THE DIGITAL PRODUCT PASSPORT AND GLOBAL FASHION SUPPLY CHAINS: TRACEABILITY, TRADE AND FAIR RESPONSIBILITY

by

Bibhanshu Baibhav[1]

ABSTRACT

The European Union's Eco-design for Sustainable Products Regulation (ESPR) creates a framework for the Digital Product Passport (DPP), with textiles as a priority product category within this framework. Rules for DPPs for textiles are not finalised yet, but the framework might shape information requirements for DPPs and the inclusion of textiles among fashion products entering the EU market. Consequently, the implications of the ESPR might extend beyond the European Union and affect producers of clothing and accessories in countries manufacturing clothes for EU brands. This article considers whether the ESPR's DPP framework can ensure traceability without passing excessive compliance burdens and responsibilities on to suppliers of textile products.

The article argues that a DPP can succeed only if traceability is treated as a shared responsibility of regulators and businesses, rather than as a demand for data passed down the supply chain. This is because the ESPR's requirements regarding DPPs target economic operators placing the product on the EU market, but the relevant information may be located in the hands of the supplier of this product.

This article outlines the ESPR's framework and proposes the principles of designing the DPP that would be fair and effective. At the same time, the article raises the issue of the implications of DPPs for international trade and mentions the relevant provisions of the WTO Agreement on Technical Barriers to Trade. It argues that sustainability rules are not, in themselves, contrary to WTO law.

Keywords: Digital Product Passport; fashion law; textile supply chains; Eco-design for Sustainable Products Regulation; international trade; data governance

[1] 2nd year B.A.LL.B (Hons') student, UILS, Chandigarh University, Punjab.

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Introduction

Clothing and other fashion products go through several stages of production before they reach the consumers. These stages include spinning, dyeing, weaving or knitting, cutting, sewing, packaging, transporting, and selling the garment. They may take place in different countries and involve firms with unequal technical capabilities and bargaining power. Yet there might be gaps in knowledge about the material components, origin, environmental aspects, and handling of a product throughout its life cycle.

The EU's Eco-design for Sustainable Products Regulation 2024/1781 (ESPR) seeks to address some of these information gaps via the DPPs. According to ESPR, the DPP means the product linked to data about the product that is made available to the users via the data carrier. The ESPR lays down the framework for DPPs and gives a mandate to the Commission to elaborate product-specific rules in delegated acts. Textiles, including garments and footwear, are among priority product categories regulated under ESPR.[2]

The DPP framework is intended to support sustainability and circular economy, facilitating product repairs and recycling, and assisting authorities and consumers in verifying compliance with environmental regulations. Yet the passport is only as reliable as the data contained in it. For fashion products, this data may be generated or verified by suppliers far from the company placing the product on the EU market.

This article discusses whether the DPP framework can increase traceability of the fashion products without passing excessive burdens and compliance costs onto the suppliers of these products from countries outside the EU. This paper argues that, although the ESPR formally targets economic operators placing the products on the EU market, the operators may rely on information from suppliers. Unless the product-specific delegated acts clarify how data is to be generated and collected, and who is responsible for it, the DPP could increase visibility for regulators and consumers while leaving smaller suppliers to bear the costs of compliance and information management.

The article is divided into four parts. First, it explains the outline of framework and product-specific rules for DPPs. Then, it examines the effects of DPP requirements on overseas suppliers. Then, it considers issues of data access, trade and confidentiality. Finally, it recommends ways to develop a more effective textile DPP.

[2] Regulation (EU) 2024/1781 of the European Parliament and of the Council of 13 June 2024 establishing a framework for the setting of eco-design requirements for sustainable products [2024] OJ L 2024/1781, arts 4 and 9 ('ESPR'); European Commission, 'Textile Apparel and the Digital Product Passport' <https://single-market-economy.ec.europa.eu/single-market/digital-product-passport/textile-apparel_en> accessed 9 November 2026.

The legal framework: a common structure, product-specific duties

The ESPR is a framework regulation. It does not provide every data field that should appear in the DPP for a textile product. Instead, it authorises the Commission to adopt delegated acts establishing eco-design and information requirements for certain products. The first working plan explicitly includes textiles, including garments and footwear.[3]

Article 9 establishes the fundamental purpose of the DPP. If the product-specific delegated act imposes a requirement of DPP, then the product may only be placed on the market if the DPP is available in accordance with the relevant requirements. Its data must be accurate, complete and up to date. The product-specific delegated act will determine, among other things, the required information, the level at which the DPP is generated (product, batch or item level), and the way it is made available to users.[4]

This is significant because the passport on the product level will be less burdensome compared to item-level passport, while the latter may be more detailed but will require more data. Similarly, collecting information only about fibre composition and repair instructions would place a smaller burden on businesses than gathering information about materials and processes throughout the production chain. This is another important choice that will have to be left to the product-specific delegated acts.[5]

The ESPR also establishes general technical requirements. A DPP should be linked to the persistent unique product identifier. It should use open and interoperable formats. It should be machine-readable, structured, searchable and transferable. The access is to be determined in accordance with the access rights determined by the product-specific delegated act.[6] The ESPR therefore does not require every data field to be open to the public, nor does it create a single access model for every actor. It leaves the design of such access rights to the future rulemaking regarding textiles.

The regulation also connects the DPP system with EU market surveillance and customs procedures. Persons placing products under the customs procedure of free circulation are required to provide or make available the relevant registration identifier. Customs authorities are required to verify the identifier against the central registry.[7] Hence, the passport is not just a voluntary labelling of a product. It becomes a condition of market access after certain product-specific requirements are adopted.

[3] ESPR, art 18(5)(c); European Commission, 'Textile Apparel and the Digital Product Passport' (n 1).
[4] ESPR (n 1) art 9(1)–(3).
[5] ibid art 9(2)(a)–(e).
[6] ibid art 10(1)(a), (d)–(g).
[7] ibid art 11(a)–(b).

The ESPR has been prioritised by the European Commission as regards textiles. According to the information currently provided by the Commission, the product-specific delegated act for textiles is scheduled to be adopted in fourth quarter of 2027, although the current timeline might change.[8] As of November 2026, it is unclear what data fields and access rights will be established in the textile delegated act. Any evaluation of the exact impact of this rule remains preliminary. The legal question is how the rule should be designed.

A European market rule with global supply-chain effects

The ESPR applies to products placed on the EU market. But the information required for demonstrating compliance might come from outside of the Union. An EU importer or fashion brand might need to know the fibre composition, production facilities, product identifiers or other characteristics of the product that are known only to an upstream supplier. In this way a market-access rule addressed to an EU-facing operator can influence production practices across a global supply chain.

However, this effect should be qualified properly. The ESPR does not impose every duty in respect of DPP directly on every overseas factory. The duties depend on the operator's legal role and on the requirements set out in the product-specific delegated act, the ESPR assigns obligations to manufacturers, importers and other economic operators. It requires the manufacturer to ensure that the product is designed and manufactured in accordance with the applicable eco-design requirements. Importer also has duties with respect to the conformity and documentation of the product.[9] The supplier's responsibility might arise from the legal provisions, from the agreement with the importer or brand or from both.

Practically, a lead firm might ask for the information from a supplier through procurement conditions, audit systems, technical specifications or digital platforms. This is required for compliance but, at the same time, it can generate a power asymmetry. A major brand may have the resources to build an information system and negotiable with technology providers. A smaller manufacturer or material supplier has to respond to multiple requests for information in various formats.

A DPP could make some of these requests more consistent if it relies on interoperable standards and shared identifiers. The ESPR specifically requires interoperability and calls for open, transferable data formats.[10] This is a good start. If the supplier can enter information

[8] European Commission, 'Textile Apparel and the Digital Product Passport' (n 1).
[9] ESPR (n 1) arts 3, 27 and 29.
[10] ibid arts 10(1)(d) and 11(a).

only once in a format which is transferable, the burden may be less than if the information has to be entered repeatedly in incompatible formats.

However, interoperability alone cannot solve the problem of cost distribution. Information has to be collected, checked, corrected and maintained over the whole lifetime of the product. This may require staffing, bookkeeping, digital infrastructure and sometimes testing or third party verification. If a brand or importer requires a supplier to guarantee every data point without providing sufficient time to produce or check it, the DPP could formalise an unfair transfer of compliance risk.

The fair system would differentiate between responsibilities in respect of the market-access decision and responsibilities in respect of information. The operator placing the product on the EU market should remain responsible for the creation and compliance of the DPP. A supplier should be responsible for the accuracy of information within its control. This division would discourage firms from using the DPP to transfer all compliance risk to parties further down to supply chain.

Data access, confidentiality and supplier protection

The DPP should make the relevant information accessible for different actors. However, the access to the DPP depends on the actor requesting this information. Consumers need information that is clear and easy to understand. Repairers and recyclers may need technical information. Authorities need information in order to verify the compliance. Suppliers and brands may need access to records so that they can verify or correct data.

The ESPR provides for differentiated access rights: The access should be granted in accordance with the relevant actor's rights determined by the product-specific delegated act.[11] This approach should be developed carefully for textiles. A tiered system might make the general information publicly accessible while keeping commercially sensitive details available only for authorities or for supply-chain actors authorised to receive it. It should also distinguish between information that should be publicly available and information that is required for verification purposes.

This is important as the supply chain transparency might reveal commercially sensitive information. The DPP that identifies production facilities, material sources or processes might reveal relationships that are confidential for the supplier. The EU Trade Secrets Directive protects undisclosed information that has commercial value and has been protected by

[11] Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure [2016] OJ L 157/1, arts 2(1) and 3–4.

reasonable measures.[12] A DPP should not be designed on the assumption that all supply-chain information is public or lacks legal protection.

The answer here is not to let the confidentiality law render the sustainability reporting impossible. Instead, the rules should specify what information should be disclosed, who should get the access and for what purpose. If public disclosure is not necessary to achieve objective, access could be limited to competent authorities supply-chain actors. The system should also deal with how the data can be reused, retained and corrected.

Personal data might arise where the DPP or the associated database that accompanies it identifies individuals, including sole proprietors, workers, or contacts. The General Data Protection Regulation applies to personal data processing under the territorial scope provisions, including certain processing of personal data by organisations not established in the EU that offer goods or services to people in the European Union. It requires the lawful ground and adherence to the principle of purpose limitation, data minimisation and accuracy.[13] The DPP itself might not contain personal data but it designers should not assume that the information from the supply chain is purely commercial.

For this reason, data minimisation should be built into the textile rules from the outset. It should include only information that is reasonably necessary for achieving certain traceability or sustainability objective. Instead of publishing names of the individuals, the facility or operator identifier might be sufficient. The rules should also make it clear who is responsible for data security and handling the corrections of the data.

Accuracy requires special attention, Article 9 of ESPR requires the DPP data to be accurate, complete and up to date. However, the framework does not explain how the disagreements about a particular entry should be resolved. The supplier should be able to challenge or correct any information attributed to him. A brand or importer should not be able to publish any unverified allegations about the compliance as fact only because the information was uploaded to a passport database. At the same time, a supplier should not be able to prevent a regulator from investigating a possible breach simply by disputing the data.

An effective system that would work will include the log about who entered or edited the information, the procedure for challenging the data, clear deadlines for correction, and the procedure for retaining the initial data upon the change.

[12] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data [2016] OJ L 119/1, arts 3–6 and 32.

[13] Agreement on Technical Barriers to Trade (adopted 15 April 1994, entered into force 1 January 1995) 1868 UNTS 120, arts 2.1, 2.2 and 2.4.

International trade and regulatory fairness

The global impacts of the DPP raise issues under international trade law, the WTO TBT Agreement recognises that member states might pursue legitimate goals, including the environmental protection, while requiring that the technical regulations do not constitute unnecessary obstacles to international trade. It also provides for the non-discriminatory treatment of imported products and encourages the use of relevant international standards.[14]

DPP requirement might be classified as the technical regulation or even involve conformity assessment procedures depending on the actual design and enforcement. The classification and the WTO assessment of the matter will depend on the final rules and facts. The existence of compliance costs does not, by itself, mean that a rule violates WTO law. Environmental traceability and product sustainability are legitimate regulatory objectives. The relevant question will include whether the measure is applied without discrimination and is not more trade-restrictive than necessary to achieve these goals.

This design of the system is therefore important, if the EU accepts only one technical architecture, even when trading partners have equivalent and reliable systems, the requirements could create avoidable costs. The ESPR itself calls for interoperable data formats and references to equivalent European and international standards in parts of the framework.[15] The Commission should use its flexibility to recognise reliable data sources and international standards where they satisfy the same regulatory goal.

The system should be transparently designed, Article 19 of ESPR provides for the establishment of the Eco-design Forum where the representatives of the Member States and interested parties will be involved. In the context of the textile delegated act, participation in consultation should include not only EU brands and IT providers but also the representatives of the suppliers, textile producing countries, small and medium-sized enterprises, workers, repairers, recyclers and civil society.[16] Discussion of cost and accessibility concerns will come too late if it takes place only after the technical architecture has been established.

Another safeguard is the consideration of the cumulative impact of related rules. The DPP framework will exist alongside other EU sustainability and waste frameworks. For example, the Waste Framework Directive is going to be amended in 2025 and establish a framework for the extended producer responsibility for textiles and footwear. Hence, the firms will have to

[14] ESPR (n 1) arts 10(1)(c)–(d) and 12(1).
[15] ibid art 19.
[16] Directive (EU) 2025/1892 of the European Parliament and of the Council of 10 September 2025 amending Directive 2008/98/EC on waste [2025] OJ L 2025/1892.

comply with overlapping information, registration and reporting obligations. Compatibility of definitions, identifiers and data formats will save the firm from repeating the same information in different databases.

A fairer design for the textile DPP

The following principles could guide the product-specific delegated act and its implementation measures.

First, data requirements should be proportionate and linked to clear purpose. Each required data field should correspond to a regulatory purpose. The rules should state whether the information is needed to support consumer choice, assess conformity, facilitate customs procedures, assist repair or manage a product's end of life. If it is possible to address the purpose using a model-level dataset, it would be unreasonable for the system to rely on the default to item-level data collection.

Secondly, access rights should be tiered. Information intended for consumers should be made publicly available in a readable format. Technical or commercially sensitive data could be accessible to relevant authorities or other actors under certain conditions. The access rights should be clear, consistent and comprehensible for the suppliers.

Third, standards should be interoperable and reusable. Suppliers should be able to use internationally recognised identifiers and systems where they meet EU requirements, open standards should facilitate transfer of the data between different platforms without imposing a supplier to purchase any specific proprietary service.

Fourth, responsibility should reflect each actor's role and control over the information. The operator responsible for placing a product compliant with the requirements onto the EU market should remain responsible for that, the supplier should be responsible for information provided by it or controlled by it but should not carry the responsibility for information it cannot reasonably check. Contracts should specify who provides, verifies and updates each data field, and who pays for any additional verification.

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Fifth, there should be suppliers' right to correction and challenge a passport should document the origin and the time of entry of each data field and contain the procedure to correct or contest it. When information is disputed, the system should identify the dispute rather than treat the contested entry as final.

Finally, implementation should account for differences in capacity. Smaller suppliers may need technical assistance, standard templates and transitional periods. If compliance requires new testing, software or third-party verification, the costs should not automatically fall on the

least powerful party in the supply chain. The framework for the ESPR should be implemented in a way that furthers the sustainability agenda of it without creating barriers to compliance for smaller producers.

These proposals do not weaken traceability. On the contrary, they make it more reliable. The system collecting large amounts of unverified data is not necessarily providing better environmental information. The system documenting the purpose, the origin, the access rights and the responsibility for each data field is more likely to facilitate enforcement and informed decision-making.

Conclusion

The Digital Product Passport may turn out to be an essential instrument of regulating the environmental and circularity attributes of the products within the EU. For fashion, the scope of the application will cover global supply chains because product information is typically gathered far from the entry of garments onto the EU market.

The ESPR already provides for key features accurate and current data, unique identifiers, interoperability, differentiated access rights and connections to market surveillance and custom procedures. Yet important decisions for fashion products remain to be made in the delegated acts setting out the textile-specific requirements, those choices will determine whether the DPP improves traceability or simply increases the compliance burden on supplies with less bargaining power. The legal design should preserve the accountability of the operator placing the product on the EU market while recognizing the fact that some information is controlled by the suppliers at an upstream level. It should protect legitimate confidentiality, comply with data-protection requirements where personal data is processed, and prevented unnecessary duplication and technical lock-in. It should also be developed through the involvement of the suppliers and producing countries, whose systems and resources will be affected.

The fair DPP is not the one demanding from all actors as much information as possible. It is the one collecting necessary information for the sake of a specific legal purpose, making this information reliable and accessible for the appropriate actors and allocating the costs and responsibilities based on control and benefit from the system.

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