



BACK TO THE FUTURE

Just Transition in the Welsh Textile Industry

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A sheep with thick white wool is standing in a green field, looking towards the right. The background is slightly blurred, showing more of the field and some trees.

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INTRODUCTION

This report combines findings from a multi-stakeholder workshop held at Cardiff University in March 2024, with relevant literature to determine how to support a just transition in the Welsh textile industry. The workshop brought together key individuals to discuss the industry, challenges and priority areas for growth, and provided an excellent opportunity for open discussion on this topic.

This report explores the opportunity for a just transition in the Welsh textile industry and explains how this could be achieved successfully, while underlying the potential challenges that may be encountered.

What is just transition? Why does it matter?

The concept of a just transition originates from the USA in the 1960s/70s when coalmining operations shifted from independent producers to large-scale businesses, jeopardising employment. Trade unions stepped in to demand rights for workers and communities whose livelihoods would otherwise be compromised (Karaosman et al., 2024).

Whilst there is no standardised definition of the concept, a just transition facilitates the transition towards a climate- and people positive-future, by “ensuring the climate actions we take protect the planet, people and the economy” (ILO, 2019).

A just transition is the transition towards a climate- and people-positive future. Just transition actions focus on the dramatic reduction of GHG emission and in parallel ensuring decent working conditions and wages for workers across supply chains in a fair, inclusive and equitable way (Karaosman and Marshall 2023). It is crucial as it ensures climate action and social justice occur simultaneously and that environmental advancement does not come at the expense of vulnerable communities who are frequently overlooked in climate negotiations.

INTRODUCTION

The textile sector in Wales

Wales has a rich history of textile production which is synonymous with high quality and excellent craftsmanship.

Historically textile production was a key economic driver in Wales, the industry has declined in recent years with the number of mills falling from 217 in 1926, to only 5 today (Bryan, 2022). Factors contributing to this decline include insufficient infrastructure to process wool both in Wales and the UK, a lack of financial incentives for farmers, increased usage of textile synthetic fibre in textile production, and increased globalisation moving textile production abroad to lower-cost countries.

The increasing popularity of on-demand production and onshoring in the textile industry for sustainability reasons may support a revival of Welsh textiles, as consumers strive to make more environmentally conscious purchasing decisions. The proud heritage of the sector opens a further possible market dimension.

In addition, environmental concerns are rife, influencing industry performance, especially now as the textile industry in Wales and beyond are under pressure to improve their environmental credentials and achieve net zero in the near future.

Pressure arises from many angles, including regulations, climate activities, consumers, and NGOs causing industries to reassess their emissions, energy consumption and product lifecycle.

The scope of this workshop was focused on Welsh wool. The Welsh textile industry is predominantly focused on wool due to the abundance of sheep and the high quality of the wool produced.

The wool industry is historically significant to the Welsh economy, not only through the production of heritage goods, but also through the employment of local people at all stages of the supply chain, a characteristic still pursued by many of the remaining mills in Wales.

KNOWLEDGE SYNTHESIS

Decarbonisation

Decarbonisation is the effort made to eliminating carbon use from all economic activity (Donthi 2022). The climate crisis has put carbon management on the agenda of many organisations (Gasbarro and Pinkse 2016) as it is not possible to achieve net zero without decarbonisation.

According to the Net Zero Tracker (2023), over 140 countries worldwide have made net-zero pledges which accounts for approximately 88% of global emissions. The scale of these pledges highlights the significance of decarbonisation for the preservation of our planet for future generations.

Decarbonisation strategies include:

- Accelerating the switch to renewable energy sources
- Making energy efficiency improvements
- Carbon capture technology
- Protecting natural ecosystems

The majority of emissions, about 86%, generate within an organisation arise from supply chain activities (Karaosman et al., 2024); thus, it would be vital for decarbonisation to start with supply chain activities. However, since decarbonisation will impact every aspect of the supply chain, from material sourcing to final product delivery, it is fundamental for justice to be rooted in decarbonisation and transitions in the context of supply chain management.



KNOWLEDGE SYNTHESIS

Just Transition

Just transition has garnered great traction since it was first recognised in the 1960s/70s, and has been adopted by both private and public sector organisations alike. Despite this increased popularity, a standardised definition has not yet been established, causing discrepancies across the literature and a lack of theoretical foundation and consistency in further theory development (Karaosman et al., 2024).

The International Labour Organisation (ILO) defined just transition as “ensuring the climate actions we take protect the planet, people and the economy”, which this report considers alongside the previous studies that highlight the importance of reducing greenhouse gas emissions without compromising the livelihoods of vulnerable individuals and communities. Inclusive discussion and collective action provide a gateway for socially responsible environmental change which is crucial in the textile industry.

Approximately 10% of all global emissions are produced by the fashion industry (Niinimäki et al., 2020) and now the governments push the industry, therefore the companies, to decarbonise their operations (Firth 2023). Yet, the fashion industry characterised by overproduction, overconsumption and labour exploitation makes it difficult to achieve environmental sustainability in fair and just ways.

The fashion industry needs to embrace justice across complex and fragmented textile supply chains for which the three dimensions of justice are of vital importance to the successful implementation of a just transition. Interactional justice ensures relationships are respectful and that communications between parties is transparent; procedural justice ensures the representation of vulnerable communities in decision making to ensure their insight is heard and not overlooked, and distributive justice makes sure that the risks and benefits are divided equally between brands and all tiers of suppliers.



KNOWLEDGE SYNTHESIS

Industrial Factors Affecting Transitions

Industrial factors are capable of influencing industry performance in terms of operation, performance and development.

Historically *technological advances* have generated significant industrial advancement, such as the development of a steam engine in during the Industrial Revolution, but more recently technology has developed further to establish tools, such as artificial intelligence. Predicting future technological advances is not quite possible; nevertheless, developments may be able to assist in decarbonisation and identifying areas for supply chain improvement.

Regulatory frameworks and *market dynamics* also play crucial roles in influencing industry performance and are particularly applicable in the journey towards decarbonisation and achieving a just transition. Regulatory frameworks mandate legal mechanisms that firms must abide by, like for example The Climate Change Act (2050 Target Amendment) Order 2019 that commits the UK to achieve net zero of all greenhouse gas emissions by 2050 (Department for Energy Security & Net Zero 2023).

Market dynamics however are also able to influence industry behaviour. This is supported by institutional theory which argues that organisations benefit from following social norms (DiMaggio and Powell 1983), therefore if major industry players are making environmental advancements, other firms will pick up on this and implement similar policies to retain their legitimacy.

Globalisation plays a key role in industry performance and is particularly applicable to the textile and fashion industry. With globalisation, international trade has increased and the majority of production has been offshored to countries where it is cheaper to produce. This is largely responsible for the decline in the Welsh textile industry as there is no financial incentive for farmers to produce materials when they can be produced cheaper elsewhere. Whilst globalisation has provided many opportunities for development, it comes at the expense of the environment.

WORKSHOP FINDINGS

1. Challenges

The following section presents an analysis of the critical challenges facing the wool industry in Wales. The Welsh wool industry, with its rich heritage and significant economic contribution, faces numerous challenges that threaten its sustainability and growth. This section aims to outline these challenges in detail, providing a comprehensive overview that stakeholders can use to devise effective strategies for improvement.

1.1 Lack of Collaboration Across the Supply Chain

One of the primary challenges identified is the lack of collaboration at every level of the supply chain. This issue hinders the efficiency and effectiveness of the industry, leading to missed opportunities for innovation and growth. Moreover, it's important to recognize that many of the most promising innovations and sustainable practices emerge from the lower tiers of textile supply chains and among small players in the industry. The absence of collaboration to harness these grassroots innovations results in a fragmented industry unable to compete on a global scale.

The discussion further highlighted a significant gap in engagement between brands and farmers. This disconnection results in a lack of understanding and appreciation of each other's needs and challenges, ultimately affecting the quality and sustainability of the wool produced. Building stronger relationships between these stakeholders is crucial for creating a more resilient, responsive, and innovative industry.

1.2 Industrial Farming, Top-Down Approaches, and Lack of Inclusivity

The Welsh wool industry's reliance on industrial farming practices and top-down management structures has led to a disconnect with lower-tier suppliers and small-scale producers. This model overlooks the valuable insights and innovative practices that can emerge from the grassroots level, impeding opportunities for sustainable development and community engagement. The lack of involvement and communication with these crucial stakeholders not only harms the industry's adaptability but also its ability to implement more sustainable and ethical practices. Fostering a more inclusive and collaborative industry structure is imperative to leveraging the full spectrum of knowledge and expertise available, thus driving innovation and sustainability in Welsh wool production.

1.3 Traceability and the Problem of Middlemen

Another critical issue is the blurring of connections between different tiers of the supply chain, primarily due to the proliferation of middlemen. This complexity leads to a lack of traceability, making it difficult for consumers and brands to understand the origin and processing of the wool. Enhancing traceability is essential for fostering transparency and accountability in the industry.

1. Challenges

Further amplifying traceability issues are the challenges posed by current labelling laws, which often lead to confusion among consumers and suppliers. Ambiguous and insufficient labelling regulations make it difficult for stakeholders to ascertain the quality and origin of wool products, further eroding trust in the industry and hindering the reputation of Welsh wool.

1.4 Loss of Emotional Connection

The emotional aspects of the wool industry, such as pride in craftsmanship and the heritage of Welsh wool, are diminishing. This is further exacerbated by a decline in education in the craft and a decreased respect for the craft. Consumers increasingly lack an understanding of the premium quality and sustainability of Welsh Wool, undermining the significance and effort required. The limited opportunities to learn the craft further contribute to this erosion of emotional connection. Rekindling this connection and addressing the educational gap is crucial for differentiating Welsh wool in the market and ensuring the conservation of traditional skills for future generations.

1.5 Tensions between Short-term and Long-term Perspectives

The industry suffers from a predominant focus on short-term gains rather than long-term benefits. This short-sightedness impedes the adoption of sustainable practices and investments in innovation, which are essential for the industry's future success. Encouraging a shift towards long-term thinking is necessary to address environmental, economic, and social sustainability challenges.

1.6 Challenges for SMEs

Small and medium-sized enterprises (SMEs) face numerous challenges, including financial constraints and the burdens of audits and certifications. These obstacles make it difficult for SMEs to compete and thrive, highlighting the need for targeted support and incentives to help these businesses overcome these barriers.



2. Lessons Learnt

Following the comprehensive discussion on the challenges faced by the Welsh wool industry, the discussion brought to light several pivotal lessons. Drawing from cross-industry insights, innovative practices, and the shared aspiration for a return to community-centric values, these lessons serve as a beacon for transforming the industry. This section aims to encapsulate these lessons, offering a roadmap towards a more sustainable, innovative, and inclusive future for Welsh wool.

2.1 Cross-Industry Learning and Skill Enhancement

A recurring theme highlighted was the potential for the Welsh wool industry to learn from the food industry, particularly in terms of skill enhancement and traceability. The food industry's advancements in these areas offer a template for how the wool industry might elevate its practices, ensuring product authenticity and enhancing the value to consumers. Emulating the food industry's traceability systems could mitigate the wool industry's challenges with middlemen and fragmented supply chains, leading to greater transparency and consumer trust.

Further highlighted was the importance of looking beyond the confines of the textile industry to inspire innovation and sustainable practices. Insights from other sectors, whether technology, sustainability, or even business modelling, can offer valuable perspectives that propel the wool industry forward. Encouraging stakeholders to explore and integrate cross-disciplinary knowledge is key to driving holistic growth and innovation.

2.2 Innovation in Wool Blends and Genetic Modification

Innovation emerged as a key theme, with particular emphasis on the development of new wool blends that increase the material's value and, by extension, the opportunities available to farmers. The introduction of such blends represents a strategic approach to diversifying product offerings and enhancing wool's appeal in various markets. Furthermore, the exploration of genetic modification within the industry presents an avenue for improving wool quality and yield. Research is underway to produce lambs that, while primarily raised for slaughter, can also yield high-quality wool. Thereby leading to increased sustainability, better resource utilization, and improved financial returns for farmers.

2.3 Reinvigorating Community, Heritage, and Local Supply Chains

The aspiration to rekindle a sense of community, preserve heritage, and reinforce local supply chains resonated deeply among conference participants, underscoring the importance of shifting away from globalized, impersonal supply chains towards more localized, community-focused models. Such a transition not only promises to enhance the economic viability of local farmers and artisans, as well as the overall economy but also to restore the emotional connection consumers have with Welsh wool, and its production and heritage.

2. Lessons Learnt



2.5 Reimagining Business Models

Lastly, the discussion underscored the indispensable role of collaboration, knowledge transfer, and community involvement in fostering a successful industry transformation. Building networks of collaboration across different levels of the supply chain and beyond can foster the sharing of insights, innovations, and best practices. This collective approach not only enhances the industry's knowledge base but also fortifies its capacity to adapt and excel in the dynamic global market.

The necessity of reimagining business models around the principles of community, localization, and trust was identified as fundamental to combating greenwashing and improving supply chain control. By adopting business models that prioritize transparency, ethical practices, and local engagement, the industry can create a more sustainable and trustworthy path forward. This approach not only ensures the integrity of Welsh wool products but also strengthens the bond between producers, consumers, and communities.

2.4 The Role of Nanotechnology in Wool Processing

A particularly exciting technological advancement discussed was the use of nanotechnology in cleaning wool. This innovation offers a sustainable alternative to traditional, often environmentally detrimental, wool processing methods. By adopting nanotechnology, the industry can significantly reduce its environmental footprint, improve the efficiency of wool processing, and maintain the integrity of the wool's natural qualities.

REFLECTIONS AND THE WAY FORWARD



Decisive climate action is needed in the context of textiles. However, this environmental action must occur in fair, equitable, and just ways. Decarbonization needs to take place across multi-tiered, fragmented, and complex textile supply chains, with responsible procurement and inclusion at their core. Stakeholder engagement, transparency, inclusive social dialogues, and responsible collaboration are crucial antecedents to fair, equitable, and just transitions.

There are tensions and paradoxical issues between techno-centric solutions and behaviours, as well as between time-sensitive actions and long-term societal consequences. While technical solutions are vital, understanding behavioural change is equally important.

In a system where fashion brands prioritize cost reduction strategies, operational efficiency, and lead-time pressure, working with industrial associations to create one-size-fits-all solutions and top-down governance structures, including audits and certifications, is common in the pursuit of lowering carbon emissions.

Yet, this approach fails to challenge underlying conditions that hinder fair and equitable climate action across textile supply chains. Business models should be questioned, and suppliers at all tiers, as well as all supply chain communities, must be involved in these conversations to avoid perpetuating existing paradoxical issues, such as overproduction versus sustainability, quality goals versus cost reduction, and sustainability targets versus purchasing strategies.

Decarbonization goals and technical demands are often cascaded onto lower-tier suppliers in textile supply chains. However, the goals and tools dictated by the fashion industry not only exclude suppliers' and workers' context-specific, real-life issues but also ignore responsible procurement principles.

Decarbonization is context-specific, so production countries, and even regions within the same country, cannot be compared. One-size-fits-all solutions or assumption-based suggestions do not and will not work due to contextual and contingent factors that must be fully considered.

REFLECTIONS AND THE WAY FORWARD

Decarbonization is far more complicated than many assume; while investment and technology are necessary, suppliers and workers have ideas, questions, and suggestions that must be heard. Long-term planning and inclusive social dialogues, along with pathways to achieve them, are vital for just transitions. This is where we see a great opportunity for Wales to initiate some of these future-facing conversations.

The most significant disconnect appears to occur between brands and mills, exacerbated by power imbalances and a lack of stakeholder engagement. Lower tiers, primarily small-sized mills and processing facilities, are not adequately compensated, hindering the scalability of operations.

Although decarbonization necessitates technical solutions, discussions often neglect efficiency measures. However, resource efficiency and suppliers' operational ideas regarding optimization would be vital for transitioning to sustainability in ways that benefit the many, not the few.

Greenwashing is rampant in the fashion industry, where brands mislead the public into believing that they do more to safeguard the environment than they actually do, offering false solutions to the climate emergency that delay and impede credible and concrete action. To address this issue, evidence is needed, requiring the knowledge of supply chain stakeholders, including mills, farmers, suppliers, and operators, to be captured and shared.

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Skills and tacit knowledge must be explored, cherished, and sustained. The general discussion around innovation and change seems to have a global focus on the 'new,' but tradition, heritage, and knowledge representing history should be the focal point, guiding these conversations. Therefore, public awareness needs enhancement to embrace and respect what is considered old.

Education emerges as a key factor in reintegrating heritage and craftsmanship into such discussions. Storytelling thus becomes significant. The way debates, conversations, and statements are framed tends to be exclusive and top-down, diminishing the role of labour and the workforce in textile supply chains. Empowering textile supply chains requires bringing labour and the workforce into the spotlight.

FINAL RECOMMENDATIONS

- Decisive climate action necessary in textiles, requiring fair and just approaches.
- Decarbonisation essential across complex supply chains with responsible procurement and inclusion.
- Stakeholder engagement, transparency, and social dialogues crucial for fair transitions.
- Tensions exist between techno-centric solutions and behaviours, and time-sensitive actions versus long-term consequences.
- Business models, including overproduction versus sustainability, need questioning.
- Decarbonization goals often neglect lower-tier suppliers' real-life issues and responsible procurement.
- Context-specific factors challenge one-size-fits-all solutions.
- Investment and technology crucial for decarbonization, but input from workers and suppliers essential.
- Opportunity for Wales to lead in future-facing conversations on decarbonization.
- Disconnect between brands and mills, with power imbalances hindering fair compensation.
- Greenwashing prevalent, requiring evidence and shared knowledge among supply chain stakeholders.
- Skills and tacit knowledge must be sustained, with heritage and tradition guiding discussions.
- Public awareness and education needed to respect and integrate heritage into sustainability dialogues.
- Top-down framing of debates diminishes the role of labour in textile supply chains, necessitating empowerment.

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