and mobilising resources to transition to them.

POSITIVE OUTCOMES

We have been able to feed back on the challenges and positive results of HINs.

Among the projects Health Innovation North West Coast helped with were 3D printing solutions to areas including heart surgeries and limb prosthetics to improve care delivery and reduce operating costs; an app for real-time information and remote diagnosis of children ailments; latex-free surgical gloves; and a portable ultrasound for use in primary care to speed up patient diagnosis and referral times.

We also identified areas where the collaboration between innovation intermediaries, buyers, and suppliers could be improved. The ideal outcome is that our advice improves procurement of innovation, that it increases the scale and the pace at which new products enter the NHS and therefore improve health services and health outcomes.

It leads to innovation on a practical level for these organisations, and anyone who encounters them. For the NHS, you might benefit from better care for whatever ailment you have. Resource productivity benefits arising from innovation also mean that public healthcare is affordable. From a supplier perspective, if you are a small company who has not dealt with the NHS before, you get a new customer, new sales, you get your product being known within the NHS, you open yourself to other markets. Everyone benefits.

The case for the Defence

As well as our work within the NHS, we analysed similar structures within the UK Ministry of Defence (MoD). Our research attracted the MoD's attention, and we gave an invited lecture to an audience of Ministry officials and other civil servants.

The MoD spent more than £20bn on procurement in 2019/20, and is expected to spend more than £85bn over the next four years. Like the NHS, the MoD recognises the importance of new and emerging technologies. But procurement practices can impede innovation.

Niteworks, a for-profit organisation, was set up in 2003 to provide an impartial environment where defence supplier employees, MoD staff, scientists and academics could collaborate to address important defence challenges.

The mediating organisation enabled early and close interactions between suppliers, military end-users and relevant MoD units to investigate key requirements of new technologies. This led to refined needs and significant cost savings.

Niteworks senior managers lobbied MoD officials to adopt more agile contracting, allowing faster integration of technological advances. They convinced stakeholders to test alternative procurement processes, and built a system where the MoD was more willing and able to engage early and closely with suppliers to define requirements. Their actions improved the way the MoD asks for and procures innovation.

This is innovation-oriented public procurement, but it could just as easily apply to the private sector, where you have large corporations looking to innovate, and SMEs who might have the products and the knowhow to help. It could be applied, for instance, to the aerospace or automotive industry, bridging the gap from early-stage innovation to commercial application.

Kostas Selviaridis is a Professor of Operations and Supply Chain Management in the Department of Management Science. His research focuses on public contracting and its role in promoting innovation, resilience, and sustainability goals in supply chains.

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This article is partly based on the paper ***Facilitating public procurement of innovation in the UK defence and health sectors: Innovation intermediaries as institutional entrepreneurs***, by Professors Kostas Selviaridis and Martin Spring, of Lancaster University Management School; and Professor Alan Hughes, of Imperial College Business School. It is published in the journal ***Research Policy***.

The Path to Eden

Eden Project Morecambe offers the potential to revitalise the town and bring new tourism opportunities to the region. But for it to be a long-term success, many factors need to be properly considered. ***Professor Radka Newton*** explains her work with local and regional government and businesses on the I-Connect project, looking to ensure that plans are made with proper public insight, and encompass all relevant aspects – especially how people get to and from the new attraction.

Eden Project Morecambe is coming. A huge new tourist attraction is just years away from reality.

Eden has the potential to help breathe new life into a seaside town that had its heyday in the 1950s, and which has seen steady decline in tourism in more recent decades with the ***closure of the Frontierland*** amusement park and the ***short-lived and unsuccessful venture*** that was the World of Crinkley Bottom in Happy Mount Park.

The plan is that the £100m development will be complete by 2026, having been ***awarded £50m from the UK Government's Levelling Up Fund*** in January 2023. That was a major step in turning the dream into reality. Transforming land on the Promenade into an indoor and outdoor experience that connects people with the wonderful natural environment of Morecambe Bay can only be a positive thing. But there is much to consider if the attraction is to be a success.

PLACE-BASED POLICY DESIGN

With the multidisciplinary I-Connect project across Lancaster University, we look at policy design affecting key planning areas. I-Connect started when ***Groundswell Innovation*** and Jane Dalton, one of Lancaster University's ***Entrepreneurs in Residence***, who sits on the Lancashire Innovation Board within Lancashire County Council, approached us to see how our participatory research could generate insight and collect data on the impact of Eden Project Morecambe on the county's infrastructure.

The ***Lancashire 2050*** framework, setting out the county's vision for the future, is presented in departmentalised sections: economy, health, well-being, and education. But things are interconnected.

Our project started out examining the 'last mile' to Eden, looking at transport issues in the area and seeing if sustainable and inclusive solutions can be found. The case of Eden encourages us to think about how to get there, have a good experience, what the journey looks like. Our stakeholders – Lancashire County Council, Lancaster City Council, the planning office, the sustainability team – were excited about the increased number of visitors and the potential for the local communities, but at the same time unsure that active transport opportunities are ready.

The Eden Project is a beacon of sustainability, thinking about the future of the planet. The last thing we want is to make driving the only way to visit.

ACTIVE TRANSPORT

Taking a human-centred design approach, we gathered data on the lived experience of active and public transport between Lancaster and Morecambe, looking at the experience of citizens walking the route, taking the bus, the train, riding a bike.

Instead of surveys or interviews, we invited participants to walk or ride with us, take a bus or the train, track their journeys and document the experience. Applying a sensory ethnography research approach, we recorded the smells, the sights, the sounds, the feelings – of cold or warmth, safety or danger – to capture the whole picture. This field-based research takes us to the place so we can better understand it. You cannot make the policy from the office. It is not possible to decide about the world around you without being in the world. Basing everything on assumptions or purely on your personal experience is not enough. These experiences can help policymakers and local business think about what services need to be implemented to make the experience inclusive and safe.

If we walk, for example, on the Greenway between Lancaster and Morecambe, we realise there are limited facilities for people to have a rest, to use the bathroom, enjoy refreshments.

TRANSFORMING TOMORROW

A PODCAST FROM

Pentland | Lancaster University

Hear more about the I-Connect project on the Transforming Tomorrow podcast from the Pentland Centre for Sustainability in Business:
https://pod.co/transforming-tomorrow/sustainability-policy-at-a-local-level

There is a lack of maps and directions. We looked at the types of waste you can see, how this can instigate feelings of fear. When you see empty bottles of alcohol or cans, you may start worrying if there are going to be drunk people around, if you are going to get into trouble.

There were feelings of people not really knowing where they are. On the bus, you're not sure where to get off; if you are walking, signage was a big issue.

When we spoke to people, we found concerns over safety on public transport – with data showing male passengers took 17% more trips than female passengers – as well as over hygiene facilities for those using both public and active transport. Then there are issues of inclusivity and accessibility for people with a variety of disabilities and pan-abilities, visible or invisible – these concerns are rarely acknowledged in the planning stage.

POSITIVE ASPECTS

What is there now is not all bad. It is not that the Eden Morecambe is all shiny and futuristic and the only way. You must ensure you do not eradicate the existing community. You must consider how they will perceive what is happening.

Our initial transport angle grew. The journey is part of the overall experience. If the journey is not a positive experience, ultimately you may not even go to the destination, enjoy it, or recommend it.

It was eye-opening to see it all from different demographical and cultural backgrounds, imagining what it would be like for families and for international visitors, people with pets, younger adults – all likely to want to visit Eden. This human-centred point-of-view was powerful for the policymakers, who will show the project approach and outputs in the City Council's common room in 2024 in a form of an immersive visual exhibition.

What was appreciated by the stakeholders is that they benefited from such diverse perspectives. They enjoyed having the local entrepreneurs, people from the Council, people from local community groups, artists, students, Lancaster University, all involved. Our open innovation paradigm gives voice to a diverse community of people who continue supporting our project through ***litter picking events*** and community engagement forums.

A BETTER FUTURE

The policymakers are now appreciative of looking at the world differently, and our research shone a light on reimagining the future of policymaking. With plans such as Lancashire 2050, you want these policies and developments to be sustainable, future-proof.

In collaboration with a wide range of local stakeholders, we applied a future scenario method to imagine Lancaster in 2050, focusing on both the future of transport and of quality of life. We outlined four potential futures: the ideal scenario of Lanctopia (with a high quality of life and transport that is accessible, inclusive and efficient); Slowcaster (with high quality of life but poor transport); Nodecaster (with good transport but low quality of life); and Lancastrophe (with poor quality of life and transport).

Lanctopia took inspiration from the Nordic States, with a community-centred governance and place-based policies. Here, technology enables digital integration of transport that is emission-free, safe, inclusive and accessible in remote rural communities. Private car ownership is socially unacceptable and unnecessary, with active transport enabled through thoughtful infrastructure.

At the other end of the spectrum, Lancastrophe combines the negatives of insufficient transport and infrastructure with poor life quality. There is an increasing divide between the ultra-rich and the ultra-poor, transport is unaffordable due to a scarcity of fuel, there is increased flooding in the region, high levels of crime, and little to look forward to.

Neither of these scenarios will play out in its entirety, but they show how policy making might be used to shape a better future, and the importance of considering the point-of-view of citizen, who understand the unique challenges they face.

Our work on I-Connect shows how this might be done through planning for the Eden Morecambe project when academic multidisciplinary research connects with a local, place-based innovation driver such as Groundswell Innovation. It is not just about the site itself, but about the journey there, and about how we consider the bigger picture of the area as a whole.

Radka Newton is a Professor in the Department of Entrepreneurship and Strategy, a Personal Chair in Management Education and Innovation, and Founder Director of the ***Centre for Scholarship and Innovation in Management Education*** (SIME).

Professor Newton is the Principal Investigator on the ***I-Connect: Co-designing Sustainable Communities*** project working in collaboration with ***Dr Jekaterina Rindt*** and ***Dr Mirian Calvo***. Project research partners are Groundswell Innovation, Lancashire County Council Innovation Board, Lancaster City Council, and Connected Places Catapult. The project impact has been supported by the ***Government Open Innovation Team***.

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Using Data To Share Food More Fairly

The charity sector is feeling the squeeze. As the cost of living rises, more people are relying on food banks to feed their families. Carl Hawkes, of *FareShare*, explains how his organisation distributes food to those in need, and how Lancaster's statistics and operational research expertise is helping to add insight and value to FareShare's crucial operational decision-making.

More than two million people in the UK ***use food banks to help put meals on their table***. Over the past five years, demand for these vital charitable and community-led services has spiked.

At ***FareShare***, we are the are the UK's largest food redistribution charity. We take food industry surplus and send it through our network of warehouses to around 9,500 charities across the UK. Each week, we provide almost a million meals for vulnerable people.

Like the rest of the charity sector, we are low on capacity. The increase in demand caused by the cost of living crisis and the effects of Covid leave us with difficult decisions to make. Even though we have gone from distributing around 16,000 tons of food to more than 50,000 tons annually, supply does not meet demand.

We cannot always meet the needs of the voluntary sector. Instead, we must make difficult decisions about where we allocate food. We must maximise our impact and squeeze as much social value as possible out of the food we have. This can leave us in the position of having to make some impossible decisions when we have limited supplies.

SOLVING PROBLEMS

There are many questions to answer if we are to achieve the best possible impact. How do we maximise the social value of our food? Are we sending our supplies to the most deprived areas, the most populous areas? How can we optimise our van routes? How can we distribute foods in a way that reduces road miles to cut our CO^2 footprint, whilst maintaining supplies and variety of produce?

To help with this, we have worked with ***Dr Anna-Lena Sachs*** in Lancaster University Management School, and PhD researchers in the ***STOR-i Centre for Doctoral Training***. By bringing together this group of research specialists, we can start to use our data to help us solve challenges in a smarter way.

Everyone at Lancaster showed a real curiosity about FareShare and our problems, asking relevant questions. Those queries and the framing of them started to unearth the basis of some of the issues we face.

DATA DIVE

To analyse these questions, we were able to conduct a data dive – an intense period of analysis of our data – with more than 100 PhD students from STOR-i and the ***Science Foundation Ireland Centre for Research Training in Foundations of Data Science***. The PhD researchers we worked with were inquisitive, curious, intelligent, engaged, and excited about helping us to use our data to answer organisational challenges.

Looking at vast quantities of data, they helped to set us on the road to new practice and solutions. For example, they told us that food volumes from our suppliers typically increase in the days leading up to and the days after a natural disaster, or an extreme weather event. Any time there is a storm, our supplies spiked. If anything like that happens now, we prepare for it.

Making decisions on where our food goes is challenging. It is not uncommon for us to send apples from one place to another far away. If we can get apples from Aberdeen and keep them in Aberdeen, rather than sending them up from the other end of the country, that is a much better outcome for the environment. Data is therefore crucial to determine where food is most needed and where it can have the greatest impact.

The data dive was particularly useful. It stretched our thinking as an organisation and set us on a path to start to use data in different ways operationally. We have since appointed an analyst to further support our decision-making processes.

A FAIR ALLOCATION

With the FARE Project – the Fair Allocation and REdistribution of food – we are using publicly available datasets across our regions to help us create an automated system of allocating food. An algorithm based on population, social deprivation, the social value generated by charities, and regional

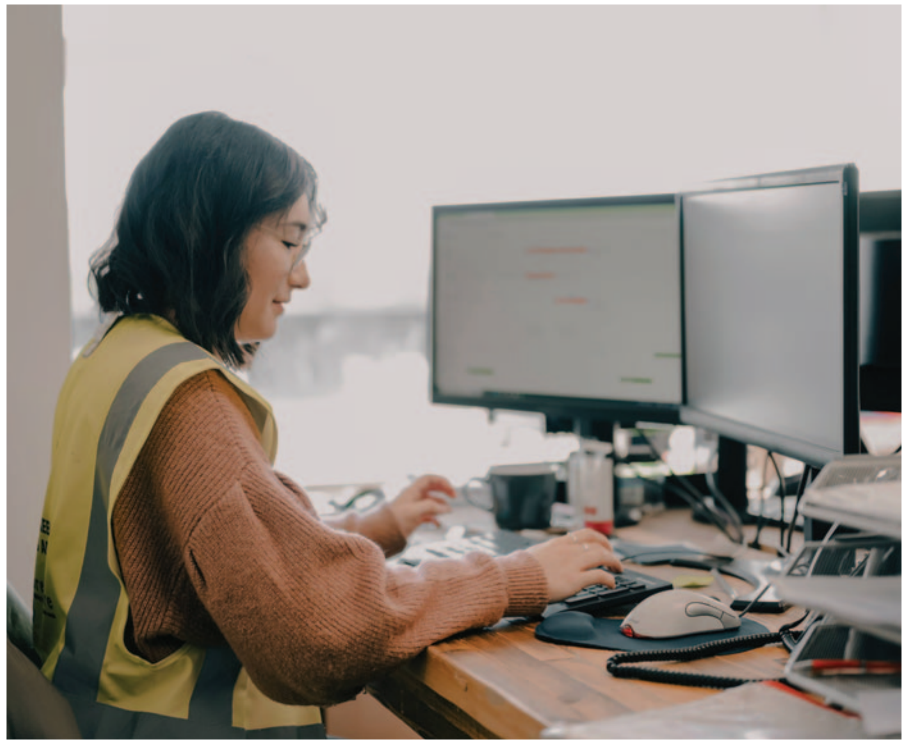
centre capacity/demand will help us to ensure that our supplies have the biggest impact.

A key thing about FareShare is our food should be a hand up, not a handout. It should be a connector to people and services, rather than just food aid. We require all our charities to provide additional auxiliary services above and beyond just providing food parcels.

If we have two charities who both do signposting to other organisations, but one version of signposting is a poster on the back of a toilet door, and the other version is a Citizens Advice Bureau advisor on site five days a week, clearly one generates more social value than the other. We are starting to identify those groups that squeeze more social value out of our food.

The seed of this project was with Lancaster University and the PhD students. It is having a real impact right across the country in terms of what we do. And this is just the start of the long-term impact our work with Lancaster has had; it has been amazing working with everyone there.

Thanks to the fruits of this collaboration, we can ensure more of those two million-plus people using foodbanks are able to put meals on their tables every evening.



Carl Hawkes is Director of Operations at FareShare.

FareShare is the UK's national network of charitable food redistributors, made up of 18 independent organisations. They take good quality surplus food from across the food industry and supply nearly 9,500 frontline charities and community groups.

The ***STOR-i Centre for Doctoral Training*** is funded by the Engineering and Physical Sciences Research Council (EPSRC) and operates across Lancaster University Management School and Lancaster University Faculty of Science and Technology. It trains researchers in Statistics and Operational Research and works with industrial partners both in long-term collaborations and to solve one-off problems.

WOMEN: BUSINESS'S SECRET SUPERHEROES

It is not men who do all the work. *Dr Allan Discua Cruz* explains a study by members of the *Centre for Family Business* that shows how women's influence on keeping family businesses operating successfully and over a long period can no longer be hidden.

Women play crucial roles in family businesses the world over. Yet their influence is often overlooked. Too often they are treated as supporting players – or ignored completely.

Within the Centre for Family Business here at Lancaster, many of us are members of families in business. We wanted to challenge these perceptions of passivity and a lack of influence on business operations and success. Our experiences have shown us how women have a vital role to play in the longevity and continuity of family firms.

Yet we have become increasingly aware that little had been said about this reality in certain areas of the world where women have always engaged in family business.

WHAT WE KNEW

Women's contributions to the endurance of business operations through successive generations has been considered marginal because of society's predominantly patriarchal structure.

Alongside my colleagues Ellie Hamilton and Sarah Jack, our work focused on my homeland of Honduras, a developing Latin American country. Honduras has a population of around 9.6 million and a GDP of ***about US$31.7 billion***. The business landscape is dominated by family firms.

In this environment, male-dominated cultural norms and expectations may characterise local family businesses, with men often designated as business leaders and successors entitled to make key strategic decisions. The role of women in this context has been poorly understood. They are often hidden or relegated to a supportive or social role, rarely considered as leading or influencing the firm.

STEREOTYPES

Our study examines the role of women in family business continuity, challenging common misconceptions about their role and illustrating how they can best approach the continuity of family businesses. We were encouraged to challenge the current understanding, highlighting and championing the different roles of women in family businesses that have not only survived but thrived.

At the outset, we were aware that despite women around the world being acknowledged as the unsung heroes who ensure harmony within a family in business, they are often perceived as underrepresented in senior management roles.

We speculated that the contribution of women to family business continuity is influenced by the circumstances they find themselves in. If they are a mother, a spouse, and a business executive, then those roles may be influenced by how things are done both in the household and in business.

STEWARDSHIP

We started with the premise that the role of women in family business continuity may relate to behaving like a steward, looking after the interests of both the family and the business. Latin American cultures are highly hierarchical, collectivist, and reliant on a strong family logic, suggesting that gender roles are clearly defined.

Yet we wanted to go beyond that and explore whether their role could be better appreciated as entrepreneurial stewards, going beyond maintaining existing ventures and showing a commitment to stewardship that aims to grow and build the family's assets.

To start untangling how women contribute to the continuity of family businesses as entrepreneurial stewards, we decided to examine situations in which they were formally appointed to executive or leadership positions.

Across three businesses we studied, we encountered the crucial role women play in the continuity of a family firm during crises. Crises were mentioned as stories, filled with emotional accounts, unfolded. Economic downturns, political crisis, and natural disasters all occurred, and we focused on who dealt with the situation and why.

We heard powerful stories of these women's experiences, the circumstances in which they found themselves, and how they resolved or managed such conditions. They revealed how and why gendered norms did or did not influence their approach and the (sometimes complex) underlying forces of gender in family business. This was important because previously women's contributions were seen as limited to social activities, supporting male family business leaders. They were viewed as hosting social events for business purposes, or becoming actively involved in social club circles where their husbands are members. They have not been expected to play a direct influential role themselves.

HIDDEN ROLES

Our work revealed these women business leaders play an informal, covert, stewarding role, going beyond their expected gendered role at home. This stewardship role develops in parallel with a formal, and more visible, role in the firm. They went beyond expected gendered stereotypes and norms, without causing uncertainty about their objectives or responsibilities. Their ability to move between formal and informal roles reveals that stewardship approaches are transferred from the domestic sphere to the firm during a crisis, contributing to the continuity of family businesses.

We also found women articulate their roles as active entrepreneurial stewards – shaping the way families engage in business, particularly when business continuity is threatened. We specifically identified three ways that women contribute to family business continuity:

Embracing a stewardship role. Women actively engage in problem-solving strategies, acting on how different family members' skills and bonds could be combined to benefit the business, and encouraging exchanges and communication among family members in times of crisis.

Nurturing resilience. They foster a shared sentiment of entrepreneurial stewardship among family members when businesses are under threat. This is represented by a collective understanding of the importance of an entrepreneurial mindset and shaping a custodianship sentiment. Such sentiment, or emotion, revolves around a commitment to be involved in the survival of the firm by maintaining not only the family assets, but also the families' unique ways of doing things.

Shaping family and business networks. They purposefully, and selectively, create and strengthen formal commercial alliances, discreetly leveraging family and non-family relationships. In close family networks, this tends to be a discreet activity; in contrast, networking behaviours outside the family realm are deliberately and openly geared to help the business.

These three elements contribute to shaping the role of women as entrepreneurial stewards, affecting dramatically the continuity of a family firm.

CRISIS MODE

The critical situations we examined proved an opportunity for women to shape a stewardship approach. What we saw is that they can play a key role at critical times by making thoughtful, strategic decisions about family assets. They can turn into powerful network actors within and outside the family itself.

When they take on formal company roles, they become visible in the business environment, yet their unique role contributing to the continuity of the firm can remain hidden. The women in our study strike a delicate balance by making decisions whilst observing traditional and socially expected gender norms.

Women should not be cast as victims or special cases in the Latin American family business context. They are potential builders of resilience and continuity; they influence family business continuity, ensuring harmony and strengthening bonds within the family.

The public perception of these women as only taking supporting roles for male leaders does not always match the private reality, in which they can be crucial to businesses surviving and thriving.

Dr Allan Discua Cruz is a Senior Lecturer in the Department of Entrepreneurship and Strategy, and the Director of the ***Centre for Family Business***.

The article ***Women's entrepreneurial stewardship: The contribution of women to family business continuity in rural areas of Honduras***, by Dr Allan Discua Cruz, Professor Ellie Hamilton and Professor Sarah Jack, of Lancaster University Management School; and Dr Giovanna Campopiano, of the University of Bergamo, is published in the ***Journal of Family Business Strategy***.

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Are you a traitor?

Can you be trusted to share? Or would you betray your friends to make a quick profit? ***Dr Renaud Foucart*** investigates how guilt, trust, cooperation, and betrayal affect how we all behave when money is on the line.

From the blockbuster BBC show ***The Traitors*** to the Last Supper, humans have always been fascinated by the concept of betrayal. How can you live together, work together, create bonds, and end up destroying everything at the last moment?

What made the book and movie ***The Social Network*** about the creation of Facebook interesting, for instance, is not Mark Zuckerberg being a greedy capitalist trying to create a massive business. That is a boring and very common story. No, what makes that story special is that, after months of working together towards building the project, Zuckerberg ended up betraying his associates – the Winklevoss twins – and taking all the money for himself.

The shocking part is not wanting to make money even if it hurts others. It is carrying out the betrayal even on people you have already walked part of the journey with.

Yes, we can feel that betrayal is different from other forms of selfishness, but how exactly can we rationalise and measure the difference between stealing from someone you do not know and from someone you have built a bond with?

A MATTER OF TRUST

The most famous laboratory experiment looking at this question goes as follow: the experimenter gives someone – the sender – £10. The sender can decide to either keep the money, or send it to someone else – the receiver. If the money is sent, it turns into £30, and the receiver can choose between keeping the money or sending half of it back to the sender, thus they end up with £15 each.

The selfish prediction of the outcome of this ***Trust Game*** is straightforward: we know that the receiver is better off keeping all the money if they receive it. The sender should expect that, and never send any money.

But we also know that people do not always behave as predicted by pure selfishness, and indeed the many experiments about the Trust Game find that a decent fraction of senders do send the money, and that money is often returned to them.

The intuition behind why people return money is that not doing so would amount to some form of betrayal. The sender somehow puts their trust in the receiver. Not returning it is not something a nice person would do. But how does it work, specifically?

One possible explanation is called ***reciprocity***: the receiver returns the money because they believe the sender has been kind to them. Sending is a kind action because the sender does it without expecting too much in return.

WHO FEELS GUILTY?

This is a testable prediction: if it is true, we should observe that the more the receiver believes that the sender expects to be betrayed, the more she wants to return money. This is not what research finds.

What seems to matter more is a much more direct sense of ***guilt*** that goes in the opposite direction: the more the receiver believes the sender expected something in return, the more she returns money.

In that world, there is no actual kindness. The religious equivalent would be people being nice in the hope of going to heaven. Is a good action still a good action if it has a purely selfish objective? The seemingly moral principle of guilt is just a very convenient preference that makes transactions like the Trust Game financially profitable for everyone.

In the long term, people build a reputation, and being known as having a sense of guilt is a trait that will take you very far. If people can trust you, it is in their interest to work with you. In contrast, people who do not experience guilt are not interesting business partners, it may work once but over time no one will send them money without a cast iron contract.

In Darwinian terms, it makes complete sense that the human species has evolved in a way that most people feel guilty not returning money.

A NEW TWIST

In a recent experiment with Jonathan HW Tan, of Nanyang Technological University in Singapore, we have taken the question one step further, trying to understand further the roots of betrayal, and what is so special about people having some shared history.

We ran the original Trust Game alongside a slightly modified version. In the Trust Game, the sender takes a risk by sending money. In our game, we ask both subjects simultaneously to send or keep £10. If at least one chooses to keep, both get £10. If both send, one of them is picked at random and gets a chance to keep or share the £30.

In our setting, even completely selfish people without any guilt aversion would choose to send money if they are not too risk averse, simply because they can expect to get the larger sum of £30 half of the time. But then, there is certainly no kindness involved, and no obvious reason to feel guilty.

Yet, our subjects return a lot of money, and even more so than in the Trust Game. What we find is therefore that simply doing something together creates a sufficiently large sense of loyalty to encourage further cooperation

We ran our experiment in a garment factory in Pakistan because our experiment is inspired by a form of credit widely used in that country, the ***Rotating, Saving and Credit Associations*** (ROSCA). In ROSCAs, people put their savings in common, and then take turns – sometimes at random – to realise small projects with the money. If one person decided to run away with the sum, it would be the end of the project for everyone. But people tend to cooperate and not to betray each other. In the end, not betraying is simply in the interest of everyone.

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The paper ***A test of loyalty***, by Dr Renaud Foucart, of Lancaster University Management School; and Dr Jonathan HW Tan, of Nanyang Technological University in Singapore, is published in ***Theory and Decision***.

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NO CIRCULAR PANACEA

Is circular economy a wonderful thing with no problems that can solve the climate crisis all by itself? Of course not. Can examining the problems with circular economy help us to better apply its principles and achieve better results? Yes. *Dr Alison Stowell* and colleagues Professor Hervé Corvellec and Dr Nils Johansson outline criticisms of the principle, and how they could help make the circular economy an actual solution to actual problems rather than a cure-all.

Circular economy is gaining political momentum. Everyone seems to support the implementation of a circular economy. From ***conservatives*** to ***environmental politicians***; ***big business*** to ***non-governmental organisations***; even the public participate by sorting, sharing and buying second-hand products.

The potential benefits are convincing for both the environment and the economy. Through long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, and recycling, global greenhouse gas emissions could be cut by 45%. Hence, according to the United Nations: "***Circular Economy [is] Crucial for Paris Climate Goals***". Circular economy is also featured as holding an enormous market potential, comparable with the establishment of the European single market. For individual companies, a circular economy can minimise risks, reduce costs and increase revenue.

Consequently, circular economy has emerged as a key principle for industrial development and environmental policy in many parts of the world, including China, Europe, the UK, Africa, and the USA. However, despite the strong advocacy for circularity, the approach has attracted a great deal of criticism from researchers and practitioners.

To ensure that the circular economy does not exacerbate the already widespread inequality and environmental impact of the consumer society, it is timely to reflect on its various dimensions, criticisms, and potentially dark consequences.

Putting all the ***criticisms into one place*** assists further dialogue and research so pathways to circularity become more concrete, inclusive and recognise the limits of our planet.

FIVE RECURRING CRITICISMS

These criticisms are scattered across a multitude of fields.

1. Complexities of defining circularity

Advocates of the circular economy sometimes overlook the complexities of defining circularity. With more than ***200 definitions***, ranging from reducing resource usage, reusing products, repair, to refurbishment, shifting away from product ownership to services and designing applications for the sharing economy make it difficult to measure the impact.

The concept is sometimes regarded as refurbished itself, or as an umbrella term bringing multiple resource management strategies together. Without clear goals, the circular economy is in danger of becoming a vague narrative.

2. Neglecting previous research

Some circular economy advocates tend to ignore the dispersion and wearing out of materials, as well as the need for energy to keep systems going. There appears a lack of recognition of the limits to material properties and current manufacturing and reprocessing technologies. Not all materials can be reused or reprocessed, some will disperse into the environment, others can be contaminated, or wear down.

The complexity of waste management and recapturing discarded resources underestimates the practical difficulties, for example recapturing the materials back in the production processes, the volatility of recycling markets, the appearance of new waste streams, where waste is processed in formal or informal economies, and restrictions on circulating toxic substances.

Contrary to what advocates indicate, there is the need for further understanding of ***consumption practices to purchase***. The expectation on consumers requires them to accept the changes created by designers, engineers, business and policy-makers. Furthermore, there appears a lack of appreciation of the volume of in-wasted materials stocked in existing infrastructures, organisations, and homes.

Focusing on the flows has the additional danger of ignoring the rebound effect, e.g., savings on the circular side leading to expenses on the linear side, with an overall increase of negative effects.

3. Unclear implementation strategies

Proponents outline policy agendas, for example within Europe, providing proposed solutions for material circulation, but social and environmental consequences appear diffused.

Some companies only develop circular activities for part of their operations. This may be because it is ***difficult to scale up*** from pilot projects, and often only a small part of the operation is characterised by the circular economy, while the core business continues as usual. Other barriers to implementing circular business models include inappropriate technology, training, high investment costs, legislation, and limitations in demand and supply of secondary materials and products.

Advocates of the circular economy have paid less attention to consumers when thinking about implementation. In particular, how they might value and respond to circular business models and their levels of awareness and interest in circularity. Will consumers accept swapping ownership for temporary access with what this entails in loss of long-term control? Who gains the most from circularisation? With increased digitisation attached with circular solutions, surveillance increases as well.

4. Unclear environmental and social contributions

Contrary to what advocates say, there appears to be poor knowledge about how the circular economy will affect resource use and growth. Will the circular economy lead to more sustainable growth, or simply more growth? This makes it difficult to measure environmental impacts, especially over the long-term and across larger geographical scales. For example, it is unclear how, where, and when circular practices conserve natural resources. Some argue that it only delays, not eliminates, the negative environmental impacts of the linear economy.

Although proponents of the circular economy claim it contributes to a socially sustainable future for all, the concept tends to be reduced to reducing the consumption of primary resources alone. There is no link to how the concept would lead to greater social equality, neither locally nor globally. For example, increased circularity here risks accelerating the transfer of destructive resource extraction and production from the Global North to the Global South.

5. An ideological agenda

Some critics argue that the circular economy depoliticises industrial and environmental policy. This entails two things: that the economy is a technical matter; and that companies are the engine for social change. It is an attractive concept that promises everyone will benefit. It makes it possible to talk about synergies, win-win, and opportunities, rather than compromises, problems, and constraints.

WHAT CAN WE LEARN?

The criticisms call into question the notion of circularity. There are numerous inconsistencies, hidden assumptions and unclear consequences that still need to be worked through.

What is needed is to keep questioning how we know that a circular solution is good for the environment. How can we transform existing social institutions? For whom is it better or worse? Will it phase out the linear economy – dig up, produce, consume, throw away?

Each area of the critiques above points at an issue in need of research, policy, and managerial attention.

A pathway toward circularity would be a circular economy that is modest, not a panacea but an actual solution to actual problems; concrete, in the sense of being clear about which kind of circularity it sets up and the conflicts it entails; inclusive, in that it takes energy, people, and waste on a global scale into consideration; and transparent, in being accountable for its achievements and shortcomings, not least when it comes to economic, social, and environmental changes.

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The article ***Critiques of the circular economy***, by Professor Hervé Corvellec, of Lund University; Dr Alison Stowell, of Lancaster University Management School; and Dr Nils Johansson, of KTH Royal Institute of Technology in Stockholm, was published in the ***Journal of Industrial Ecology***.

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How Creativity Can Transform Evaluative Practice

More and more organisations, teams and individuals are looking into creative approaches to help them evaluate their projects, programmes and interventions in ways that are participatory, engaging, relevant, impactful and inclusive. ***Dr Elisavet Christou***, ***Dr Pınar Ceyhan*** and ***Violet Owen*** discuss how evaluative practice can be transformed by Creative Evaluation approaches that employ creative thinking, methods, methodologies and tools.

We all engage with evaluation in one way or another. We might evaluate projects and programmes trying to understand what works well, what does not, and what the value and impact of our interventions is. However, evaluation is not a practice we immediately associate with creativity and innovation.

Very often we view evaluation as a bureaucratic process or a tick-box exercise; as something that happens at the end of a project and is a drain on resources; or something that can be done by one individual assigned to collect data through surveys and interviews and produce a report to be shared within specific interest groups, such as funders and trustees.

However, evaluation practice is evolving in reaction to various needs, employing a range of methods, methodologies and tools that respond to the particularities of different contexts. Successful evaluations require thorough understanding of context, identifying the different types of value evaluation can produce, and forming partnerships with key stakeholders throughout the process.

We believe creativity is a helpful – even necessary – tool in addressing complexities arising from an increasingly interconnected world. In recent years, new evaluation approaches are being developed that promote creativity, participation, engagement and inclusivity through flexible methods and methodologies that can be easily adapted to the particularities of the evaluation context, from the education and health sectors to cultural industries and social work.

FIVE PRINCIPLES

Creative Evaluation is not one clear pathway. It is instead a constellation of approaches that employ creative thinking and creative methods, methodologies and tools, such as visualisation, gamification, co-creation, participation and more.

There are five main principles that underly Creative Evaluation approaches. These can produce benefits both for organisations, teams and individuals conducting evaluations, and for their partners and stakeholders.

Principle 1: Working across and within different disciplines and sectors.

Benefits: Prioritising collective wisdom, capitalising on resources outside of one's own area of expertise, increasing opportunities for learning and expanding networks and opportunities for collaboration.

Principle 2: Exploring and responding to the particularities of the evaluation context.

Benefits: Aligning the evaluation priorities with the aims and objectives of the project or organisation, promoting ethical practices, increasing relevance and appropriateness.

Principle 3: Increasing engagement of partners and stakeholders in the evaluation process through collaborative and participatory methods.

Benefits: Increasing impact, increasing opportunities for learning, informing the evaluation process through active collaboration with partners and stakeholders, and utilising a wider pool of knowledge, skills and expertise.

Principle 4: Listening and responding to different voices.

Benefits: Ensuring that all collaborators are valued, producing representative and relevant outcomes, fostering agency for collaborators, and increasing impact.

Principle 5: Producing new knowledge and opportunities for learning.

Benefits: Improving opportunities for collaborators and participants, deepening understanding of how change can occur, supporting meaningful dissemination and adoption, fostering the creation of new networks, and strengthening existing ones.

THE REALITY

What does Creative Evaluation look like in practice? Our research into Creative Evaluation approaches allowed us to collect a series of examples. Whether it is through applying creative thinking in the evaluation design, or employing creative methods for evaluation implementation, these examples demonstrate how Creative Evaluation approaches can be accessible, practical effective and fun, especially when applied with intention and when the core values of equality, diversity and inclusion are embedded into their process.

One example is the ***Storytelling Evaluation Methodology*** – based on the Most Significant Change technique (MSC), developed at The Old Fire Station, Oxford, a centre for creativity through arts practice working in partnership with the homelessness charity Crisis.

The Storytelling Evaluation Methodology has been used by The Old Fire Station to evaluate the impact of their work since 2017. Instead of setting outcomes to measure against, they decided to let those they work with identify outcomes for themselves by telling a story and considering "what changed for them?", "how did change happen?" and "why is it important?". They use a step-by-step methodology to help create an open space for the storytellers to discuss what they see as the most significant impact and to focus on the richness of diverse lived experiences over longer periods of time, such as months or years.

Another example – developed by two of the authors of this article, Elisavet and Pınar, alongside Philip Ely, from Manchester Metropolitan University – is the ***Evaluation Visualisation Design Tool (EViD)***.

EViD is a virtual collaborative tool for project evaluation that employs a step-by-step methodology where users are guided through the process of exploring and designing project evaluations with the help of a visualised process designed to support its usability. EViD's design promotes participation and collaboration between team members, partners and stakeholders from the very start of a project; it helps make the evaluation process explicit and transparent; it guides users on how to create a concrete evaluation plan with specific evaluation activities; and it can act as a resource that can be utilised again and again to help increase their overall evaluation capacity. The tool is now a Lancaster University spin-out that is free for educational purposes and to all non-profit organisations.

Storytelling Evaluation Methodology Steps, Old Fire Station, Oxford. Artist: Zuhura Plummer.

A PRACTICAL RESOURCE

Our research into Creative Evaluation has been translated into a useful, practical resource for non-academic audiences, the ***Little Book of Creative Evaluation***. This book aims to shed light on the diverse spectrum of Creative Evaluation approaches and showcase how these can produce important benefits for organisations, teams and individuals, and support their evaluation needs and goals.

The impact of this little book, both in its printed and ***online form*** has been great. We have been invited to present the book at the British Library, at ***Lancaster CVS*** and several symposiums, conferences and public engagement events. This is a great example of the need and value of developing research in partnership with external organisations and translating research findings and outputs into practical resources that are freely available and accessible to all.

The ***Little Book of Creative Evaluation*** includes a series of Creative Evaluation examples, along with a list of practical resources – from methodologies to methods, tools and readings – that are freely available online. Find out more at ***creativeevaluation.uk***

You can access the storytelling evaluation methodology at ***storytellingevaluation.co.uk***

You can access the EViD tool at ***evidtool.com***

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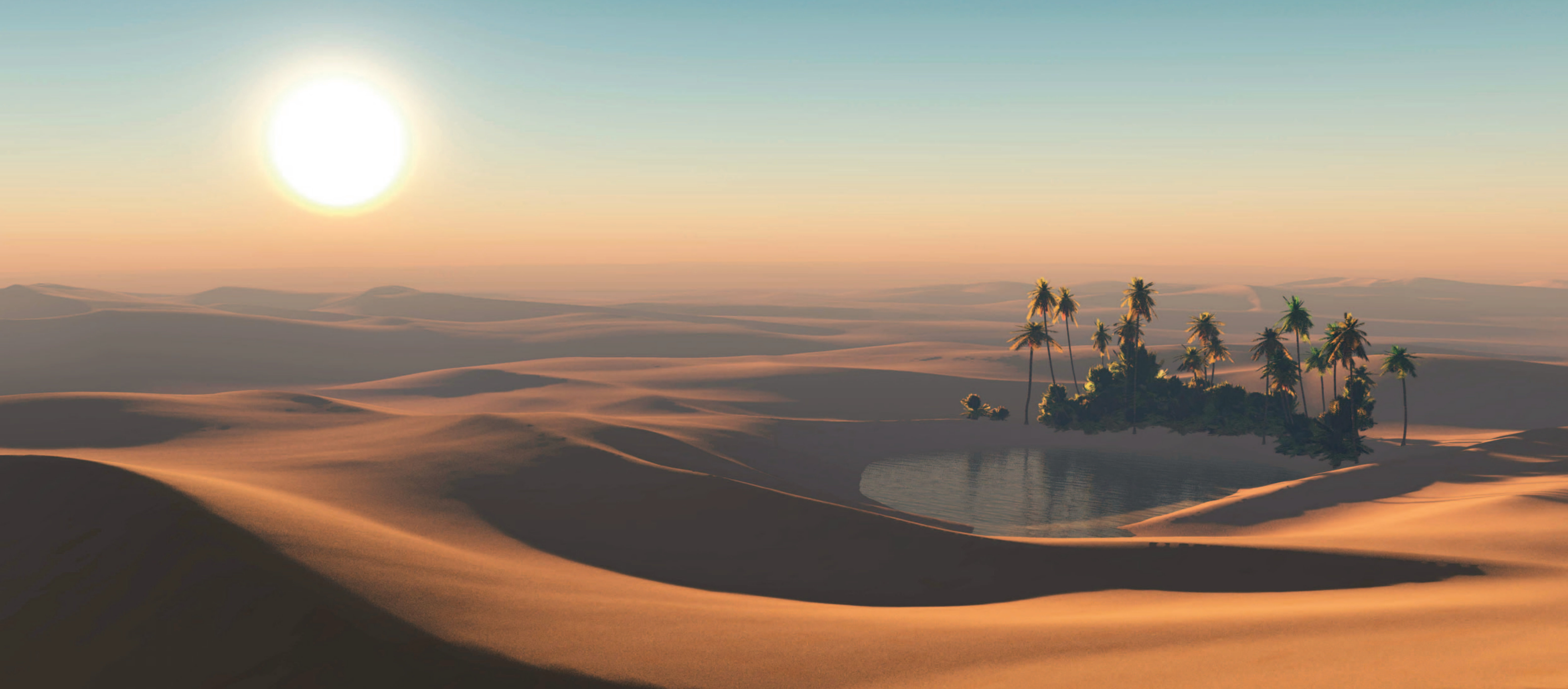
The Family OASIS in a Leader's journey

The divide between the workplace and the family can often be stark for leaders and managers – but there is value to be gained from allowing one to influence the other. Entrepreneur in Residence and leadership coach *Sanjay Rishi* looks at how lessons from work can be applied at home, and vice-versa, to make us better in both spheres.



In a world wracked with uncertainty, day-to-day decision-making is severely impacted. The difference between distracting, tactical, and strategic elements is constantly blurred. CEOs and senior decision-makers constantly react rather than anticipate, leading to preoccupation and exhaustion. There is no paucity of data or scenarios, but what is the 'right' choice?

Since making choices and decisions is the core of a leader's role, in my leadership coaching over the past decade I have endeavoured to locate that 'oasis' wherein a leader can reflect and rest before committing an organisation and its ecosystem to a particular and sometimes irrevocable path, impacting livelihoods in geographies far removed from themselves.

We can go deep into childhood events, to the destinations we aspire to and the life stages that influence us. But only in recent years have I started including what I believe is the 'oasis' – family and close friends. From an initial surprise and wariness, it is today often welcomed by clients, especially when at the cusp of a deeper personal transformation.

The emotional poise required to confront the often conflicting demands which go into a decision can only come from a place of tranquillity. For most of us, that place is our family and close friends. If it is truly an oasis, it girds one up to face continuous dilemmas. Conversely, if there is chaos, one barely copes and may even unravel.

Ironically, we fall prey to the fallacy that home is where tranquillity needs to reign, but without our having to consciously invest in it. After all, unlike boards and investors – who may come across as opportunistic, the family unit is one of permanent shareholders whom, if nurtured, will be there for us through thick and thin.

It is this need for a tranquil personal space, with an unstated assumption that someone else is responsible for its creation, which aggravates an already abysmal lack of understanding and vocabulary around partnership in the family unit.

So, what do we do? As the leadership coaching journey unfolds, three imperatives emerge.

PREOCCUPATION

Leaders must surface what they are pre-occupied with and confront its consequences. This is key.

Leaders I work with often display a child-like surprise when they see how workplace feedback resonates with that from family and friends. If a parent, a spouse and a supervisor are all concerned about physical health and burnout, it speaks to the longevity of our career and the fear of being replaced, hence the concern about earnings and stress at home.

Often, family concern is labelled as 'nagging', and we shy away from discussing these issues, forgetting that for the family we are irreplaceable, but for the organisation, despite our value, we may not be so unique. Indeed, I have come across many instances where people deliberately go home late, or prefer to travel so they can avoid difficult domestic issues.

Yet our conscience never sleeps. It gnaws away at this avoidance, depleting already stretched emotional reserves, triggering irritation, and leading us to lash out. We end up 'managing tasks' at home or at work instead of immersing ourselves in the present. Men, for instance, are great at living and perpetuating the "I am responsible, I am the provider" narrative, forgetting that duty to provide bread is no substitute for duty to be present. Children want a storyteller and play partner parent more than fancy toys and expensive holidays.

We can also create tension if we do not select where to be present. In one poignant instance, the teenage daughter of a leader expressed how her father's sharing, while gratifying at one level, made her feel overwhelmed and inadequate as she perceived him in the anchoring role of a parent and was not yet ready to see or engage with his vulnerable side. By engaging with his 'uncritical' daughter, he was evading difficult conversations with his spouse, complicating the vibe at home. He realised his unmet needs sprang from his inability to express himself, as he was preoccupied with meeting others' expectations.

This interplay between all spheres of our lives, and how without addressing it we cannot progress in a leadership journey, opens the door to the next step.

THE WHOLE PERSON

Conscious acceptance to work on yourself with a whole person approach can be liberating. Suddenly, and unhesitatingly, we select topics to discuss with family which deepen our understanding of ourselves and others.

This can be the beginning of a partnership at home, the realisation that only the family is willing to put in the hours to listen and help us 'shift', as they are the ones most affected. After the initial worry of hearing "I told you so", we tap into the innate wisdom and experience of those we had overlooked.

And as expectations shift, so do conversations, and perceived roles. As leaders respond, I ask, "What are the roles in your life today and what are your and others' expectations from each of these?" They become conscious of the many roles they play and whether they are investing in their professional and personal spaces fairly. One epiphanic moment with a group of leaders in the Middle East was when they accepted that their time and duty to self was sacred too. This had not even figured in their day! From the obvious focus on health and vacations, to the gratifying commitment to community and spiritual self, overlooked dimensions emerge.

Recently, I asked the father of one leader, in the leader's presence, "What is it that you wish your son to accomplish?" He replied "My son is a better version of myself, cares for his family and community... but in a society that is increasingly broken, he experiences the pain of adhering to his values. I cannot change society, nor would I ask him to change his values, but knowing that his sense of responsibility comes from my upbringing, I would not want him to achieve more, but instead to rest more, to enjoy his life."

HOME AND WORK

Leaders often excel at creating a shared vision in an office but may be oblivious to its need at home. They are shocked if a sibling or a child selects a certain career, or a parent decides to come out of retirement. Those I have had the privilege to observe or work with have great qualities of listening, empathy and mentoring, but as I tell them (and myself), charity begins at home.

It could be awkward, and there is a risk of being overbearing, but what greater joy than to invest in making our own family and friends successful? And we can build a secure and trustful space into the bargain, without any ethical lines being crossed.

In working with and through the family, the objectives of a leadership coaching journey are realised, such as listening without judgement, not putting ourselves first, being assertive with oneself before asserting with others. If we succeed with family, imagine how impactful we would be at work, where a leader is comparatively detached and dispassionate?

Sanjay Rishi is a leadership coach and the founder of @intersections. He is an Honorary Teaching Fellow and Entrepreneur in Residence in Lancaster University Management School.

The picture (left) for this article shows sculpture The Embrace, created by Hank Willis Thomas as a memorial to Martin Luther King and his wife, Coretta King. It stands at Boston Commons as a superb embodiment to what a partnership stands for. The Embrace is a memorial to their love and leadership, inspired by a photograph of the Kings' embracing. It reflects the power of collective action, the role of women in the freedom movement, and the forging of solidarity out of mutual empathy and vulnerability. See more at ***www.embraceboston.org/memorial***

How secure work can reduce regional inequality

What can be done to reduce insecure work levels across England, and how can local policymakers have an effect? The Work Foundation's ***Rebecca Florisson*** examines regional variations in job insecurity across England's Mayoral Combined Authorities, and how they link with other job market problems that might be addressed at regional levels.

Where you live and work in England can have a significant impact on your ability to access secure and well-paid work. Indeed, England is one of the OECD's most spatially unequal countries in terms of its economic development and social and health outcomes. These inequalities have emerged over time in the context of historical, economic and political processes, such as rapid deindustrialisation.

Successive UK governments have tried to tackle this with little success, resulting in an economy where some cities and areas are thriving while others are struggling with persistently high rates of worklessness and a high proportion of the workforce in low paid and severely insecure work.

Research from the Work Foundation shows that Mayoral Combined Authorities – an English structure where a mayor leads a cabinet made up of leaders of local authorities under their jurisdiction, with wider legislative powers – in England have unique insights and policy options that can be leveraged alongside national action to improve the quality and security of jobs in local economies. Given that Lancashire's ***devolution deal*** is now underway, the findings and policy options put forward in this report are highly relevant for policymakers and academics in and around Lancaster University.

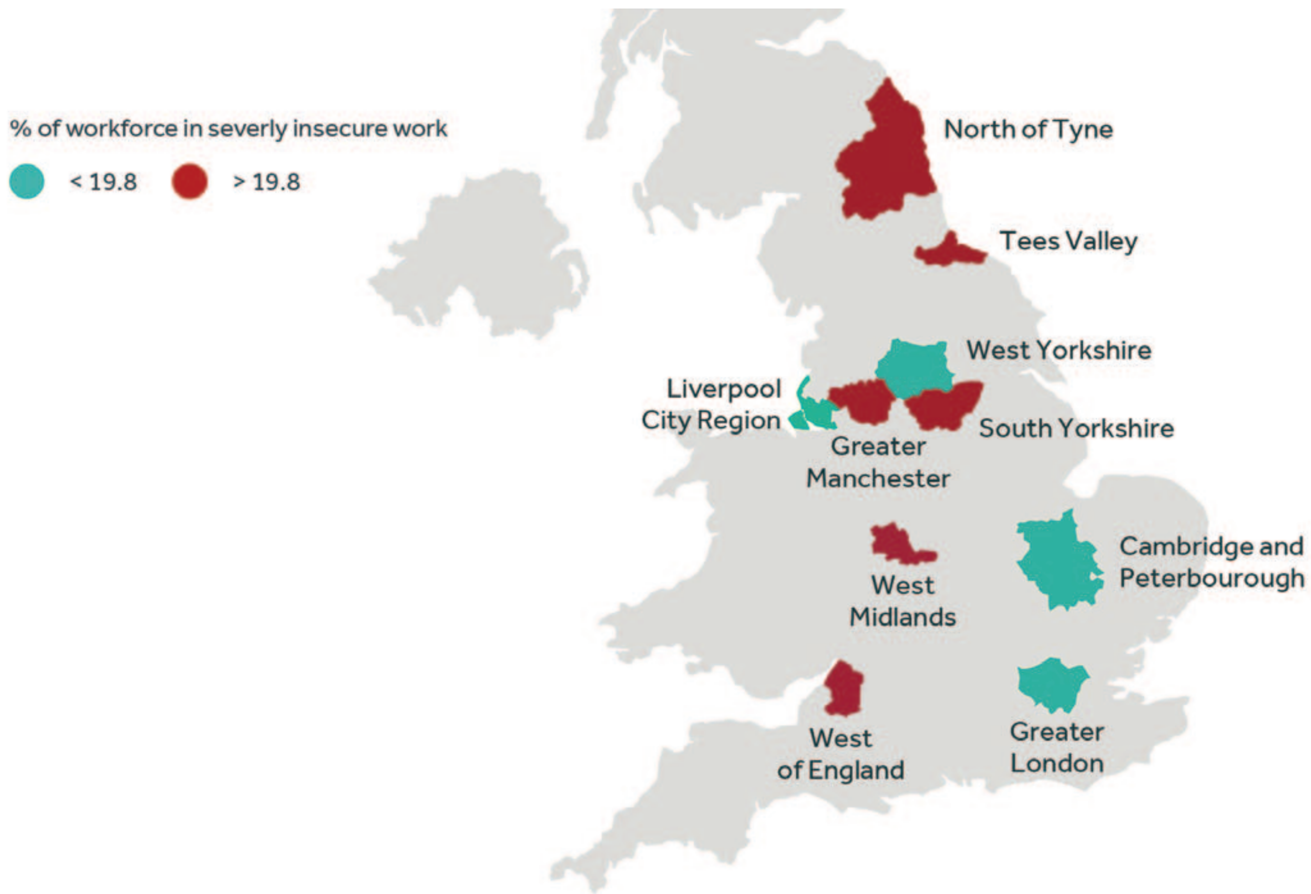
LOCAL ISSUES

The Work Foundation estimates that in the first half of 2022, 19.4% (2.2 million) of the workforce in the English Mayoral Combined Authorities was in severely insecure work – this means experiencing involuntary part-time or involuntary temporary work, or several forms of insecure work at the same time. This is termed 'severe insecurity' as it is where negative effects are most likely to be concentrated. Some of these effects include a higher risk of job loss, a lack of progression in work, and a higher risk of experiencing anxiety and depression and other impacts on wellbeing.

This suggests that insecure work has a wider impact on people's lives.

The research proposes to use insecure work as a key indicator for analysing local labour markets, alongside the number of jobseekers and the number of people who are out of work and not looking for work. It not only informs us about the quality and security of employment, but also about the likely experiences and the vulnerabilities of workers experiencing this.

This is useful in examining differences between Mayoral Combined Authorities as well as ***within*** the MCAs. In many places, the differences in the levels of severely insecure work align with wider labour market dynamics. For instance, in Tees Valley, Middlesbrough is a clear insecurity hotspot, with rates of severely insecure work standing at 29.8%, which is ten percentage points higher than the national average. The rates of inactivity (28.1%) and unemployment (5%) are well above the national average too.



SECTOR DIFFERENCES

Insecure jobs tend to be concentrated in specific sectors – such as hospitality, social care and administrative services – but the level of insecurity in these ***sectors differs*** across the country. For example, hospitality workers in Tees Valley are more likely to experience severely insecure work than hospitality workers in the Liverpool City Region. This results from differences in the scale and productivity of these sectors in these respective places, with one providing higher value activities than the other. Broadly understood, high-value added activities are more likely to provide more secure working conditions, compared with lower-value added activities, which appear to be related to the presence of more insecure jobs. This may be because businesses that generate higher value added – meaning they are more productive – tend to be more profitable and pay better wages. In contrast, businesses with lower productivity may have smaller profit margins and are not able to offer high wages or stable conditions.

Job roles that have lower levels of worker autonomy and have more routine tasks are more likely to have insecure working conditions than professional and managerial roles. However, this research has found that similar jobs can have very different outcomes in different places, which relates to the productivity of the organisation and the sector where people work.

QUALITY EMPLOYMENT

It is not surprising that stronger economies tend to provide more well-paying, secure jobs than economies that are lagging. In particular, high levels of severely insecure work are associated with lower levels of available jobs overall, lower levels of labour market participation, and concentrations of lower value-added activities. This makes it important to address the quality of employment alongside wider policy aims of growing the economy.

With a General Election in 2024, and seven Mayoral Combined Authorities, including Greater London, holding elections in the same year, it could be a pivotal year for renewing and elevating commitments to reduce insecure work and level up city regions and the UK by 2030.

Rebecca Florisson Rebecca Florisson is Principal Analyst at ***the Work Foundation***.

The report ***Delivering Levelling Up? How secure work can reduce regional inequality*** was produced by the Work Foundation and authored by Rebecca Florisson.

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The internship challenge

Internships are one way for university students to gain valuable workplace experience before they graduate. But what are the main benefits, and how could they be improved to serve both the students and the businesses who take them on? ***Dr Mike Ryder*** explores what can be learned from those who have undertaken internships to help ensure future students enjoy the best possible experience.

In the world of Higher Education, there is a lot of emphasis placed on the need for students to boost their employability. Partly, this comes from the students themselves, who want to leave university ready for the workplace; but it also comes from within, as we want our students to get the best jobs and flourish in their future careers.

For this reason, many courses today include the option of an internship or placement. Here at Lancaster – both within the Management School and across the wider University – this normally take the form of a placement year with an employer, where students pause their studies to spend time gaining valuable experience that they can take with them as they enter the working world.

THE BEST OPTION?

As a Lecturer in the Marketing Department, I am often asked by students whether I think an internship is 'worth it' – and whether an internship is the best option for them?

In many cases, my answer will be 'it depends'. After all, it can be a quite competitive process to secure an internship with one of the big names in any industry, and not every student is able to secure the ideal placement that they might have envisaged when they started their journey. In the UK, there are literally hundreds of students from across many universities applying for a very limited number of places at the likes of THG, Microsoft, Time Warner and Volkswagen. Careers teams, like that here in LUMS, can provide valuable guidance and assistance honed over years of going through such undertakings, but there are no guarantees.

Even once they start on an internship, students can have mixed experiences – some good, some bad, some even just indifferent. As with many things in life, not every placement is perfect, and sometimes internships do not quite go to plan.

For example, the host company may not be fully prepared for the arrival of the intern or may not have a clear idea about what sort of work they may be doing. The host company may even be experiencing its own internal challenges that the student arrives in the middle of. This can pose a real baptism of fire in what is, for many, their first experience of the professional working world.

It is not that long ago that some students on internships found themselves on placement amid Covid-19, or going through the process to secure a placement when the pandemic began. This was an issue for all students on placements in all countries the world over.

From the university's side, too, placements can prove a challenge. If the internship is not suitably rewarding, then the student may feel let down by the process and may return to university feeling demotivated for the rest of their degree. While the university may not be responsible for

the quality of any placement, per se, a poor experience will impact on how students think about their time at university as a whole – whether that be for better, or for worse.

SKILLS AND DEVELOPMENT

In response to all of these challenges, ***my colleagues and I analysed*** the reflective diaries of 154 Lancaster University students engaged in work placements over a three-year period. Our aim was to explore the ways in which students learn from their experiences, and to see how the internship process might be improved.

Overall, our results paint a complex picture.

In the first instance, we identified three key 'meta-competencies' that students tend to develop during their time on placement. These are self-regulation, self-awareness and self-direction. Essentially, they are the ability of students to manage their own behaviours; their understanding of their own particular context; and the ability to manage their own learning and work.

Our findings also highlight the role of socio-political dynamics of internship work in shaping students' experiences. What this means in practice is that students' own perceptions of the workplace and their future employment shapes the way they engage with their internship, and how they judge their own perceived successes and failures. Often, when students struggle in their internships, it is a case of misaligned expectations on the part of all involved.

As such, we suggest a more learner-centred approach to work-based learning that is built around a more holistic view of what employment is, and what skills are important in the workplace.

One of our key recommendations is for a stronger relationship to be fostered between the student, the university, and the host organisation, in order to encourage dialogue about the workplace as a site for learning, in which the students can create their own individual learning plan, tailored to their development needs.

We also recommend that universities adapt their assessment practices in relation to work-based learning to encourage reflexivity, to help students make better use of their time on placement, and so that they can use it constructively as they prepare for life after graduation.

A CHANCE TO LEARN

As we know, no two internship experiences are the same. They simply cannot be!

As educators then, it is our role to work closely with students and their host organisations to ensure they get the most they can from their time on placement. While internships certainly pose challenges, they are a great opportunity for students to develop and grow.

Dr Mike Ryder is a Lecturer in the Department of Marketing. His website is ***www.mjryder.net***

This article is based on the journal paper ***Are undergraduate internships worth the effort? Time to reconceptualize work-based learning for building protean meta-competencies***, by Dr Carolyn Downs, Dr Uzair Shah, and Dr Mike Ryder, of Lancaster University Management School; and Dr Farooq Mughal, of the University of Bath, published in ***Studies in Higher Education***.

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