School of Fashion and Textiles

Response to Productivity Commission Interim Report

Textiles

April 2025

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1. Synopsis

The purpose of this submission is to respond to the call for textiles-specific information, drawing from our expertise as researchers from the School of Fashion & Textiles, RMIT University.

1.1. Key Recommendations

Recommendation 1: Reframe definition to 'A circular economy is an economic strategy that maintains the value of materials for as long as possible and ensures materials are used effectively across all phases of their life cycle, to meet human needs.'

Recommendation 2: Rephrase definition to 'Circular activities include designing products and services to reduce overall material throughput'.

Recommendation3: The government to publish guidance on use of certifications, ideally in alignment with other governments. Certification bodies can support policy implementation should government decide to legislate.

Recommendation 4: Care, product, and ecolabels/Certifications should be included and be part of adopting a Digital Product Passport System or similar system.

Recommendation 5: Introduce a co-regulatory or mandatory product stewardship scheme for textiles and clothing that shifts responsibility to producers, ensures financial accountability, and establishes a coordinated national framework for environmental and social impact.

Recommendation 6: Implement minimum sustainability standards on clothing imports and introduce import caps that align with the principle of sufficiency—ensuring Australia imports enough to meet the needs of its population without incentivising perpetual growth in textile consumption.

Recommendation 7: Transition to a co-regulatory or mandatory model to ensure broad business participation and embed circular design requirements, including fibre recyclability and material reduction, to address textile waste at its source.

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2. Defining Circularity and Circular activities

Before providing the textiles response, we would like to address several of the interim report's overarching 'Key Points' that require further analysis.

2.1. Defining a circular economy to include sufficiency as well as efficiency

The PC report has defined a CE as follows: 'A circular economy is an economic strategy that maintains the value of materials for as long as possible and ensures materials are used efficiently across all phases of their life cycle'. The interim report has 57 examples where this idea of increasing material efficiency is highlighted. However, it is well established in the 'rebound effect' that material efficiency can have the perverse effect of increasing overall material consumption [1]. Therefore, there needs to be acknowledgment that 'sufficiency', or living well with less, is also an aim of the circular economy, and 'effectiveness' rather than 'efficiency' is also required [2]. Sustainable development is development that meets present needs without impacting future generations' ability to meet their needs, and so framing a circular economy about needs and wellbeing is important. An 'efficient' circular economy is likely to keep meeting 'wants' rather than 'needs', will paradoxically use more materials in doing so, and will not achieve sustainable development. Instead, what is needed is a just, effective, and sufficient circular economy, operating within planetary boundaries.

Recommendation 1: Reframe definition to 'A circular economy is an economic strategy that maintains the value of materials for as long as possible and ensures materials are used effectively across all phases of their life cycle, to meet human needs.'

2.2. Following the 'ladder of circularity' with 'rethink' and 'reduce' activities as higher order than 'reuse', 'remanufacture' and 'recycle'

The Productivity Commission's definition of 'Circular activities include designing products to use less materials, extending product lifespans via reuse and repair, and recycling and recovering materials to reduce waste' requires further nuancing, particularly around design. Before a product is designed, there should be consideration as to whether that product is needed in the first place. The ladder of circularity (also known as the waste hierarchy) has 'rethink' and 'reduce' at the top of the hierarchy. Phrasing the key point as 'designing products to use less materials' could be interpreted that each individual product is designed to be lighter, when in fact, the overall material use across the economy needs to be reduced. As well as designing products, in many cases, designing services can replace the need for new product. Relatedly, the PC Report quotes 'Circular economy activities span the entire product life cycle and include designing products to use less materials ('narrowing material loops'); extending the time that products are consumed via reuse and repair ('slowing material loops'); and recycling and recovering materials ('closing material loops'). However, this is a misrepresented view of what 'narrowing material loops' means: it should mean narrowing overall inflow of materials, not simply designing individual products to use less materials [2].

Recommendation 2: Rephrase definition to 'Circular activities include designing products and services to reduce overall material throughput'.

3. Specific Responses

The following sections address the individual information enquiry by the PC section 6.1.

3.1. Protections for consumers of textiles and clothing

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*the extent to which consumers of textiles and clothing products **consider certification trademarks** when choosing between different products and what product qualities those certifications cover (for example, ethical production, sustainable inputs, product functionality).*

Recent research has found that although many Australian consumers read clothing care labels, there are differing levels of concerns or interests in sustainability issues [3]. Another study of Australians found that consumers are overwhelmed by information and decisions at the point of purchase [4]. The industry needs to move beyond attempting to differentiate their products through sustainability initiatives, and government needs to realise that the purchasing practices of individual consumers will not shift the dial. Safe products that do not exploit consumers should be the baseline, not a 'nice to certify'.

The question the PC should ask here is, '**what are the baseline characteristics a textile product should have to be placed on the Australian market**'?

These baseline expectations should be:

- The textile product is safe for human health
- The textile product was not made in a way that exploited human rights
- The textile product's materials and processes are designed to minimise environmental impact through its life cycle

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which certification trademarks are considered most trusted in the textiles industry and by consumers, and what makes them stand out compared to others

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Certifications have been used as a proxy to demonstrate social and environmental sustainability attributes. Voluntary certifications have emerged in a largely unregulated sector which has grown massively in both production volumes and global reach, and the voluntary certifications play an important role in supporting good practice and can later inform mandatory regulation. Examples include:

1. Organic Content Standard (OCS)
The Organic Content Standard (OCS) by Textile Exchange verifies the presence and amount of organic material in a final product. It ensures that the organic content is accurately tracked from the source to the final product through a chain of custody certification. This standard helps brands communicate their use of organic materials and supports the growth of organic farming.

2. Recycled Claim Standard (RCS)
The Recycled Claim Standard (RCS) also by Textile Exchange, sets requirements for third-party certification of recycled input and chain of custody. It ensures that the recycled content in a product

is accurately identified and tracked from the recycler to the final product. This standard promotes the use of recycled materials, thereby reducing waste and supporting the circular economy.

3. Global Recycled Standard (GRS)
The Global Recycled Standard (GRS) is a more comprehensive certification that includes the criteria of the RCS but also adds requirements for social and environmental practices and chemical restrictions. It aims to increase the use of recycled materials in products and ensure that these materials are processed in a more sustainable way.

4. Better Cotton (BC)
Better Cotton aims to make global cotton production better for the people who produce it, better for the environment it grows in, and better for the sector's future. BCI provides training on sustainable farming practices to farmers, ensuring that cotton is produced in a way that cares for the environment and improves the livelihoods of farming communities.

5. OEKO-Tex Standard 100
OEKO-Tex Standard 100 is a globally recognised certification that tests textiles for harmful substances. Products bearing this label have been tested and certified to be free from harmful levels of over 1,000 substances. This certification ensures consumer safety and promotes sustainable production practices.

6. Zero Discharge of Hazardous Chemicals (ZDHC)
The ZDHC program aims to eliminate hazardous chemicals from the textile and footwear supply chain. It provides guidelines and tools for brands and manufacturers to manage chemicals responsibly and reduce their environmental impact. The ZDHC Gateway is a platform that connects the industry to safer chemical alternatives.

7. Global Organic Textile Standard (GOTS)
The Global Organic Textile Standard (GOTS) is the leading certification for textiles made from organic fibres. It covers the entire supply chain, from harvesting to manufacturing and trading, ensuring environmentally and socially responsible practices. GOTS certification requires annual on-site inspections and compliance with stringent criteria, providing credible assurance to consumers.

These certifications play a crucial role in promoting sustainability within the fashion and textiles industry. By ensuring the use of organic, recycled, and non-toxic materials, they help reduce the environmental footprint of textile production. They also support the principles of the circular economy by encouraging the reuse and recycling of materials, reducing waste, and promoting sustainable production practices. This shift not only benefits the environment but also enhances the social and economic well-being of communities involved in textile production.

Recommendation 3: The government can publish guidance on use of certifications, ideally in collaboration with other governments. Certification bodies can support policy implementation should government decide to legislate.

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the extent to which textiles and clothing manufacturers and retailers engage in misleading behaviours (for example, misleading logos, terminology, or accreditation; providing insufficient information to support claims) that fall outside of existing general consumer protection laws (such as the Unfair Trading Practices prohibition) and associated compliance activities (guidelines)

Australian Consumer Law (ACL) [5] already has options in place to protect against false or misleading claims, however, does not explicitly refer to the full product life cycle. ACCC guidance on interpreting ACL states that claims need to: be honest and truthful; detail the specific part of the

product or process it is referring to; use language the average member of the public can understand; explain the significance of the benefit; and be able to be substantiated. Penalties can be up to $1.1 million for companies and $220,000 for individuals [6]. ASIC (Australian Securities and Investments Commission) cases [7] and legislative authority are also recent examples of investor and consumer protection.

Selective transparency and tokenism are common in greenwashing [8]. Companies often highlight sustainable materials without providing comprehensive lifecycle information. Incorporating small amounts of sustainable materials can attract eco-conscious consumers without significant changes to business practices. The luxury positioning of sustainable products can also suggest that these items are more about image than substance.

Consumers are generally expected to research potential products before making a purchase, but most lack the necessary knowledge and understanding. Even within the fashion industry, there is a lack of materials knowledge, with most brands relying on suppliers for accurate and truthful information.

While the fashion industry is making some progress towards sustainability, greenwashing remains a significant concern. Robust regulatory frameworks, specialist textiles knowledge, and transparent labelling are essential to ensure that brands and consumers can make genuinely sustainable choices.

Textile products labelled as “bamboo” are an excellent example of greenwashing, lack of consumer knowledge and misinformation [9]. Many consumers purchasing products labelled as bamboo believe they are buying a natural, sustainable product. However, many bamboo products are instead viscose or rayon, which needs a reliable source of cellulose to create. Bamboo is an excellent, fast growing source of cellulose; however, many consumers are not aware of the chemicals (carbon disulphide) needed to create viscose and the negative health effects of this chemical [10].

In Australia, there is no requirement to include fibre content in clothing and textile products, which creates problems for sustainability and product stewardship. Fibre content labelling is crucial for determining end-of-life strategies, as the type of fibre affects whether a fabric can be recycled or composted. Blended fabrics pose a particular challenge, as a significant portion of clothing on the market is composed of mixed fibre blends, which often can only be mechanically shredded or sent to landfill. This lack of mandatory fibre content labelling contradicts Australia’s goal of a circular fashion industry by 2030, as it impedes recycling and end-of-life options.

The new guide developed by researchers at RMIT University, Refashioning: Accelerating Circular Product Design at Scale [11], provides a comprehensive roadmap for transitioning from linear to circular design, with a focus on maximising the lifespan of products and materials. Challenging traditional design thinking, the guide offers practical steps to facilitate change. It presents a systematic and methodological approach to implementing circular clothing design, suitable for organisations of all sizes. Based on extensive industry research, the guide outlines actionable steps businesses can take to enhance the circularity of their outputs. While other circular design guides exist, Refashioning is notable for offering a unique, systematic methodology that helps designers both slow the flow and close the loop. This guide can offer a methodology for wider adoption.

Additionally, around 8,000 auxiliary chemicals [12] are used in clothing and textiles, which brands are not required to disclose. Some of these chemicals can have significant health effects, and recent reports indicate that the current design approach in the fashion industry often prioritises immediate sales over end-of-life considerations of products, leading to significant sustainability challenges. Companies can make misleading environmental claims due to a lack of comprehensive material knowledge. Consumers, who generally know even less about these materials, are unfairly burdened with making sustainable choices.

Addressing this issue requires robust oversight and regulatory frameworks that establish clear criteria for safe, durable, and sustainable textiles, ensuring that manufacturers and consumers are better informed and aligned towards genuine sustainability.

what, if any, harms to consumers arise from these misleading claims

There are growing safety concerns regarding chemicals in clothing, particularly Per- and polyfluoroalkyl substances (PFAS). These substances do not break down in the environment, leading to their accumulation in soil, water, wildlife, and humans. Exposure to PFAS has been linked to immune suppression, hormone disruption, fertility issues, and cancer. As awareness of these risks increases, so does the urgency to act [13].

Governments worldwide are enacting bans and restrictions on PFAS in textiles, compelling fashion brands to rethink their supply chains. For instance, California will ban intentionally added PFAS in clothing by 2025, while New York will restrict most apparel containing PFAS by 2028, with limited exceptions. The European Union is proposing a comprehensive PFAS ban under the REACH Regulation, and both France and Denmark plan to implement bans by 2026.In response, brands such as Patagonia, The North Face, Deuter, Everlane, Jack Wolfskin, and Adidas are already adopting PFAS-free materials in products ranging from outdoor jackets to athletic wear.

The textile industry is a major contributor to global CO_2 emissions, accounting for 8-10% of total emissions [14]. The use of pesticides in cotton farming and the pollution from dyeing processes harm local ecosystems, while the disposal of synthetic fibres, which do not biodegrade, leads to soil contamination. Textile production consumes vast amounts of water and often leads to water pollution due to the discharge of untreated dyes and chemicals.

Microplastics, another significant concern, are being investigated as a cause of declining reproductive health. Recent studies have revealed the deleterious effects of microplastics exposure on male reproduction and sperm quality, making them a potential hazard to reproductive success. Microplastics have been found across diverse ecosystems, including oceanic, freshwater, and terrestrial environments [15]. They can adsorb pollutants, such as heavy metals and persistent organic pollutants, which can then be transferred to animals upon ingestion, leading to potential health effects. Microplastics can accumulate in organisms at various trophic levels and block animals' digestive systems, resulting in reduced nutrient absorption and exposure to toxic substances. This accumulation can magnify through trophic levels, affecting predators, including humans.

Clothing and textile items are significant contributors to microplastic pollution, as textile materials shed microfibers and microplastics during laundering. All fabrics shed microfibers, and the fabric composition impacts the rate at which microfibers are released. Fabrics with a higher mass, as well as those with a brushed or raised surface or composed of low twist yarns, release more microfibers than tightly woven, smooth fabrics with a higher yarn count or density [16].

Actions that governments or product stewardship schemes could take to promote the availability of reliable and relevant information about whether clothing and textiles products' claims related to circularity and sustainability are accurate and credible.

3.2. Product labelling for textiles and clothing

The PC is considering the role for governments in product labelling to improve the availability of information about textiles and clothing products (such as their design, material composition, repairability and durability) and enable consumers and businesses to adopt circular practices. Options could include amending existing regulatory frameworks or standards governing existing textile and clothing labelling schemes, and/or designing and developing a new product labelling scheme with industry.

Currently, there are numerous consumer certifications, trademarks, and voluntary schemes, which are confusing for both consumers and brands to navigate. This complexity can lead to consumer mistrust and brand inconsistency. Strengthening and introducing legislation would help "even the playing field" for brands and promote consumer trust, as all brands would be required to comply with the same regulations [17].

At present, many large brands have an advantage in obtaining certifications because the process often involves significant costs, which can be prohibitive for smaller brands. For example, certifications like B Corp, Better Cotton Initiative (BCI), and Oritain come with substantial fees [18]. This financial barrier can prevent smaller brands from achieving certification, despite their commitment to sustainability.

Legislation would ensure that all brands, regardless of size, adhere to the same standards, fostering a more equitable market. It would also reduce the prevalence of "greenwashing," where brands make misleading claims about their environmental practices [8,17]. By implementing uniform standards, consumers can have greater confidence in the sustainability claims made by brands, knowing they are backed by rigorous, legally enforced criteria [17].

The movement in the EU towards Digital Product Passports will require companies that sell into this market to gather comprehensive data about inputs from Tier 4 (raw materials) to End of Life [19]. Care labels provide essential information for consumers to make informed decisions during the life of a garment. However, many consumers overlook the importance of this information, leading to quicker clothing damage and shorter garment life. Often, the information on care labels can be complicated for consumers to understand.

It is crucial to educate consumers on the importance of care labels to reduce garment mismanagement and increase longevity. Effective consumer decisions also require transparency in information, which could be enhanced by QR codes or alternative labelling systems. For consumers to make more sustainable choices, they need transparency throughout the entire textile and clothing supply chain. This can be achieved through QR codes, digital passports [19], blockchain technology [20], or eco-labels [21]. Consumers often lack the skills to interpret clothing label information effectively. Visual design elements, such as colour (e.g., green) and certifications, significantly impact perceptions of sustainability. Product labels play a vital role in consumer decision-making for sustainability.

3.3. Product labelling for textiles and clothing

3.3.1. Information on product labelling for textiles and clothing

Due to the sheer volume and variety of styles of clothing and textile items produced and imported into Australia annually, stronger regulations on the design, material composition, repairability and durability of clothing and textile items may act to limit the volume of textiles coming onshore. However, these regulations would need to apply to all clothing and textile items imported (e.g. including brands that ship directly to Australian consumers from overseas).

Regulations/guidelines on minimum standards for quality and durability (e.g. ISO standards on wash fastness, colourfastness, pilling, drycleaning, etc.), as well as guidelines on the types of materials use (limiting the use of blended fibres to specific blends only, such as 50/50 cotton polyester, which has an existing recycling stream) would significantly limit a brand's ability to produce new products.

Care labels and product labels serve different purposes in the lifecycle of textile and clothing products. Care labels are primarily focused on providing consumers with instructions for maintaining and cleaning garments, ensuring their longevity and preventing damage. These labels include standardized symbols or text detailing washing, drying, ironing, bleaching, and professional cleaning methods. By guiding consumers on proper maintenance practices, care labels also contribute to sustainability by extending product lifespans and minimising environmental impacts associated with improper care. Care labels are intended for post-purchase guidance, ensuring that consumers can maintain the quality of their garments over time. They play a critical role in promoting sustainable consumption by encouraging proper care practices that reduce waste.

Product labels are designed to provide general information about the garment at the point of purchase. They typically include details such as brand name, size, material composition (e.g., 100% cotton), country of origin, and occasionally marketing claims like "organic" or "sustainable." Product labels help consumers make informed purchasing decisions by offering transparency about the product's attributes. Product labels are pre-purchase tools that emphasise identification and marketing aspects, helping consumers evaluate a garment's suitability based on its size, material, or sustainability claims.

Additionally, ecolabels are labels that communicate a product's supply chain and environmental attributes [22]. These labels indicate various aspects, such as the use of sustainable materials, reduced water consumption in production, or fair Labor practices. Crucially, ecolabels serve as essential tools for informing consumers about the supply chain of the product.

3.3.2. Importance of Guidelines

Implementing comprehensive guidelines for care, product, and ecolabels is crucial for several reasons:

1. Consumer Education: Clear labels educate consumers about proper garment care and the environmental impact of their choices, encouraging sustainable consumption practices [21,22]. Ecolabels, when effective, significantly increase sustainable fashion consumption.
2. Regulatory Compliance: Clear information in labels ensures labels meet legal requirements (if any), avoiding potential penalties and trade barriers.
3. Sustainability Promotion: Proper care instructions reduce the environmental footprint of clothing by minimising the need for frequent replacements and lowering energy and water consumption during washing and drying [23]
4. Brand Transparency: Clear product labels provide consumers with essential information about the garment's supply chain, materials and origin, enhancing trust and brand loyalty. Ecolabels enhance transparency by verifying sustainability claims through third-party certification, which is essential for consumer trust [22].

3.3.3. Key Components of Effective Labels

3.3.4. Care Labels

Effective care labels should include clear instructions for:

1. Washing: Temperature, machine/hand wash, and cycle type.
2. Drying: Tumble drying permissions, temperature settings, and line drying instructions.
3. Ironing: Maximum temperature and restrictions.
4. Professional Cleaning: Dry cleaning permissions and special processes.
5. Bleaching: Types of bleach permitted or prohibited.

3.3.5. Product Labels

Product labels should include:

1. Material Composition: Accurate details about the fabric content (e.g., 100% organic cotton).
2. Country of Origin: Where the product was manufactured.
3. Size Information: Standardised sizing for consumer convenience.
4. Brand Information: Brand name and logo for identification.
5. Sustainability Certifications: Certifications or claims (e.g., "GOTS-certified") that align with sustainability goals [22].

3.3.6. Ecolabels

Ecolabels should include:

1. Certification Body: Information about the third-party certification organization, which is crucial for enhancing consumer trust.
2. Environmental Attributes: Specific details about the environmental benefits of the product (e.g., reduced water usage, recycled content).
3. Visual Systems: Use of visual cues, such as a rating system like energy efficiency labels, to quickly convey sustainability information [21, 22].
4. Scope of Impact: Clearly define the scope and criteria of the ecolabel to avoid greenwashing [8].

Care labels directly impact a garment's environmental footprint by promoting practices that extend product lifespan and reduce resource consumption [23]. Ecolabels inform consumers about the environmental impact of the product's life cycle, including production, use, and disposal, influencing purchasing decisions.

Clear, accessible care, product and ecolabels help bridge the gap between consumers' desire to act sustainably and their actual behaviour [22]. This is achieved by making sustainable choices and practices more accessible and understandable.

Care, product, and ecolabels are vital communication tools that link manufacturers and consumers, influencing both product quality and sustainability. Effective labels not only help maintain product quality but also contribute to broader sustainability goals by extending product life, reducing environmental impacts, and promoting circularity.

Based on literature, when purchasing textiles or clothing, consumers require key information on product labels to make informed decisions.

This may include:

1. Material Composition: Clear details about the fabric content (e.g., "100% organic cotton" or "70% recycled polyester") help consumers understand the environmental impact and quality of the garment. Such transparency is essential for promoting sustainable choices and aligns with findings that consumers value material-related information when assessing sustainability [22].

2. Country of Origin: A country of origin is “the country in which a product is wholly obtained or produced, or the country where an article is substantially transformed into another product [24]. Indicating where the garment was manufactured provides insight into ethical production practices and supports conscious purchasing decisions. This information can also influence perceptions of quality and sustainability.

3. Size Information: Standardised sizing ensures consumers can select garments that fit properly, reducing returns and waste.

4. Sustainability Certifications: Labels should include verified certifications, such as "GOTS-certified" (Global Organic Textile Standard) or "EU Ecolabel," to enhance trust in sustainability claims. Research shows that third-party certifications significantly improve consumer confidence in ecolabels [21,22].
5. Care Instructions: Basic care guidelines (e.g., washing temperature, drying methods) should be included to ensure proper maintenance, extend the garment's lifespan, and reduce environmental impact during use. It has been determined that “only text” format and the combination of “text and symbols” in care labels significantly increased consumers' confidence and a reduction of consumers' risk perceptions about the care of garments [25].
6. Brand Name and Logo: Identifying the brand helps consumers associate their purchase with specific values or practices, such as ethical manufacturing or sustainability initiatives.
7. An QR or bar code that contain specific details of the product, related to the supply chain, to support the consumer that require further information about the product’s production, use, and disposal; and information about the possibilities of extension of the products life (repair, recycle, upcycle).

By including these descriptions in product labels, consumers have access to essential information that supports sustainable purchasing decisions while fostering transparency and trust in the fashion industry.

Recommendation 4: Care, product, and ecolabels/Certifications should be included and be part of adopting a Digital Product Passport System or similar system.

Types of Information on Product Qualities

The types of information on product qualities (such as sustainable inputs, repairability, durability and recyclability) *that would be usefully included on product labels for: –consumers, to support their ability to buy circular textiles and clothing products*

A circular economy is also a just economy. Addressing modern slavery and human rights risks in clothing supply chains are as important as increasing efficient and sufficient use of materials and products. Therefore, it is important labelling maintains country of origin data.

– textiles recycling and upcycling businesses, to support their ability to adopt circular opportunities

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In the recent Sustainability Victoria funded project, Refashioning Accelerating Circular Product Design at Scale: A Practical Guide led by RMIT University, provides a comprehensive Circular Design guide that designs clothing in ways to ‘slow the flow’ and ‘close the loop’. As part of this guide, a checklist model was developed [11]. This approach could be adapted to provide both the inputs in the Digital Product Passport, as well as the labelling needed.

Textile recyclers will require the proportion of fibre type in each of the fabrics within the garment as well as pertinent chemical finishes that could contaminate their output, e.g., PFAS group of chemicals. Labelling can also include the End-of-Life solutions at the point of sale and can determine the how the garment/product can circulate withing a circular fashion system.

3.4. Textiles and clothing product stewardship schemes

The PC is seeking further information on:

The impacts of changing from a voluntary industry-led scheme to a voluntary accredited, co-regulatory or mandatory scheme, such as:

- the value of potential environmental, economic and/or social benefits from greater government involvement in textiles and clothing product stewardship schemes.
- the size and nature of potential costs associated with this increase in government involvement.

3.4.1. The Case for Greater Government Involvement in Textiles and Clothing Product Stewardship

A government-mandated approach to textiles and clothing product stewardship would generate significant economic, environmental, and social benefits by creating a more structured and accountable system. **Economically,** a regulatory framework would establish a level playing field, reducing the risk of free-riding by ensuring that all producers contribute to circular economy initiatives rather than relying on voluntary participation. This would also provide greater financial stability for stewardship schemes, allowing for long-term investment in recycling infrastructure and circular business models. **Environmentally,** increased government involvement would secure dedicated funding for waste management, textile recovery, and material innovation, addressing the limitations of underfunded voluntary programs. Additionally, shifting the focus from consumers to producers is critical—while consumer responsibility has been emphasised, Australia's lack of local textile production does not preclude it from regulating imports to ensure product durability, recyclability, and responsible end-of-life management. **Socially,** a government-led system would provide a common framework for businesses, ensuring alignment on key data, metrics, milestones, and best practices. Without this coordination, voluntary schemes risk fragmentation, with different players pursuing disparate sustainability agendas that fail to address systemic issues. Moreover, Australia enforces stringent regulations on imported food and consumer goods, yet textiles, one of the highest-impact product categories, remain largely unregulated. A stronger government role would ensure that imported clothing meets requirements of product safety to reduce environmental harm and promote ethical supply chains.

It is essential that product stewardships are mandatory to eliminate free-riders and create a level playing field. Otherwise, companies that do the right thing by addressing the impacts of their products are effectively penalised for it, while companies that do not pay into these schemes benefit from the good work the scheme does without contributing to them. Starting in a voluntary environment has often been good in that it allows industry to build the schemes collaboratively, however, they are unlikely to have the greatest impact in a voluntary environment.

A government-regulated scheme would also ensure that product stewardship mechanisms function as they were designed—to hold corporations accountable for the full life cycle of their products. As it stands, the interim report places disproportionate responsibility on consumers to make sustainable choices, while overlooking the structural power of corporations in shaping how their products are designed, how many products they make, and what happens to their products at end-of-life. Without regulatory intervention, companies that invest in sustainable practices risk being undercut by competitors that continue to externalize environmental and social costs. A mandatory product stewardship framework would create clear and enforceable obligations for producers, ensuring that sustainability is embedded into supply chains rather than positioned as an optional commitment.

Increased government involvement in textiles and clothing product stewardship will inevitably introduce additional costs for businesses, particularly as producers assume greater financial

responsibility for their products. However, these are not arbitrary costs but rather necessary corrections to a market failure in which the environmental and social impacts of textile production and disposal have been externalised. Currently, the cost of textile waste is borne by taxpayers, local governments, and charitable organisations managing surplus clothing, as well as by communities facing environmental degradation from unchecked waste streams. Shifting this financial responsibility to producers aligns with the **polluter-pays principle**, ensuring that businesses internalize the true cost of their operations rather than passing them on to society. While businesses may perceive increased regulation as a burden, the cost of maintaining the status quo far outweighs the cost of transitioning to a more sustainable system. The long-term economic and environmental costs of inaction include resource depletion, rising waste management expenses, and lost opportunities for circular economy innovation. In contrast, a regulated stewardship scheme creates economic efficiencies by incentivizing design for longevity, facilitating textile recovery infrastructure, and reducing the financial and environmental toll of disposal. Moreover, early regulatory intervention positions businesses to adapt proactively to inevitable global policy shifts, such as extended producer responsibility (EPR) frameworks being implemented in Europe and emerging elsewhere.

Recommendation 6: Introduce a co-regulatory or mandatory product stewardship scheme for textiles and clothing that shifts responsibility to producers, ensures financial accountability, and establishes a coordinated national framework for environmental and social impact.

Recommendation 7: Implement minimum sustainability standards on clothing imports and introduce import caps that align with the principle of sufficiency—ensuring Australia imports enough to meet the needs of its population without incentivising perpetual growth in textile consumption.

3.4.2. Business Participation in the Seamless and ABSC Schemes: Barriers and Incentives

Business participation in the Seamless and ABSC schemes is hindered by financial uncertainty, scepticism about voluntary schemes, and the perception that sustainability is an optional add-on rather than a necessity. Some businesses already investing in circularity see little value in joining, while others fear competitive disadvantages without regulatory certainty. Voluntary schemes also risk fragmentation, as businesses pursue different sustainability approaches without a unified framework. A co-regulatory or mandatory approach would ensure fair industry-wide participation, provide financial stability, and drive systemic change. Participation in textiles and clothing product stewardship schemes presents both challenges and benefits for businesses and retailers. Key challenges are around the cost of membership which brands currently see as ‘optional’ due to the voluntary nature of schemes, and the lack of data that many brands have about their own products, hindering the accurate reporting that is essential to stewardship schemes. The benefits outweigh these barriers—businesses gain access to training, collaborative problem-solving, and structured support for circular practices. These schemes also provide regulatory certainty, enhance social license to operate, and align businesses with national sustainability goals, ensuring long-term resilience in an evolving policy landscape.

A key strength of Seamless is its focus on circular design, offering businesses training and support to integrate sustainability from the outset. Yet, despite its global recognition as the first product stewardship scheme with circularity embedded in its framework, the Productivity Commission report largely overlooks the role of design in enabling circularity. While it acknowledges the importance of recycled fibres, it fails to address fibre recyclability, the reduction of total clothing production, and the impact of semi-synthetic fibres, which pose chemical challenges to circular systems. Given that 80% of a product’s environmental impact is determined at the design stage, policy must move beyond

durability and repairability to holistic circular design principles, ensuring materials are chosen and products are created with end-of-life solutions in mind. Australia has the ability to influence design standards by working with manufacturers and implementing stronger regulatory frameworks.

Through joining Product Stewardship Schemes (PSS), businesses and retailers can take collaborative action in areas that as a single company they cannot influence alone or would not have the time and resources to address. As a CE is a systemic transformation, many of the actions required are in this pre-competitive space where PSSs operate. Good examples of pre-competitive action needed in clothing and mattresses would be establishing trusted national collection schemes and viable end-of-life pathways. Other benefits for businesses include access to knowledge and data, access to pilot programs for circular business models, forming agreed definitions and standards as an industry, and accessing specialist advice.

It also needs to be noted that while there are many benefits to joining PSSs, there will always be companies for whom sustainability and circularity is seen as secondary to their primary purpose and who do not recognise that they have a responsibility to participate in the wider economic transformation underway. For this reason, mandatory PSS will be required to bring the laggards along. Numerous countries around the world are putting in place mandatory Extended Producer Responsibility (EPR) for precisely this reason, and Australia will be left behind if we do not take decisive action.

Recommendation 8: Transition to a co-regulatory or mandatory model to ensure broad business participation and embed circular design requirements, including fibre recyclability and material reduction, to address textile waste at its source.

3.4.3. Strengthening Government Accreditation for Effective Stewardship

Current accreditation arrangements lack the structure needed to drive meaningful change, as voluntary schemes remain fragmented and under-resourced. A mandatory, government-accredited framework operationalised by industry product stewardship organisations, such as Seamless, would ensure consistency, accountability, and real impact. By embedding industry expertise within a regulated system, this approach would streamline accreditation, set clear metrics, and provide long-term stability for circular initiatives while allowing businesses to adapt within a structured, outcome-driven model.

3.4.4. Businesses and retailers' experiences of participating in textiles and clothing product stewardship schemes, including challenges faced and benefits gained

While as researchers we cannot speak for businesses, we have observed that overwhelmingly, businesses are calling for mandatory PSS because the leadership and risk appetite needed to sign up in a voluntary environment is so significant. Business requires a level playing field. The businesses who have signed up for Seamless and ABSC should be applauded. The country's largest clothing importer, Kmart Group, has not signed up to Seamless due to concerns regarding free riders and the scheme's voluntary nature. Ironically, they have since become the Seamless scheme's biggest free rider. This issue won't be resolved until the government requires mandatory PSS.

3.4.5. Limitations in current government accreditation arrangements and how they can be improved to implement effective voluntary schemes

The current voluntary accreditation scheme is an important way to demonstrate that a scheme has government backing. However, the actions that can be taken by government in a voluntary accredited environment have clearly been insufficient to eliminate free riders.

4. Conclusion

In conclusion, adopting a circular system's approach is essential for maintaining the value of materials and ensuring their effective use throughout their life cycle. Circular activities should focus on designing products and services to reduce material throughput. Governments can play a pivotal role by publishing guidance on the use of certifications, ideally in collaboration with other governments, and supporting policy implementation through certification bodies. Integrating care, product, and ecolabels into a Digital Product Passport System will enhance transparency and sustainability. A comprehensive approach, as seen in the German Government's environmental initiatives, can facilitate greater circularity across the textile's product life cycle. Introducing a co-regulatory or mandatory product stewardship scheme for textiles and clothing will shift responsibility to producers, ensure financial accountability, and establish a coordinated national framework for environmental and social impact. Implementing minimum sustainability standards on clothing imports and introducing import caps will align with the principle of sufficiency, ensuring that Australia meets its population's needs without incentivising perpetual growth in textile consumption. Finally, transitioning to a co-regulatory or mandatory model will ensure broad business participation and embed circular design requirements, addressing textile waste at its source.

Author Credits

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