



Two PhD positions are available at Aalborg University Business School (AAUBS), Aalborg University (AAU), Denmark, under a large-scale research project titled “Circular economy in Bangladesh’s Apparel Industry (CREATE)”, funded by the Danish International Development Agency (DANIDA). These joint PhD scholarships are offered at AAUBS in association with Ahsanullah University of Science and Technology (AUST), Dhaka, to develop knowledge capacity for Bangladeshi scholars and institutions on circular economy transition, and innovation policy and strategy for sustainable apparel business systems linked with apparel global value chains. The two PhD students will be admitted to AAUBS and will focus on topics related to CREATE project themes, as outlined below. PhD students will have to stay in Bangladesh (1.5 years) and Denmark (1.5 years). While in Bangladesh, PhD students will be based at the School of Business at AUST and take PhD courses at Danish Universities. To fulfill the PhD requirements at AAU, as per Danish Ministerial Order for PhDs in Denmark, students must take an equivalent of 30 ECTS of PhD courses at the universities in Denmark, write an academic thesis (either monograph or paper-based), and disseminate knowledge of around 600 hours. Upon completion of PhD requirements and defense of the PhD thesis successfully, students will be awarded a PhD degree from Aalborg University, Denmark.

Though this is an equal opportunity position, female candidates are encouraged to apply.

**Start Date:** 1 October, 2024 (Expected)

**Duration:** 3 Years

**Applications Due:** **30 August 2024 at midnight CET** (see details of the application process at the bottom of the document)

**Salary/Funding Package:** The PhD students will receive a stipend and allowance from CREATE project and Danida Fellowship Center. The detailed of the stipend and allowance and other facilities are mentioned below:

- a) A stipend will be given in Bangladeshi-TAKA for 3 years during their attachments at AUST in Bangladesh under CREATE project. The per month gross stipend amount is 1,25,000/ Taka.
- b) In addition, a Danida Fellowship Center (DFC) standard allowance (in Danish Kroner) will be given to PhD students during their stay at Aalborg University on top of their stipend in Bangladesh. This stay is for 18 months in total during the 3-year PhD duration. Per month **gross** allowance is approximately 13,521 DKK (Tax is waived on DFC allowance in Denmark).
- c) All of the PhD student's travels between Dhaka and Aalborg, Visa fees, and other expenses will be borne by DFC. In addition, CREATE project will provide an additional budget for PhD study which includes tuition fees, the cost of PhD research data collection, PhD course attendance, international conference participation, equipments/books, and other costs related to knowledge dissemination and publications in peer-reviewed journals, as well as PhD stay abroad in another reputed University.

### **‘CREATE’ Research Project Overview**

CREATE aims to examine the circularity shift in apparel global value chains and the challenges and opportunities this presents. CREATE also aims to explore how Bangladesh's apparel industry can implement circularity to retain its position in reconfigured apparel global value chains as well as drive green industrialization processes to meet the sustainability goals by 2030.

The five-year long research project comprises five work-packages focusing on mapping the circular economy shift in apparel global value chains, baseline study of resource use and waste-recycling, firm-level capabilities and cost analysis, evaluation of the recycling initiatives/resources and corporate strategies leading to policy and strategy formulation for the Bangladesh Government, apparel suppliers, and global brands.

Global clothing production has doubled in the last 15 years due to fast fashion, with more than half going to landfills and incinerators in a year. The negative environmental impact is set to triple by 2030 as production increases due to growing world population, fast-fashion, and rising incomes in emerging economies. Therefore, the global fashion industry must move from the linear take-make-waste system to a circular system; making more clothes using virgin resources will not keep us within planetary boundaries of water use, CO<sub>2</sub> emissions, use of chemicals, and generation & disposal of waste. A circular system design reduces waste and pollution, keeps products and materials in use, avoids the use of non-renewable resources and preserves renewable ones.

However, it is not so simple to transform the business systems in which suppliers are embedded, as their operations are governed by the brands from the global North. Suppliers' value chains are globally dispersed, where post-consumer waste is controlled by the brands in the consuming countries, mostly in the global North; however, the production that generates the possibility of recycling pre-consumer-waste depends on the national institutions' policies and incentives, entrepreneurial cognitions, inter-firm collaborations within and between industries, financing & labor systems, and technological conditions. While large global fashion brands are moving towards circular economy business models, challenges appear to be different for suppliers of different types and sizes, with variations in the nature of relationships with global brands of different home institutions. Organizing their circular value chains and developing complementary policies and institutional supports becomes very critical in the transition process. Challenges are also different in terms of how pre-consumer waste (i.e., leftover textile during production) and post-consumer waste (garments after use) value chains are organized for recycling. This requires in-depth research for policy development.

Bangladesh will be affected significantly by the new demands of global buyers related to circularity, responsible value chain governance, and its traceability, given that the apparel exports contribute to 84% of export earnings and employ over 4 million people in Bangladesh. While over 200 large Bangladeshi apparel firms have upgraded in the past ten years with LEED certification and developed sustainable ways of manufacturing, moving into more complex products, diversifying into synthetic products, and increasing the value addition in production, smaller and medium sized firms that constitute most of the industry have not made these investments to upgrade capacities for moving up to more sustainable ways of value addition. Low value addition or producing basic products with no innovation pushes them to put pressure on prices. While European brands are in a race to move to circularity by 2030, Bangladeshi suppliers need to have a clear understanding of the challenges and opportunities for circularity primarily based on pre-consumer waste, which can add value to their earnings and help reduce CO2 and water consumption. Post-consumer waste can also open a new area for further value addition in global circular value chains. Value addition on pre-& post consumer waste will contribute to brands initiative for green global supply chains, which the EU policies and UN initiatives pursue.

At this point, circularity offers an opportunity for the Bangladeshi industry to capture more value from its apparel exports and create more linkages between the apparel industry and the global economy through waste management, recycling, and innovations. Existing research on the apparel GVC shows that supplier firms covered the costs of meeting these environmental standards, with no price premium or other forms of financial support provided by their buyers; instead, they are under continuous pressure for cost and price reduction. Suppliers perceived these green investments as necessary to retain market access, while buyers captured the value in terms of reputational enhancement, pressure from the global institutions, and products marketed as sustainable. This was part of a broader trend where buyers used sustainability strategies to extract value but shifted the costs and risks to suppliers, resulting in a ‘sustainability-driven supplier squeeze’. Buyers’ initiative regarding environmental standards did not address the sustainability of the global value chain as a whole, because they continued with their fast fashion business models based on increased production and consumption.

However, things are changing. A few large global fashion brands and retailers began making commitments in their corporate strategies to circularity, investing in new technologies and adopting new business models and long-term strategies, which push their key suppliers to reconfigure in pursuit of their value creation in GVCs. CREATE project adopts a conceptual approach and seeks PhD proposals that combine, or focus on, insights from Global Value Chains, business systems and institutionalism, and innovation management with insights from circular economy perspectives to examine firm strategies and the systems entailing firms and their interactions with sectoral and national institutional actors and policies.

## **Project Partners**

CREATE, being the largest multi-stakeholder ‘research-based capacity development project’ on circular economy in the apparel industry, collaborates with Aalborg University, Denmark, Copenhagen Business School, Manchester Metropolitan University, Manchester Fashion Institute, SOAS- University of London, Global Fashion Agenda (GFA) Copenhagen, Access2Innovation, Danish Fashion and Textiles (DM&T), Ethical Trading Initiative- UK, Reverse Resources (RR), Ahsanullah University of Science and Technology (AUST), Dhaka, and Bangladesh Garments Manufacturers and Exporters Association (BGMEA).

## **PhD positions and Research Themes:**

Two PhD students announced as part of the project will work on the following themes.

- a) **Corporate strategies in Bangladesh's textile and apparel firms as they move towards a circular economy.**

This PhD position will explore how apparel suppliers' corporate strategies are evolving (i.e. changing and developing) in relation to ownerships, corporate missions, and governance as they move towards a circular economy in Bangladesh, and how suppliers of different types are adapting to changing exogenous factors, such as global brands changing strategies, institutional policies, geopolitics and Europe's green initiatives and technological advancements (i.e., recycling and traceability technologies). Typically, firms' corporate strategies are shaped by the ownership structures, corporate missions, and background institutions. These affect firms' nature of governance and how firms engage in collaboration with firms and institutions for sharing resources and leveraging complementarity to move towards a circular economy. Apparel suppliers in Bangladesh are diverse in size and capabilities while they have complex circular value chain, making it unique to understand how their corporate strategies are evolving in connection with global brands strategic priorities on green transition and circularity. In particular, the PhD will examine the nature of ownerships and corporate missions of suppliers and brands (key buyers), and the relationships between suppliers, new technologies, institutional and extended value chain actors for circularity transition in Bangladesh.

There are two questions to examine in this research: one is the evolution of corporate strategies of suppliers (changes of suppliers' corporate strategies and missions, what changes, how they change, and why they change) and the role of buyer's (brands) strategic shift and supplier's ownership structure (i.e. nature and type of ownerships including owners motivation and mind-set), and two is the adaptation of the corporate strategies in respect to exogenous factors (i.e., external changes such as rules, policies, norms, cognitions/logics of production, profitability, global brands' pressures, strategic priorities, newly emerging global standards such as corporate due diligence, extended producer responsibilities, and digital traceability for greater transparency (e.g. global recycled standard [GRS] and recycled claimed standard[RCS]) in circular value chains.

*RQ: 1 How do suppliers corporate strategies evolve in response to circular economy transition in GVCs?*

*RQ: 2 How and why do suppliers adapt their corporate strategies and activities in connection with exogeneous pressures (i.e. buyers' requirements/buyers strategic shift/emerging sustainability-standards/profitability)?*

A good academic track record in relevant bachelor's and master's degrees (e.g. international business, management, development studies, international economics etc.) is a prerequisite to apply for this PhD position.

## **(b) Innovation Ecosystem of Circular Economy in Bangladesh's Apparel Export Industry**

This PhD position will explore the innovation ecosystem of circular economy in the context of Bangladesh's Apparel Export Industry. With the emergence of technological innovations in new fiber and recycling technologies, the interactions, strategies, and capabilities of incumbent actors and new entrants may change and co-evolve. This PhD research aims to understand the coupling and interactions between various actors and technologies within the innovation ecosystem of the apparel export industry to facilitate a circular economy. Key areas of investigation include the dynamics of green value creation and value capture among textile actors, innovation ecosystem design and governance, role of small and medium-sized enterprises in the circular economy ecosystem and their capabilities, and the development of sustainability-driven business models for new fiber and recycling technologies. The study will also compare international experiences from other emerging economies' apparel industries to derive best practices applicable to Bangladesh.

This PhD will primarily adopt an innovation and technology management approach, contributing to literature on innovation ecosystems, business model innovation, and green innovation. Potential research questions include but are not limited to:

1. How do different actors within Bangladesh's apparel innovation ecosystem create or co-create and capture value through new fiber and recycling technologies, and how do actors navigate the tensions between green value creation and green value capture?
2. What factors influence the choice of technological trajectories in the adoption of green technologies within the apparel innovation ecosystem to enable "optimal distinctiveness", and how do these technological choices affect the sustainability and economic performance of firms within the ecosystem?
3. How can new business models be designed to support circular economy practices to enhance the competitiveness of firms within the circular innovation ecosystem?
4. What roles do policy frameworks and institutional arrangements play in the governance and functioning of the apparel innovation ecosystem? How do firms navigate different institutional logics to adopt circular economy?
5. How can international best practices, or other emerging economy experiences (e.g., China) be adapted to Bangladeshi contexts to facilitate green technological innovations and strategies?

By addressing these questions, the research will aim to provide a comprehensive understanding of how technological innovations and a well-designed innovation ecosystem can drive the transition towards a circular economy in Bangladesh's apparel industry. The PhD candidate can choose qualitative, quantitative, or mixed method design, depending on the research questions.

Applicants should have a master's degree (i.e. research based) in business and management/ technology and engineering management/ business economics/ supply chain management, or relevant domains. International experience is an added advantage.

### **Minimum Requirements**

- a) To be considered, the candidate should have successfully completed the Master's level education (similar to the 3-year bachelor+ 2-year '*research-based*' master education as per the Bologna process) from a reputed institution.
- b) Applicants will normally have received at least an equivalent grade of 10 (A-) or higher on the Danish grading scale for their master thesis.

c) The applicant must be fluent in written and oral English. Applicants who do not have English as a first language shall provide documentation that they have passed one of the following official tests with the respective minimum score:

- IELTS (band score): 7
- TOEFL (paper-based): 600
- TOEFL (internet-based): 100

The language test must be no more than 2 years old at the time of the application.

### **Application Submission:**

If you are interested in applying for any PhD positions in this project, **please submit the following documents electronically to the following email addresses:** create.sob@aust.edu with a CC to imran\_du6@yahoo.com by **August 30, 2024 by making ONE PDF file of all the documents** asked for.

Please mention one of the three proposed areas of research to which you are applying.

1. Research proposal on one of the two themes described above should be maximum of five pages (**5 pages only**). This research proposal should contain a title followed by a presentation of an original research question based on the research problem/gap in the literature, a description of the initial theoretical framework and methodology, a presentation of the suggested empirical material, as well as a work-plan.
2. Copies of Bachelor's and Master's degree certificates or other certificates of a corresponding level along with grade transcripts.
3. Brief curriculum vitae (CV)
4. List of papers and publications, if any.
5. One copy of a selected publication or a written work (e.g., Master's thesis or a publication of good quality)
6. Documentation for English language skills (if you do not have a valid IELTS score, you may apply, and later, sit for the language test and submit the valid document in 6 weeks)
7. A motivational letter highlighting your career objective and the relevance of the proposed PhD study

### **Recruitment Procedure**

The recruitment committee expects to shortlist at least four applicants for the final assessment. All applicants will be notified of their status in the recruitment process shortly after the application deadline. Applicants selected for assessment will be notified about the process of the assessment. Short-listed candidates will be required to participate in an interview via Zoom.

Once the recruitment process is completed, applicants will be notified of the outcome of their application. It should be noted that once the project team has selected a candidate, the candidate will have to go through the formal admission process of AAU and pass an internal academic quality evaluation at AAU before they can start PhD studies.

Applicants must return to Bangladesh after completing the PhD program to assist in CE capacity development.

Any question related to the PhD scholarships and the proposed theme may be directed, only in case of urgent inquiry, to A/Professor Mohammad B. Rana, [mbr@business.aau.dk](mailto:mbr@business.aau.dk), Aalborg University Business School, and A/Professor Yimei Hu, [yimei@business.aau.dk](mailto:yimei@business.aau.dk), Aalborg University Business School, AAU.

## CREATE PARTNERS:

