

Rana, M.B. and Allen, M.M.C. (2023) 'How Institutions Influence Firms' Climate Change Strategies: Extending the Perspectives of International Business and Global Value Chains with Business Systems', accepted for the publication in Progress in International Business Research, edited by Rob van Tulder (Rotterdam School of Management) Birgitte Grøgaard (BI Norwegian Business School) and Randi Lunnan ((BI Norwegian Business School.

How Institutions Influence Firms' Climate Change Strategies: Extending the Perspectives of International Business and Global Value Chains with Business Systems

*Mohammad B. Rana
Aalborg University, DK.
Contact: mbr@business.aau.dk*

*Matthew M.C. Allen
Manchester Metropolitan University, UK
Matthew.Allen@mmu.ac.uk*

<a> Abstract

The changing roles of the United Nations and national institutions have made addressing climate change a critical concern for many multinational enterprises' survival and growth. This paper discusses how such institutions, which vary in their nature and characteristics, shape firm strategies for climate change adaptation. Exploring different versions of institutional theory, the chapter demonstrates how and why institutional characteristics affect typical patterns of firm ownership, governance, and capabilities. These, in turn, influence companies' internationalization and climate-change strategies. Climate change poses challenges to how we understand firms' strategic decisions from both an international business (IB) (HQ-subsiidiary relations) and global value chains (GVC) (buyer-supplier relations) perspective. However, climate change also provides opportunities for companies to gain competitive advantages – if firms can reconfigure and adapt faster than their competitors. Existing IB and GVC research tends to downplay the importance of climate change strategies and the ways in which coherent or dysfunctional institutions affect firms' reconfiguration and adaptation strategies in a globally dispersed network of value creation. This paper presents a perspective on the institutional conditions that affect firms' climate change strategies regarding OLI (ownership, location, internalization), and GVCs, with 'investment' and 'emerging standards' playing a significant role. We illustrate our discussion using several examples from the Global South (i.e., Bangladesh) and the Global North (i.e., Denmark, Sweden, Germany) with a special emphasis on the garment industry. The aim is to encourage future research to how a 'business systems', or Varieties of Capitalism, institutional perspective can complement the analysis of sustainability and climate change strategies in IB and GVC studies.

Keywords: *Climate Change, Strategy, Institutions, International Business, Global Value Chain*

<a> Introduction:

Issues concerning sustainability, particularly issues around man-made changes in average land and sea temperatures as well as the earth's atmosphere, commonly referred to as climate change, have been a critical concern for firms' survival and growth in the international business (IB) and global value chains (GVCs) literatures. Studies have explored how climate change issues affect MNEs' firm-specific advantages (FSAs), especially the knowledge and competencies that underpin their product differentiation and process reconfigurational capabilities to reduce environmental pollution (Kolk & Pinkse 2008). However, significant variation exists in the climate change risk profiles of different regions (Romilly, 2007); these variations can include institutional voids, affecting the ability of multinational enterprises (MNEs) to focus on the challenges of climate change (Pinkse and Kolk 2012). Previous studies have tended to view climate change strategy through a unitary lens of economic imperatives, highlighting, for instance, how MNEs' climate change mitigation strategies influence their sales, profits, market share or, indeed, survival (Chakrabarty and Wang, 2013; Kolk and Pinkse, 2008).

The IB and GVC literatures have both discussed the dynamics of, and influences on, MNEs' strategies across globally dispersed value chains, yet neither adopts a comprehensive perspective on institutions to examine MNEs' climate change strategies. In particular, both tend to downplay how climate change strategies and the ways in which coherent or dysfunctional institutions affect firms' reconfiguration and adaptation strategies in a globally dispersed networks of value creation. By seeking to address these issues, we draw on the 'business systems' perspective, and seek to explain how institutional conditions affect firms' climate-change strategies regarding OLI (ownership, location, internalization), and GVCs, with 'investment' and 'emerging standards' playing a significant role.

While institutions present a dual perspective, i.e. constraints and opportunities, affecting failure and success for MNEs (Rana and Sørensen, 2021), previous studies have demonstrated a partial view of institutions to explain climate change issues that firms address. Thus, there is a need for a theoretical discussion of institutions in relation to climate-change issues as to how and why variations in institutional systems shape firm capabilities, and how complementarities (or a lack of

complementarities) and path dependency in national institutional systems not only constrain firms' efforts to mitigate climate change, but also enable them to harness opportunities from policies and discourses on climate change.

This perspective paper, in line with the Sustainable Development Goal (SDG) on Climate Action, therefore, seeks to explain how institutions shape firms' strategies for climate change adaptation. It discusses the key questions of how institutions and firms, as powerful actors, interact and evolve socio-politically manifested climate change agendas and priorities, and how this process shapes firms' capabilities, structures, and strategies in a globally interconnected business network.

Climate change issues, such as CO₂ emissions, water depletion, sustainable energy, resource conservation, green transportation, and green manufacturing, raise key strategic choices for firms and national and international organizations (Lund-Thomsen and Lindgreen, 2014; Kolk, 2016; Fransen, Kolk, and Rivera-Santos, 2019; Rana and Boje, 2021). To be ecologically and humanely (i.e., ethically) sustainable, a society must adopt 'a new order of things' (Dovers 2001, p. 3). Climate change and sustainability represent profound challenges for both businesses and people; tackling them involves a re-evaluation of the basic assumptions and structures of societal institutions.

To de-carbonize the economy by 2050, the European Union (EU) has introduced the Carbon Border Adjustment Mechanism (CBAM) to reduce the risk of carbon leakage and level the field for European industries towards the de-carbonization of production processes. In a similar vein, carbon taxes and emissions trading systems have been introduced worldwide, in particular for high-emitting industries such as steel, cement, aluminium, fertilizer/chemical, and energy production (European Commission, 2021). Not all countries in the world have or implement similar policies to reduce their carbon footprints; therefore, the EU's new rules and policies may create arbitrage opportunities in the production and sale of some goods from certain countries. A higher carbon price (via a carbon tax, tradable certificates, or simply stricter regulation) will make goods relatively more expensive for countries implementing this policy, pushing carbon-intensive production into countries that have weaker institutional systems characterized by less stringent regulations or lower carbon prices, and increasing the emissions from these latter countries.

The new policies and rules on climate change will not affect all industries directly. The apparel industry, for example, will not be subjected to as much direct regulation even though it is a heavily

polluting industry. Nonetheless, this industry will experience an indirect impact as it uses aluminium, chemicals, and energy across its activities, such as textile production, dyeing, fabrication of metal accessories, garment manufacturing, washing, packaging, and transportation. All of this activity takes place within globally dispersed value chains. The European Environment Agency (EEA) has estimated that the amount of clothing bought per person in the EU increased by 40 per cent between 1996 and 2012, and that over half of all clothing is not recycled, resulting in significant water consumption, pollution, greenhouse gas emissions, and landfill use. As a result, in 2021, the European Parliament adopted a resolution on the new Circular Economy Action Plan, initiating additional measures to achieve a carbon-neutral, environmentally sustainable, toxic-free, and fully circular economy by 2050. To achieve this ambition, the EU has implemented tighter recycling rules and compulsory targets for materials use and consumption by 2030 (News European Parliament, 2021).

The new rules will not only affect apparel brands from the Global North (i.e., advanced economies), but also suppliers from emerging economies in the Global South with weak institutional settings (Rana and Allen, 2021b). Institutional contexts and their variations between countries, therefore, are critical factors for firms when determining their strategies to address climate change issues (Rana, Allen, and Servais, 2021).

Critical press reports and media stories have highlighted the overproduction of, and waste associated with, clothes and textiles, particularly in the Global North, where the fast fashion trend has resulted in short-term usage to such an extent that some consumers may use clothing items only once or twice before throwing them away. As a result, the global textile industry has been under scrutiny due to its negative impact on the climate, particularly through CO₂ emissions related to various aspects of the industry's global value chain. This is relevant in the context of the so-called science-based targets, which help companies by showing how much and how quickly they can reduce their greenhouse gas emissions and prevent the worst effects of climate change. Meanwhile, the industry's impacts on global CO₂ emissions are also distributed highly unequally, as are the risks that producer and importer countries face due to climate change. For instance, Bangladesh, the second-largest apparel exporter in the world, contributes very little to global climate change, but is likely to be among the countries worst affected by it, with 17 per cent of the country's land projected to be underwater by 2100.

In the context of this globalizing industry and its widespread effect on climate change, a central question arises as to how producer and importer countries can adapt and mitigate their environmental impacts. In this paper, we use an institutional theory lens – the business systems approach – to address

these questions and focus on how typical IB and GVC studies can draw on the business systems framework to analyse and explain better firms' climate change strategies. We seek, then, to show how institutional theory – in the form of the business systems approach – can help to conceptualize how transnational and national institutions interact with transnational industries and firms in the face of the global climate crisis (Agrawal, McSweeney, and Perrin, 2008).

How national institutions affect climate change mitigation and adaptation agendas and how firms respond to climate-change imperatives are subjects of contention that have not yet been comprehensively addressed in typical IB or GVC studies. These issues have been widespread in recent years, and each has been approached differently by academic fields investigating globalizing business and sustainability issues. Hence, both literatures have relevance for the analysis of climate change mitigation and adaptation for multinational enterprises (MNEs).

The Swiss Re firm reports that climate change could reduce the global economy by up to 18 per cent of GDP by 2050 if global temperatures rise by 3.2°C. The impact of climate change is forecast to be the hardest for Asian economies, with a 5.5 per cent hit to GDP in the best-case scenario and a 26.5 per cent hit in the worst case. Meanwhile, the World Economic Forum's Global Risks Report 2021 identifies the failure to take climate action as the most impactful and second-most likely long-term risk the world is facing at a time when populations are struggling to mitigate the consequences of the COVID-19 pandemic (Marchant 2021).

The remainder of this paper is organized as follows. First, we briefly review different and important institutional perspectives, and how they can be applied in relation to climate change strategies. Second, we illustrate the key dimensions of the IB and GVC frameworks to demonstrate the firms climate-change strategies that employ and the role played by institutions. We explain how these strategies are relevant and how they are applied with reference to examples from transnational industries, particularly the apparel industry, as one of the most polluting industries. Finally, we present conclusions and argue that an institutional approach is crucial in explaining the dynamics and strategies for climate-change issues, and can help to complement typical IB and GVC analyses. We hope this chapter will encourage future IB and GVC studies to consider the institutional perspective to enhance analytical rigor in examining sustainability and climate-change strategies.

<a> Institutional Perspectives and Their Relevance to Climate-Change Adaptation Strategies

In this section, we explore various institutional perspectives. We focus on national-level institutions, as this is the level at which many key changes are manifested and applied, and they help to explain how different actors— including states, firms, and civil society organizations – contribute to the pursuit of climate-change mitigation and adaptation in transnational industries, such as clothing and textiles. Our first entry point into this discussion is early-institutional theory and new institutional theory in economics and neo-institutionalism in organization studies, followed by a national business systems perspective. We also explore how the institutional perspective can be employed in the context of climate change strategies and sustainability.

** Institutional Perspectives**

The concept of institutionalism, particularly early institutional theory, originates from Max Weber's ideas of 'rationalization' and the 'iron cage' (i.e. structures) and Émile Durkheim's functional structuralism. Weber and Durkheim explain that rules, norms, values, and beliefs collectively institute 'modes of behaviour' that rationalize forms of transactions, relationships, and social orders (Fransen, 1974). In the context of this paper, the focus is on the rules, norms, values, and beliefs of dominant actors, such as the state, firms, and civil society actors (e.g., NGOs), regarding climate change mitigation and adaptation. Different actors' interpretations of, and responses to, climate change challenges are, therefore, associated with pressures to conform, power struggles, and identity reconstruction based on their internal resources, knowledge, and cognitive frames. Consequently, the focus of the strategizing process is not on objectively valid knowledge about 'climate change', but rather on how actors in organizations produce and reproduce knowledge about climate change through their interactions with the state, other businesses, and civil society actors.

Based on the theoretical foundations laid by early institutional researchers, new-institutional economics (North 1991; Coase 1998; Williamson, 1975), neo-institutionalism in organizational studies (Scott, 2008), and business systems (Whitley, 1992b; Morgan 2001) have worked to assess how institutional characteristics influence actor behaviour (Whitley, 1999).

North (1991) defined institutions as "humanly devised constraints that structure political, economic and social interactions". Constraints include both formal rules (constitutions, laws, property rights) and informal norms (sanctions, taboos, customs, traditions, codes of conduct) which perpetuate order

and safety within a market or society. In the context of climate change challenges, formal rules and regulations can limit the ability of firms (and other actors) to pollute the environment, particularly through CO₂ emissions and water consumption. However, informal norms clearly have significant implications as well, particularly for the question of whether climate change can be addressed as a priority issue and how a society (or a firm in the case of an organisational boundary) would like to address a specific aspect of climate change. For instance, a critical issue is whether actors – in terms of their norms and values – accept that climate change is ‘real’ and thus prioritize it; this is subsequently manifested by the actions of the state, firms, and civil society actors across the country.

The degree to which institutions are effective in setting constraints can be reduced by factors such as a government's limited coercive force, the lack of an organized state, or the presence of strong religious precepts. In the case of addressing climate change challenges, we should expect that governments’ willingness and ability to act to reduce CO₂ emissions within their borders will differ substantially.

North (1991) argues that the way institutions are organized in a country shapes the extent of property rights, information asymmetry, agency (control), and transaction costs experienced by a firm operating in that country. The difficulty in monitoring the degree to which suppliers in weak institutional contexts carry out climate change mitigation strategies in GVCs has resulted in lead firms and other organizations creating private regulations and self-reporting-based indexes (Rana, Hoque & Allen, 2019). Examples of such regulations are ‘Accord’ and the ‘Alliance’, initiatives established by European and American firms purchasing garments from Bangladesh that suppliers to global brands are obliged to follow (Kazi and Rahman, 2021).

Scott (2001:48, 2008) summarizes the neo-institutionalism approach to the study of organizations, highlighting how ‘institutions are social structures that have attained a high degree of resilience’. Institutions are composed of cultural-cognitive, normative, and regulative elements which, together with associated activities and resources, provide stability and meaning to social life.

For instance, tackling climate change requires supportive regulations and social norms to which firms should conform in formulating strategies. However, in a country where most firms are family owned and not listed in capital markets, owners tend to have higher influence in corporate decision making because they usually sit on company boards. This is the case in Bangladesh. Therefore, if business

owners do not have a positive mindset towards addressing climate change developed in line with institutional norms and rules, firms will see climate change as an extra cost or, at best, an opportunity for instant economic benefit, instead of responding to climate change issues for the long-term outcomes.

The national business systems approach builds on early institutionalism, providing a comprehensive operational framework for studying institutions (Whitley, 1987, 1992, Morgan et al 2010). The characteristics that make this framework distinct are, first, the degree to which it focuses on institutions at the national level and the idea of a coherent and relatively systematic national institutional framework that impacts firms; and second, the degree of agency that each firm is assumed to possess, and therefore the degree of importance given to the strategies and organizational structures of firms and the variety of ways in which they respond to institutional and market pressures in a global context (Rana and Morgan 2019; Rana and Allen 2018). This approach posits that institutions are constructed and re-constructed through their continuous interactions with firms and other actors, leading to a coherent system that shapes companies' structures, strategies, motivations, and capabilities to adapt to, and compete in, changing conditions (Rana, 2015).

For example, the UN's climate change agenda has contributed to change in many national markets. Variations in the readiness and ability to create an enabling capacity among national institutions will make the national market and firms either more or less competitive. For instance, in a collaborative business system, such as Denmark's, where state institutions are dynamic and highly efficient, firms are likely to be more efficient in responding to the climate change agenda in terms of product development, process reconfiguration, and marketing as compared to firms based in incoherent and fragmented business systems, such as Bangladesh's. In the latter type of business system, firms do not receive support from institutions of similar quality to those present in collaborative business systems. Thus, Danish firms are likely to have a competitive advantage over Bangladeshi companies. For example, Danish energy firms are more competitive in renewable and green energy production because national institutions, over the last forty years, have provided supportive policies and incentives to boost research, education, and incentives for firms to catch up with the cutting edge of renewable and green energy technologies.

The business systems approach emphasizes how globalization and internationalization may change firms and institutions. Thus, it considers how firms which exist in both national contexts and global networks are influenced by international phenomena, and collectively implement creative responses to changing markets and institutions (Rana and Morgan 2019). It takes the variable nature of firms into consideration, which the GVC literature does not tend to, and considers how institutions co-constitute firms, which the IB literature does not tend to. Often, rules are not developed at all by state institutions in the Global South: firms there often apply climate change adaptation strategies in response to the requirements of Global North buyers. This eventually influences states to form new rules due to pressures from global actors and local suppliers to international brands. Thus, local firms, in support of their western business partners and multilateral institutions, including donor agencies, are the initiators of climate-change adaptation. This is the case for the practice of the circular economy in the Bangladeshi garment industry, which was initiated by the P4G (Pioneering green partnership) and Global Fashion Agenda, with the government not having designed the policies and regulations as of the time of writing.

Table 1 sets out the proximate/formal and background/informal institutions; it illustrates the business system characteristics of firms that future studies on sustainability and climate change can consider in their analyses (See, Whately 1992; Rana 2015).

Table.1 Institutional Features Conditioning Firm Characteristics on Climate Change and Sustainability Strategies

Institutional Features	Description
Norms governing trust and authority relationships.	<ul style="list-style-type: none"> • Trust in formal institutions and interaction-based relationships to support climate change strategy adoption. • Importance of social capital in accessing resources, information, and justice for achieving sustainability goals • Authority hierarchy governing the degree of autonomy and power given to subordinates for independent decision making
Rationales and logics affecting decisions and justifications.	<ul style="list-style-type: none"> • Both material and ideational logics affecting decisions over costs, technology features, production and operation features, interaction features and sustainability/climate change features.
State structures and policies	<ul style="list-style-type: none"> • Degree of dominance and directive role of the state in response to adapting and mitigating climate change issues across industries • Degree of complementarity and collaboration between state organs and between firms/business groups and state organs/policies.

	<ul style="list-style-type: none"> • State encouragement of intermediary organizations in developing and implementing economic policies on sustainability and climate change-related initiatives and research.
Financial system	<ul style="list-style-type: none"> • Size, liquidity, and significance of capital markets and their roles in reconfiguring and adopting long-term technological capacities and science-based targets on climate change mitigation. • Dominance and support of bank-based financing vs capital market-based financing (e.g., the presence of a large pension fund can make a difference in facilitating long-term investment for sustainability-focused transformation by firms).
Labour system	<ul style="list-style-type: none"> • Effectiveness of the public skills development and certification system on sustainability and climate change knowledge and skills • Quality of education and research system. • Strength of employer and labour federations and their role in coordinating bargaining power and employee rights in the context of green transformation and re-skilling.
Firm Characteristics	
Nature of ownership and governance of firms	<ul style="list-style-type: none"> • The degree to which family-owned, state-owned, foundation-owned, or public-limited companies are dominant and how they integrate sustainability agendas in their corporate strategies (i.e., both environmental, social, and economic agenda). • The degree to which private managerial hierarchies (salaried managers) coordinate economic activities as opposed to owners, and how the degree of autonomy delegated to managers allows them to take risks to undertake innovative and long-term strategies for meeting the climate-change agenda. • The degree to which firms are networked with foreign firms (e.g., HQ-subsidary relationships, joint ventures, licencing, arm's length relationships in the GVC), and how the agency (power) and nature of control by the lead firms/HQ in the network plays a role in adopting the climate change agenda in the management and operation of firms. • The degree to which the specialization of managerial capabilities and activities within authority hierarchies contribute to resource and operation reconfiguration towards the sustainability agenda. • The degree to which risks are managed through mutual dependence with business partners, complementary institutions/intermediaries, and employees in transforming the operation and structure of firms towards achieving sustainability goals. • The degree to which large conglomerates (domestic and foreign) are dominant and proactive in bringing new knowledge and resources for achieving sustainability capability, and how their agency co-develops new policies to mitigate the challenges of climate change.
Nature of the networks and relationships between firms	<ul style="list-style-type: none"> • The extent of long-term co-operative relations between firms within and between sectors/industries, providing resource dependency opportunities and complementarity in achieving sustainability goals. • The significance of intermediaries/supporting firms and institutions in the coordination of market transactions and efficiency in the business model reconfiguration. • Stability, integration and efficiency of business groups/associations in formulating coherent and indiscriminate policies for all types of firms to gain sustainability capabilities. • Dependence of co-operative relations on personal ties and trust; and/or the degree of dependency on social capital for accessing compatible resources for achieving sustainability goals.

<p>The internal management dynamics (i.e. The nature of management in organizations)</p>	<ul style="list-style-type: none"> • The degree to which the formalization of authority and subordination relationships in firms contributes to the implementation of new routines and strategies for achieving sustainability goals. • Task, skill, and role specialization and individualization suitable for promoting adaptation to climate change. • The degree to which the differentiation of authority roles and the decentralization of operational control contribute to the development and implementation of innovative strategies for adapting to climate change and social sustainability agenda. • The degree to which the distance and superiority of managers affect the voices, new ideas, and decisions from the bottom level of operations (supervisors, workers) in developing new strategies on environmental and social sustainability. • The extent to which employer-employee commitment (i.e., long-term/short-term or the nature of the incentive structure) contributes to transforming the organizational structure to achieve sustainability goals.
--	--

Our rationale for adopting a business systems perspective is its focus on how firms are shaped by national-level institutions, as the institutions at this level tend to be strongest and have the most significant effect on the overall economic outcomes of society (Allen et al., 2021). Nevertheless, this perspective also recognizes that there can be regional or sectoral differences, depending on the state’s policies and structures (see Whitley 2005). For instance, in a unitary state system (e.g., Denmark), rules and incentive structures apply equally for all firms in the country. However, countries with a federal state system, such as China’s, may have different incentive structures for different industries in different provinces. This can encourage some industries to reconfigure more quickly than others by taking advantage of the differentiated rules and incentive structures at the regional/provincial level. The circular economy districts established in various regions in China are good examples of regional institutional differences that affect climate change strategies; these include Guangzhou Huadu in Guangdong Province in Southern China and Suzhou New District in Jiangsu Province of Eastern China.

The business systems perspective argues that the interactions between firms and institutions give rise to a particular firm capability, with institutions acting as systemic influences on firms, enabling them to pursue some strategies more readily than other strategies (Whitley 1992, 1999, 2010; Redding, 2005).

Climate change issues primarily affect the following three characteristics of firms seeking to gain competitive advantage in a business system (Rana, 2015, 2014) (see, firm characteristics in Table 1):

- i) *the nature of firms’ ownership structure and governance,*
- ii) *the nature of inter-firm collaboration and relationships, and*

- iii) *the nature of management in organizations, including the vision, aim and commitment for change.*

Gaining a competitive advantage or improving sustainability will, therefore, depend on how coherent the state policy and regulatory supports are for adaptation and reconfiguration; how complementary the financial institutions are for the reconfiguration of R&D, production, technology, and marketing; and how efficient and supportive the labour institutions (including the education system) are in renewing and restructuring the skill development and employment systems.

Climate change issues present challenges for garment suppliers in Bangladesh, which they need to address if they are to remain competitive; for example, buyers from Western countries may choose not to purchase products from Bangladeshi suppliers if they fail to maintain or meet the required climate standards. Conversely, a climate change perspective can also be a source of competitive advantage if companies can obtain or create the relevant knowledge and technology and can reconfigure their organizational capabilities in pursuit of climate change issues faster than their competitors. This ability of the firm will reflect how it can implement green production processes to make more environment-friendly products, have an efficient cost structure and supply chain, and develop differentiation strategies on sustainability (Ivang and Rana 2019).

** Institutionalism in Practice**

There are four key conditions in an institutional system that, when present, can hinder firms' ability to adapt to climate change: i) when state agencies cannot develop consistent policies and regulations with the same speed with which the global rules are framed and enacted; ii) when the state cannot enforce policies and regulations efficiently or cannot create or reform complementary institutions (such as financial and labour institutions); iii) when state institutions fail to adequately collaborate with firms and support them to reconfigure themselves for climate change mitigation and adaptation; and iv) when there is a lack of socially and environmentally conscious consumers.

The final condition requires a high-quality education system and background cultural institutions that encourage such an institutional norm in society. Through these institutions, the state influences consumers to develop the norms to consume and legitimize sustainable products. Unless consumers' minds are ready to consume environmentally sustainable products, and they have the ability and willingness to pay for them, firms will find it difficult to develop sustainable products or reconfigure

their processes so that they are less environmentally damaging. In such a context, gaining a competitive advantage in the global market would be difficult as reconfiguring product design (i.e., R&D), technology, manufacturing, and supply chains would be too expensive and cumbersome. For example, environmental policy in Denmark provides tax waivers to house owners to renovate and improve the energy efficiency of their houses by changing roofs and windows. As this policy encourages house owners to buy energy-efficient products, it creates a national market for companies working in renewable energy and sustainable roofs and windows, helping Danish companies to compete in the global market.

A strong and coherent institutional system provides innovation opportunities for firms through research budgets; strong collaboration with firms to tackle the climate change challenges they face; a high level of trust in collaboration between organizations, universities, and state institutions; and high-level managerial and scientific knowledge produced at universities (Whitley, 2007). Trust and commitment in organizations regarding change and adaptation are, therefore, created through institutional policies, incentives, and a credible education and research system. For example, Bangladeshi apparel companies do not tend to collaborate with universities for product, process, and capacity development and innovation due to low trust. The sole exception to this is task-specific consultancy works. This, arguably, hampers firms' innovation capabilities in relation to climate change mitigation.

Such collaboration is unlikely to improve unless state policy provides research grants that focus on the challenges that companies' face, and encourage firms and universities to collaborate. Collaboration between industry and academia also requires universities to have high-class research and innovation capabilities that firms are aware of and can access. Firms in business systems that lack such collaboration are more likely to experience difficulties in reconfiguring their capabilities for quick adaptation to climate change and are less able to develop local solutions using local knowledge (Witt & Redding, 2014).

A business systems perspective looks for multiple logics and rationalities in the relationships between institutional systems and firm behaviour. Studies focusing on IB and GVC that seek to explain organizations' climate change strategies can consider this perspective to gain greater insights. In comparison, the new institutionalism in economics based on North's (1991) work primarily focuses on the 'constraint' dimension of institutions and overlooks how firms can actively change or

complement institutional voids or weak institutional systems (Jackson and Deeg, 2008; Whitley, 2010; Rana and Allen 2021b).

Future Studies on climate change can identify certain key institutions and their characteristics that shape resources for firms and the opportunities and constraints under which firms operate – e.g. the state, the financial system, the skills and training system, and labour market regulations and trade union formation (e.g., monopolies or oligopolies, restrictions on labour supply, or weak trade unions that are politically motivated and fragmented). The background cultural system (i.e. norms, authority, identity, rationales) is also highly significant (see Table 1).

For example, it is important to consider whether cultural relations are predominantly individualistic, based on opportunism and economic incentives, or collective, relying on shared notions of community, trust, and social capital. Where non-market relations are predominant, studies can ask what roles the three main actors – the state, employers, and labour – play in shaping institutions and how they affect climate change strategies at the national and firm levels. Where the state, employers, and labour and, in some cases, NGOs or trade unions, which may act on behalf of labour (e.g., in Northern European economies), the outcome is a form of corporatist capitalism (Whitley, 1999). This may be highly inclusive and network-based (i.e., aiming to treat all workers and firms in the economy in the same way), as in Denmark, which resembles a collaborative network-based business system, or a collaborative, but slightly less inclusive collaborative business system, such as Germany that privileges export-sector employees and large conglomerates that have a significant influence on policy outcomes (Rana and Morgan, 2019). Compared to those in Germany, institutions in Denmark tend to enable labour representatives to have a greater influence on policy; consequently, climate change strategies tend to include labour perspectives more (e.g., health and safety, and skill development), and technological adaptation and research has greater emphasis in educational institutions (Morgan, Whitley, & Moen, 2005).

Where labour is absent from the dominant coalition, three broad climate-change strategies are possible. First, the state is dominant and encourages particular forms of business to emerge, often based on the exchange of political favour (e.g., South Korea, India). Consequently, climate change policies from the state dominate firms' work to reconfigure themselves to adapt to climate change. The second is where the state and businesses tend to be equally powerful and negotiate co-operation amongst themselves (e.g., Japan) (Rana and Morgan 2019). In this context, firms and the state co-evolve climate change policies and strategies. The labour perspective is reflected in climate-change

policies, while the education system focuses on high-level research and development on climate change issues, from which firms can benefit.

The third possibility is the one currently seen in Bangladesh. Here, institutional systems become incoherent and fragmented, and the country fails to develop an effective business system. In such a context, skill certification is weak and poorly organized, and thus the wages for specific skills are not well defined or consistent. Labour unions are politically oriented with low bargaining power in many areas, such as labour welfare and development, and thus NGOs step in to push for improved labour welfare. Workers and lower-level managers do not have a voice in strategic decisions, leading to poor labour management and top-down decision making on social sustainability and climate-change strategies. Although specific policies on tax incentives and low-cost capital are offered for climate change adaptation, access to these schemes often depends on social capital and affiliation with political executives. In such a situation, accessing resources and government schemes requires employers to have strong ties to political elites. Consequently, firms' growth and ability to reconfigure for climate-change adaptation is dependent upon these relationships. Educational institutions rarely offer high-level market-oriented skills and research knowledge for catching up with the cutting-edge technology required for climate-change adaptation (Rana and Allen 2021b). Therefore, firms in such business systems view climate-change strategies from the cost and legitimacy perspectives, instead of as an opportunity to develop long-term sustainable competitive advantage.

In fragmented business systems, firms' responses to climate change in IB and GVC depend on how companies build their strategies in line with national and global institutional systems and how they act as institutional entrepreneurs to change or complement the institutional gaps to grow and sustain in business. However, firms need to fulfil the requirements of Scope 3 emissions, as defined by the UN global compact – a currently predominant phenomenon – to adapt to climate change issues. Scope 3 emissions are the result of activities from assets that are not owned or controlled by the reporting organization; however, those activities outside the organization in its global value chain indirectly impact on emissions. Scope 3 emissions include all sources not within scope 1 and 2 emissions; these latter two cover the GHG emissions that a company makes directly (scope 1), such as its combustion-engine vehicles or gas-powered heating, as well as those it makes indirectly (scope 2), such as the electricity it buys to run its computers or cool buildings. Scope 3 emissions arise up and down the company's value chain and relate to the emissions that its suppliers and buyers make. Scope 3

emissions, therefore, often arise because of MNEs' internationalization strategies and their role within GVCs.

How companies respond to the need to reduce scope-3 emissions reflect the type of capitalism that they operate within. In particular, there are two critical issues that firms should consider when addressing their climate change impact.

- First, a firm needs to look at the GVC to map out the critical-value generating points that emit the most CO₂ and take the necessary steps to reduce or eliminate these emissions. Global firms that have internalized their value chains (Dunning 1998) are likely to be able to implement such efforts more quickly by adopting new technology and reconfiguring the process of value creation, value delivery, and value proposition across the GVC. This may be relatively easy and less time consuming because although the value chain for such a firm is internationally dispersed, it is contained within the firm's organizational boundaries. However, firms may not be able to internalize some value-creating activities, such as transportation, and distribution.

Conversely, firms that tend to outsource production and supply are likely to find it more difficult to reduce their environmental impacts because all suppliers across borders may not have equal capabilities and resources. They are, furthermore, embedded in institutional contexts that may lack the necessary complementarity to reconfigure operations in pursuit of GHG emissions reduction.

- Second, firms should prioritize a circular economy that builds on regenerative and restorative mechanisms using sold products and/or waste as the input for the further production of new products. This can significantly reduce CO₂/GHG emissions, water consumption, and 'fugitive emissions', such as unintentional and undesirable emission, leakage, or discharge of toxic gases (Ivang and Rana 2019). As a comprehensive strategy, firms can also develop their own methods or collaborate with relevant firms for carbon capture (e.g., Power2X business) and storage using a set of technologies in power plants, transportation, and production systems. The stored carbon can be then traded in an emissions trading scheme, which can offset firms' CO₂ emission balance in the GVC and provide a competitive advantage by creating a new source of revenue, provided firms have the requisite knowledge, technology, and managerial capability.

For example, taking advantage of institutional supports and incentives, Power2X, in collaboration with researchers from Aalborg University, Denmark, and local industries, built a complete industrial-scale electricity-to-methanol plant in Aalborg. The plant makes eMethanol from CO₂ (which is emitted by various industries in the area) and hydrogen using renewable electricity. This technology can make heavy transport greener, because transport in general (ships, lorries, trains, and aircraft) accounts for more than half of CO₂ emissions from the transport sector. At the same time, it provides a complementary advantage to other firms in re-using captured and stored CO₂, which contributes to green transportation that the possibility for this kind of strategy emerges from an institutional system with high complementarity (i.e., effective complementarity and collaboration between a technology company, research institution, and local firms (AAU News 2021)). This sort of complementarity is insufficient or absent in a fragmented institutional system, such as that found in Bangladesh.

Both strategies require institutional complementarity and path-dependency to accomplish the corporate goal regarding climate change. Firms' institutional settings fundamentally shape firms' opportunities in terms of how they use capital, labour, and technology for climate change adaptation. The business systems and institutionalist research imply that there is a limited number of ways in which institutions cohere, to a greater or lesser extent, into a 'national business systems'. This can be explained in many ways, but generally relies on two key concepts: institutional complementarity and path dependency.

The first concept, institutional complementarity (Deeg, 2005; Whitley, 2005; Morgan, 2007), draws attention to how the benefits of one institution are greater if other institutions encourage the same type of actor behaviour. For instance, combining a labour system that is based on long-term employment with financial markets that are highly volatile and subject senior managers to short-term financial pressures are likely to be difficult to combine. The ability to expand or contract the labour force is a major way in which managers can respond to short-term financial pressures, and can manage how changes in the economy influence their firm's share price. Therefore, if companies are subjected to short-term financial performance goals, offering lifetime employment for most employees in the firm will be extremely difficult. Long-term employment policies and investment for sustainable product and process development require long-term commitment and finance.

Similarly, firms in institutional systems characterized by a lack of trust between managers and workers will face severe challenges to sustain long-term employment policies. Firms will, as a result,

be shaped by their home-country institutional setting; this is true for both firm strategy in general, and climate change, in particular.

The following case goes some way towards explaining the concept of institutional complementarity in firms' strategy on climate change and sustainability.

When the extent of the climate crisis first became apparent, Denmark undertook consistent policies to support firms in reconfiguring their production processes, energy usage, and products to adapt to climate change challenges. In 2014, it developed long-term policies and strategies, such as the "Danish Nature Policy" (Naturplan Danmark) and "Global Climate Action Strategy: a green and sustainable world (klimastrategi)", aiming to reduce emissions by 70 per cent by 2030 and achieve climate neutrality by 2050. To strengthen the focus on adaptation and sustainable development, state organizations co-operated with the private sector on green solutions. This was complemented by two subsequent policies, "Green Growth in Denmark" and "Green Future Fund", aiming to generate up to EUR 15 billion for financing green companies and projects for climate change adaptation and reconfiguration (State of Green, 2021). Such a highly ambitious set of goals and policies could never be achieved without a skilled workforce and research outputs; in pursuing this ambition, Danish research grant authorities and universities have prioritized sustainability and the climate change agenda in their education and research to complement firms' restructuring and adaptation strategies. As a result, Danish firms can now reduce GHG emissions, store and trade CO₂ using local innovative technology, and use green energy throughout the value chain – practices for which Denmark already has earned a strong reputation.

In contrast, although Bangladesh has developed some policies and strategies for transforming the energy sector, it currently relies on fossil fuel, which generate more than two thirds of the total energy produced; less than 2 per cent of electricity comes from renewable sources, primarily solar energy. Policy implications, however, face difficulties in achieving the goals due to a lack of complementarity and collaboration between several ministries (i.e., those responsible for developing policies and those responsible for implementing them), research institutions, business groups, and financial systems. High-level bureaucratic inefficiency, a lack of green funds and research grants and the absence of a long-term vision and policy contribute to ineffective institutional efforts to support firms' abilities to adapt to climate change. Although some policy initiatives, such as schemes that direct banks to disburse loans to firms for climate change adaptation, have been implemented, they are often applied in a discriminatory way, depending on who owns the firm and how closely the owners are networked

with political elites. Recently, Bangladesh's Infrastructure Development Company Ltd (Idcol) received USD256.5m from the UN's Green Climate Fund to promote private sector investment through the adoption of energy-saving technologies and equipment for the textile and readymade garment sectors (Rahman, 2020). However, large textile firms with adequate knowledge of technology and managerial capability are likely to receive this discounted loan for climate change adaptation, creating a one-sided benefit for big players due to discriminatory practices in the institutional system.

The second key concept is path dependency (Deeg, 2005; Morgan, 2007). Once actors invest and follow existing institutional practices and norms, they are often reluctant to change because they may have strongly embedded routines. They also tend to adapt to change in an incremental way unless a major crisis occurs or pressure is exerted by a different set of institutions or the impetus for change comes from some external source, such as competition or political upheaval.

Institutional complementarities and path dependencies vary considerably, not just in the degree to which they exist, but also in how far and in what ways they are present in society. In some incoherent and dysfunctional institutional systems, such as Bangladesh's, some complementarities can be negative, i.e. they reinforce weak firms and weak economic development, locking institutions and firms into a low-performance equilibrium. Equally, complementarities can be positive for some sectors in society and less so for others, creating a discriminatory or varied institutionally conditioned performance for different firms (Rana and Allen 2021b).

This explains why some societies in the Global North may specialize in different sectors, depending on the sorts of complementarities that are strongest. For example, Danish firms are particularly strong in the green energy sector and related industries (ventilation, cooling, pumps). Long-term finance for sustainable growth from pension funds and foundation-led investments support these firms. This example illustrates how firms' strategies, capabilities, and structures in an institutional system evolve for endogenous reasons as much as exogenous ones – i.e., the rise of new sectors or new pressures from global and national institutions such as COP26 and the UN Sustainability Goals. These external pressures/incentives can cause the decline and re-organization of mature sectors and pose difficulties in developing supporting institutions that affect the growth and survival of the existing business models followed by firms in a particular industry (Boje and Rana 2022). The business systems framework enables analyses to more readily include the factors discussed above than do other theories. However, combining insights from the business systems framework with typical analytical

foci in IB or GVC studies potentially will provide the most cogent explanation of firms' responses to the climate emergency.

<a> Climate Change Strategies in IB and GVC Research:

The IB and GVC literatures have not, so far, focused much attention on climate change strategies. International business research focuses primarily on MNE governance, performance, and competitive advantage in cross-border contexts. Studies of GVCs often examine how lead firms in global value networks/global production networks drive value-creating activities and the upgrading of value chain actors (Kostova, Marano, Tallman, 2016; Ponte, Gereffi and Raj-Reichert, 2019). Despite these differences, there is a similarity between IB and GVC research. Both focus on the same boundary structure in which organizations interact (i.e., in global and cross-border contexts) and both aim to explain a) how organizations are interlinked with multiple actors in global business operations to create value and b) how actors across countries co-ordinate economic activities, which are embedded in various national institutional contexts and influence socio-economic development (Gereffi, 2002, 2018). However, the underlying rationales that explain how firms gain and control competitive competencies in value-creating processes across countries make these two approaches different in their application. Aware of these differences, we present a discussion of how climate change strategies from an institutional perspective can be explained in the IB and GVC domains.

** Climate Change Strategies in International Business:**

Despite the increasing attention being paid to the climate change agenda and the institutional perspective, IB studies have overlooked how institutions in home and host contexts affect MNEs' governance and ownership to reconfigure capabilities for climate change adaptation (Doz and Prahalad, 1980; Allen, Rana, & Liu, 2019). Although the 'institutional context' is an important dimension in IB literature (see Peng, Wang, & Jiang, 2008), IB studies have tended to downplay suppliers' perspectives on GVCs from the Global South (Developing countries in Asia) that are linked with foreign subsidiaries (i.e. with buyers) from the Global North. This lack of focus on how Global South suppliers are linked to different foreign subsidiaries results, partially, from how the IB literature tends to neglect how the institutions in the lead firm's home-country influence the nature of that company and its relationship to its subsidiaries and suppliers. In particular, IB research does not

typically examine the GHG emissions of their subsidiaries and suppliers that are connected across borders.

Using the Ownership, Location, and Internalization (OLI) paradigm, IB studies can explain climate change strategies in two types of relationship contexts: i) HQ-subsidary and ii) subsidiary-supplier relationships.

Dunning (2000) argues, using an OLI approach, for the rationality of MNEs' ownership and location advantages and the decision for internalization or externalization in cross-border operations (i.e., either internalizing ownership that has full control over operations or externalizing by outsourcing). The OLI model contends that a company must possess net firm- and/or country-specific ownership advantages over other firms from other countries in serving a particular national market. In the context of a climate change agenda, ownership advantages may stem from institutional incentives and/or institutional complementarities, such as managerial and technology competencies embedded in the local education system. Companies may be able to draw on these institutionally condition resources to make themselves ready for climate change adaptation. If these advantages do not already exist in the local context, firms may employ strategies to acquire them, using internationalization (i.e., through FDI, joint ventures, licensing, or strategic alliances).

There are two scenarios that may negatively affect MNEs' abilities to integrate a climate change agenda into their operations:

- First, the financial pressures on investors/owners reduce their ability to adopt a positive mindset towards addressing climate change issues, and thus firms are not willing to accept risk in reconfiguring their operations for long-term gains.
- Second, management and employees are not motivated or willing to accept the risk arising from the reconfiguration process; this applies to the context where managers and workers view this change as a threat to their jobs or as unimportant. Similarly, if an MNE's headquarters does not support the change process in subsidiaries or if suppliers work in less formalized institutional systems, senior managers may find it difficult to transition their organizations away from fossil fuels at all or partially. The inability to adapt to climate is likely to occur most when the MNE's policy is not consistently evolved to reconfigure subsidiaries' organizational capabilities in terms of new skills and technology development that requires additional investment in the host context.

However, firms may be able to develop new capabilities that help them adopt more environmentally sustainable practices if the corporate governance conditions enable it. For example, H&M Foundation, a part of H&M, in consistent with H&M's corporate strategy entered an international strategic partnership with the Hong Kong Research Institute of Textiles and Apparel (HKRITA) and invested millions of dollars in developing a first-of-its-kind textile recycling machine called 'hydrothermal recycling technology'. Hydrothermal treatment is a solution to the recycling of blended textiles and garments that supports a circular approach to manufacturing and recycling. This will help H&M to reduce CO₂ emissions and water consumption in its production operations across GVCs.

The Partnership for Cleaner Textiles (PaCT), a programme funded by the International Finance Corporation (IFC), a global institution with which fashion multinationals are networked, helps Bangladeshi garment suppliers to adopt cleaner production practices. This initiative demonstrates how institutions can constitute firms, changing their natures and capabilities. This initiative, which provides a useful example for the global supplier perspective in IB, has helped 338 factories to reduce freshwater consumption by 25 million m³ a year and wastewater discharge by 21.08 million m³ a year. As a result, these suppliers now can save 2.5 million MWh/year in energy and avoid CO₂ emissions of up to 489,796 tons per year. PaCT assists factories to recover chemicals, such as salt and caustic soda, from production processes, and provides low-cost green investment funds to garment suppliers from the USD200 million Green Transformation Fund, which is supported by IFC group and World Bank as part of UN sustainability green fund (PACT 2022). This programme supports suppliers to develop dynamic capabilities to reconfigure their competencies and comply with the new requirements that MNE buyers, such as H&M, emphasize for their suppliers. In this regard, the global climate change initiatives undertaken by global institutions in collaboration with MNEs, suppliers, local institutions, and civil society complement suppliers' reconfigurational processes (Rana and Tajuddin, 2021).

IB studies tend to overlook the role of national and transnational institutions, such as the Partnership for Cleaner Textiles in MNEs' suppliers' adaptation to the effects of climate change. The supply-side actors in manufacturing industries, particularly the component suppliers and manufacturers, are often in emerging economies. They are generally seen as rule takers or rule followers and tend to be less powerful due to their limited organizational capabilities and market influence compared to their

counterparts that control key resources, such as brands. This is where the tension appears, as suppliers and MNEs experience unequal institutional conditions that result in different capabilities and strategies to mitigate and adapt to climate change challenges (Okereke, 2006). Below we discuss OLI from the perspective of climate change strategies.

❖ *In OLI, the concept of Ownership* has been extended to different dimensions, such as asset advantage ownership (Oa) and transactional advantage ownership (Ot) (Dunning 1977, 1983, 2004). Oa signifies the exclusive possession and use of certain kinds of income-generating assets, and Ot considers a firm's ability to co-ordinate separate value-adding activities across national boundaries and to reduce environmental (i.e. climate change and socio-political) and foreign exchange risks (Dunning, 1988a: 25). Ownership can be analysed in several ways, including the cognitive perspective (ability and access to information and knowledge about the assets); the equity vs non-equity perspective (cooperative relations-based); and the tangible vs intangible asset-based perspective (intellectual and relational assets) (Eden and Dai, 2010). Further, the OLI framework also emphasizes *institutional ownership advantages* (Oi), including both formal and informal institutional structures, incentives, and enforcement mechanisms (constraints) that shape firm choices and performances in relation to climate change impact (Dunning and Lundan, 2008a, 2008b, 2010).

For instance, the Swedish fashion multinational H&M has been a forerunner in adopting climate change strategies in its corporate strategies, global sourcing, and marketing. In its downstream operations, H&M has promoted sustainable fashion and consumption and has taken measures to reduce CO₂ emissions, water consumption, and chemical waste. It ensures that the operations across its upstream (designing, component sourcing, production, and shipment) and downstream (sales and distribution) value networks consistently adopt climate change mitigation strategies. The challenge in this approach lies in reorganizing and governing upstream operations in line with downstream operations, primarily because its upstream operations are externalized (i.e., it sources apparel products from China, Bangladesh, Vietnam, India, Turkey, Indonesia, etc.) (Rana and Allen 2021a). Since supplier countries have relatively weak institutional settings that tend to undermine efforts to address fire safety, water, and air pollution issues, H&M has developed a restrictive form of governance and collaborates with suppliers to ensure employee wellbeing and climate change adaptation. It has developed a long-term plan to curb climate change challenges in supply and

production. H&M has effectively implemented a circular economy model in parallel with a linear business model in global production networks by using advantages conferred by asset ownership, transaction ownership, and institutional ownership in the Swedish institutional system (Rana and Tajuddin, 2021). In the Swedish institutional system, which is a collaborative and networked business system, family-owned firms tend to pursue long-term sustainable strategies to protect their family reputation, while large firms can source long-term finance from financial institutions that access large-volume pension funds with an aim of investing in sustainability-driven projects. H&M, therefore, has been able to invest heavily in recycling technology, developing a mechanism to collect used clothes and produce artificial cellulosic fibres, reduce CO₂ emissions and water consumption amongst its suppliers. This is incentivizing and encouraging suppliers to transform production processes and use environmentally unsustainable components in garment manufacturing. This strategy consistently contributes to the reduction of CO₂ emissions, water consumption, and waste disposal in the long run. H&M's institutional advantages and corporate-ownership advantages in terms of knowledge, managerial skills, and finance, together with its long-term investment commitment, have allowed the company to reconfigure its internalized activities and externalized manufacturing operations (though partly) in developing countries (i.e., its globally dispersed supplier networks) (Rana and Tajuddin, 2021). In contrast to the GVC literature, IB research has traditionally examined internalized operations, exploring how MNEs' strategies are affected by ownership advantages, location advantages, and internalisation advantages, although they are not necessarily relating climate change strategies across countries.

- ❖ *'L' (Location) advantages (where to invest?)* present that the net ownership advantages must be profitably exploited in the context of conditions (skills, knowledge, markets, raw materials, technologies etc.) outside the home country and in the host country (Eden and Dai, 2010). Using the firm perspective in international production, John Dunning emphasizes the institutional complementarity in which transaction costs (Williamson 1975) have been the central argument of the OLI eclectic paradigm because differences in institutional contexts produce different kinds of transaction costs. Therefore, location advantages depend on institutional characteristics, and transaction costs impact how subsidiaries and their supply chain actors can adopt climate change strategies. MNEs are resource-rich, thus they may undertake several strategic options (including FDI, strategic alliances, and franchising) and market transactions when they expand globally. As

a result, different factor conditions will apply as to how climate change strategies will be employed in different locations.

For example, following Facebook and Apple, the tech giant Google has invested USD4.5 billion in renewable energy-driven data centres in Fredericia, Denmark. Its reason for internationalizing its data centres is that Denmark has the locational advantage of institutional incentives for renewable energy, state-of-the-art renewable energy infrastructure, and a global reputation as a green energy country, helping tech giants to achieve global legitimacy and net-zero carbon emission goals.

- ❖ *'Internalization' (I) advantages (how to invest?)* are those which represent benefits for a firm to use its ownership advantages inside its organizational structure rather than leasing or outsourcing them. Building on the resource-based view and transactional cost theory, Dunning points to the motivations (i.e., the willingness of owners and management) and capabilities of MNEs as factors that drive internalization (I) decisions, i.e. what to internalize and what to externalize. Thus, internalization strategies and location choices are closely dependent on the sum of ownership advantages $[O_a + O_t + O_i]$ (Eden and Dai, 2010). In explaining the internalization concept, Buckley and Strange (2011) point to two important issues, namely the cost of governance and the risks of governance within the hierarchy of the firm and the markets (external institutional settings), which are critical to climate change strategies.

MNEs tend to have three kinds of problems when making long-term strategic decisions on climate change issues, namely the information/knowledge problem, the co-ordination problem, and the motivation problem (from managers', subsidiaries', or stakeholders' point of view). The way in which these problems are handled depends on the organizational norms and practices around risk, organizational capabilities, and visions as well as the institutional contexts in which the firm is embedded. The choice to either take or avoid risks depends on the comparative costs of external and internal governance, which are necessarily influenced by the internal and external transaction costs within the institutional context (Buckley, 1993).

For instance, Spanish fashion multinational Inditex internalizes 53 per cent of its 8,543 supplying factories worldwide; these are in relatively close proximity to its HQ in Arteixo, A Coruña, Spain. This is done to mitigate the risk inherent in the need to supply their shops to meet fast

fashion trends and to have the reconfiguration capability needed to respond to changes in the market and regulations, including those related to climate change. As it internalizes such a large amount of production, Inditex can quickly implement climate change strategies in its supply chain and operations based on the ownership advantages it possesses. Thus, it has been able to reduce its energy consumption and GHG emissions more quickly through strong coordination within its internalized network in Spain. Specifically, 81 per cent of Inditex's global energy consumption (HQ production, logistics, and stores) comes from clean sources, and senior managers in the firm are committed to increase this to 100 per cent by the end of 2022. Its current focus is on transforming the energy consumption of its suppliers that are externalized in the value chain.

Inditex provides a useful contrast to H&M suppliers outside its ownership structure. This requires H&M to form collaborative relationships with externalized suppliers to support them in transforming their energy consumption practices, which takes more time and strategic effort.

However, certain countries rely heavily on fossil fuels in their energy mix. For instance, 95 per cent of Bangladesh's energy comes from fossil fuels, complicating suppliers' adoption of green energy strategies in their operations. In contrast to firms based in Denmark, such suppliers in Bangladesh will, therefore, have difficulty in transforming their energy consumption from highly polluting to green energy. Climate change adaptation processes that require the reconfiguration of value-creating activities result in tension due to differences in cognition (or mindset that determines which aspect of the climate change agenda to prioritize), institutional conditions, and firm capabilities. It is true that ownership advantages give firms a competitive advantage through certain location advantages, but it may also pose some disadvantages when firms wish to change before the institutions to support that transition have developed sufficiently (Cantwell & Mudambi, 2005; Nachum & Zaheer, 2005; Nohria & Ghoshal, 1997). Therefore, in general, the IB literature would benefit from integrating key insights from the business systems framework into analyses of how firms respond to climate change. In particular, ensuring that home and host country institutions are fully included in analyses so that the context within which firms develop new capabilities is important. This will require 1) a solid understanding of how home-country institutions constitute firms, both lead firms and suppliers, and 2) an awareness of how firms' relationships with other organizations will vary as a result, affecting their abilities to achieve climate change objectives.

 Climate Change Strategies in the Global Value Chains:

The concept of the GVC refers to the full range of activities embedded in a variety of institutional contexts that different economic actors carry out to bring a product or service from conception to end-use and recycling (Ponte et al., 2019). This concept helps map activities that are geographically dispersed and explains the role of lead firms and formal institutions (such as national and transnational institutions) in the economic and social upgrading of actors in the value chain (Gereffi, Humphrey, and Sturgeon, 2005). These activities include design, production, processing, assembly, distribution, maintenance/repair, marketing, finance, consumer services, and disposal/recycling.

Global value chain studies tend to assume that lead firms from all countries outsource or externalize some activities to suppliers (Sako and Zylberberg, 2017). However, this may not always be the case: several Danish apparel SMEs have internalized their supply chains in Italy, Poland, and Romania. Therefore, studies examining the impact of climate change can examine the role of actors in a hierarchical network in the GVC or a network defined by relational governance with an arm's length relationship, which is typically externalized, e.g. H&M. This neglect of how firms' actions vary stems, in part, from the GVC literature's approach to institutions: it tends to downplay how the institutions in lead firms' countries vary and how those institutions co-constitute firms, leading to differences in the strategic priorities and capabilities.

There is a clear power imbalance in the governance structure between SME brands and their suppliers, as well as between MNEs and their suppliers, due to differences in trade volumes, innovation competency, and suppliers' dependency on lead buyers (Khan, Lew, and Sinkovics, 2015; Lee and Gereffi, 2021). *Processes and power* in the global value network are key dimensions that climate change strategies should consider when explaining the strategic choices for MNEs or SMEs and the consequences that they can have for their suppliers' upgrading and reconfigurational capabilities.

There are two major issues that will affect GVC studies on climate change strategies.

❖ *Investment perspective on climate change strategies in GVCs:*

The reconfiguration of climate change strategies requires firms to have as much support from management and technology as they do from investment. There is a growing community of financial institutions acting and demonstrating leadership on climate change initiatives. Some institutions are allocating capital and driving financial flows towards more low-carbon and climate-resilient

activities. Others are pursuing strategies to change corporate behaviour, influencing policy outcomes by building the data and tools required to embed climate-change issues into how the market functions.

For many developing countries, enhancing resilience means not only confronting the severe economic vulnerabilities stemming from a lack of export diversification and a dependence on a few industries in the GVC, but also adapting to increased exposure to environmental shocks, which can only be mitigated through organizational capability and long-term investment (Whitfield and Staritz, 2020). Many large MNEs have been planning to re-shore some activities within their GVCs to enhance resilience. Re-shoring is likely to reduce the existing power asymmetries between lead firms and their suppliers that moderate the efforts by governments in supply-side countries in the Global South to mitigate the effects of climate change.

The extent to which suppliers will be able to reconfigure their operations in response to climate change depends on the extent to which the institutions around them can change and support the transition process. Since Bangladesh generates most of its energy from fossil fuels, 152 large garment suppliers have recently constructed green factories and internalized the solar panel-based green energy system, partly financed by global institutions and the national climate fund. They have received LEED (Leadership in Energy and Environmental Design) certification, giving them more bargaining power to receive more orders at higher prices from western buyers in the GVC. However, small and medium-sized factories are under different resource and capability conditions since they have limitations in accessing finance from national and multilateral institutions.

An investment perspective on climate change strategy facilitates an assessment of the impact of foreign direct investment in GVCs and the roles that national and multilateral organizations play. To stimulate economic transformation through GVCs, policymakers and firms in developing countries need to better understand MNEs' business strategies, the internationalization pathways for domestic firms, and how climate policies can create a conducive environment for both local and international firms. The United Nations Conference on Trade and Development (UNCTAD) 2020 report reveals that the global sustainability and climate change funds have reached USD1.2-1.3 trillion, including USD260 billion of green bonds, USD105 billion of social bonds, and over USD900 billion of sustainability-themed equity funds (Zhan 2021). The global effort to mobilize investment to achieve the Sustainable Development Goals will change the future patterns of FDI globally, which will impact sources of financing, sectoral development, and geographical locations. However, a long-term national investment plan for technology and infrastructure development in relation to climate change

will also impact the degree to which the focal sectors in a country will be able to upgrade and compete in GVCs.

❖ *Emergent standards affecting climate-change adaptation strategies:*

Today's GVCs and the end-to-end processes that underpin activities, such as raw material extraction and processing, consumer fulfilment, and end-of-life disposal or recycling, have been built on a paradigm of localized production nodes and globalized flows. How the Fourth Industrial Revolution and emerging global standards will impact the role of production and restructure the paradigm in connection with climate change in GVCs remains a question to be investigated. The key emergent standards today typically come from global institutions, civil-society organizations, and technological breakthroughs, each of which continues to develop new requirements and policies in relation to climate change, consumption and disposal, artificial intelligence, and 3D production, global ethics, and labour rights. National governments and companies, therefore, need to rethink their policies and institutional ownership to create necessary transformations in GVCs for their industrial development and investment strategies.

Thus, studies should examine the opportunities for multi-stakeholder collaboration in national economies to build readiness and resilience in institutions that can play a role in next-generation sustainability in GVCs.

Global economic policies, especially trade and investment policies, are shifting from multilateral co-operation to regional and bilateral solutions. This is compounded by the shift in national economic policymaking through new industrial policies, including protectionism, digital governance, and standard building (i.e., compliance criteria) in relation to climate change mitigation. The aggravated systemic competition (in trade, investment, technology, etc.) between economic powers impacts firms' relationships in GVCs. For instance, the application of new technologies in global production networks by MNEs will have far-reaching consequences for the configuration of and governance in GVCs. These new technologies include robotics-enabled automation, AI-enhanced systems, and supply chain digitalization (including platforms, Internet of Things (IoT), blockchain, additive manufacturing, and mass customization) (Brun, Gereffi & Zhan, 2019).

While robotics-enabled automation can reduce wastage in production and enhance efficiency and productivity, AI-enhanced systems in supply chain management can record and analyse vast quantities of data from upstream and downstream operations and enable real-time analysis on

different parameters of climate change issues in relation to a range of value-adding activities across the globe. This technology suggests solutions for optimized supply chain management between buyers and suppliers in relation to resilience and sustainability. It will reduce information asymmetry and ensure data-driven customized governance and compliance in many GVCs. However, the extent to which firms can adopt such new technology will depend on their internal resource capability and the institutional contexts they are embedded and operate within.

The Higg Index is a recently introduced tool supporting the pursuit of digital governance within the global apparel and footwear industries. It presents a measure of sustainability for each factory throughout a product's lifecycle, from raw material production to end-of-life, based on detailed information on climate change and social responsibility parameters provided by suppliers on a voluntary and continuous basis. At present, the metrics created by the Higg Index are limited to the company's internal use for the evaluation and improvement of its environmental performance. However, over time, it has the potential to share information with buyers and other value chain actors to become a global standard for addressing climate change in the global garment and textile industry; this would, however, depend on dominant institutional actors granting it legitimacy.

Despite efforts such as these, the differences in approaches and standards between countries and regions on emissions targets, as well as suppliers' responsiveness, will continue to impact the governance choices for buyers' GVCs and how value chain actors can adapt to institutional changes and standards. Hence, including insights from the business systems framework on the role of wider institutions on firms' strategies to address the climate change emergency are important.

<a> Conclusion

This chapter has illustrated and discussed various dimensions of climate change strategies from institutional perspectives, including those perspectives from international business and the global value chain literatures. While both the IB and GVC literatures can explain some aspects of climate change strategies and sustainability, this paper has tried to highlight relatively downplayed aspects in both, and to offer new insights to address those aspects. We argue the combining IB and GVC analyses with insights from the business systems framework will provide more cogent explanations of how firms in different countries respond strategically to the climate change emergency.

Reflecting on the internalized global network of multinational enterprises (i.e., MNEs and their subsidiaries) and the externalized global production network of multinational buyers and their suppliers in developing countries, we have illustrated how different dynamics in institutions, highlighted in the business systems framework, such as the ownership and control of firms and the role of government, influence climate change strategies across countries. In so doing, we have presented several examples from the Global North (i.e., Europe, especially Denmark and Sweden) and the Global South (particularly from Bangladesh with reference to the global garment industry) to substantiate the insights reflected in the theoretical discussion so that future researchers can follow the theoretical reasoning in reference to the OLI and GVC frameworks.

We argue that the changing nature of institutional structures and firms' capabilities shape climate change strategies. How firms develop their climate change strategies, thus, depends on the changing nature of institutions, complementarity and path-dependency in the institutional environment, and the extent to which emerging technologies, investments, standards, and market forces support firms' operations in the GVC. Therefore, we argue that the use of a further institutional perspective, namely the business systems perspective, which covers these areas, will help to ensure the analytical rigor of research on climate change strategies in IB and GVCs. By doing so, this paper contributes to sustainable strategic management from an institutional perspective in the IB and GVC literatures.

<a> References:

- AAU News (2021) <https://www.en.engineering.aau.dk/Cases/Power2X/>, accessed on 30.01.2021.
- Agrawal, A., McSweeney, C. and Perrin, N. (2008). *Local institutions and climate change adaptation*. Social Development Notes; No. 113. World Bank, Washington, DC. <https://www.unepfi.org/fileadmin/documents/FinancialInstitutionsTakingActionOnClimateChange.pdf>
- Allen, M.L., Allen, M.M.C., Cumming, D, and Johan, S. (2021). Comparative capitalisms and energy transitions: Renewable energy in the European Union. *British Journal of Management*, 32(2), pp. 611-629.
- Allen, M., Rana, M.B., and Liu, J. (2019). Comparative institutional analysis and institutional voids: The influence of firm heterogeneity and host-country institutions and contexts. *EGOS Conference, Edinburgh, United Kingdom*.
- Berger, P. and Luckmann, T. (1967). *The social construction of reality: A treatise in the sociology of knowledge*. Garden City, NY: Doubleday.
- Boje, D.M. and Rana, M.B. (2021). Defining a sustainably-driven business modeling strategy with a ‘storytelling science’ approach. In Markovic, S., Sancha, C. and Lindgreen, A. (eds.). *Handbook of sustainability-driven business strategies in practice*. Edward Elgar Publishing.
- Buckley, P.J. (1993). The role of management in internalisation theory. *MIR: Management International Review*, 33(3), pp. 197-207. <http://www.jstor.org/stable/40228157>
- Chakrabarty, S. and Wang, L. (2013) Climate Change Mitigation and Internationalization: The Competitiveness of Multinational Corporations, *Thunderbird International Business Review*, 55(6), 673-688
- Coase, R.H. (1998). The new institutional economics. *American Economic Review*, 88, pp. 72-79.
- Deeg, R. (2005). Path dependency, institutional complementarity, and change in national business systems. In Morgan, G., Whitley, R. and Moen. E. (eds.). *Changing capitalisms? Internationalization, institutional change and systems of economic organization* (pp. 21-52). Oxford: Oxford University Press.

- DiMaggio, P. and Powell, W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2).
- Dovers, S. (2001). Institutions for sustainability. *Tela Series: Environment, Economy and Society*, 7. Accessed at <https://openresearch-repository.anu.edu.au/bitstream/1885/40972/3/een0101.pdf> on 25.01.2022.
- Doz, Y. and Prahalad, C.K. (1980). How MNCs cope with host government intervention, *Harvard Business Review*, March.
- Drori, G.S., John W.M. and Hwang, H. (eds.) (2006). *Globalization and organization: World society and organizational change*. New York: Oxford University Press.
- Dunning, J.H. (1988). The eclectic paradigm of international production: A restatement and some possible extensions. *Journal of International Business Studies*, 19(1), pp. 1-31. <http://www.jstor.org/stable/154984>
- Dunning, J.H. (2000). The eclectic paradigm as an envelope for economic and business theories of MNE activity. *International Business Review*, 9(2), pp. 163-190.
- Durkheim, É. (1974) [1953]. *Sociology and philosophy*, translated by D.F. Pocock, with an introduction by J.G. Peristiany. Toronto: Free Press.
- Fransen, L., Kolk, A. and Rivera-Santos, M. (2019). The multiplicity of international corporate social responsibility standards: Implications for global value chain governance. *Multinational Business Review*, 27(4), pp. 397-426.
- Gereffi, G. (2002). *The international competitiveness of Asian economies in the apparel commodity chain*. EDB Working paper Series No 5, Asian Development Bank, Manila, Philippines.
- Gereffi, G. (2018). *Global value chain and development: Redefining the contours of 21st century capitalism*. UK: Cambridge University Press.
- Gereffi, G., Humphrey, J. and Sturgeon, T. (2005). The governance of global value chains. *Review of International Political Economy*, 12(1), pp.78-104.
- Greenwood, R., Sahlin-Andersson, K., Suddaby, R. and Olver, C. (eds.) (2012). *Institutional theory in organization studies*. London: SAGE.

- Haxhi, I., and Aguilera, R.V. (2017). An institutional configurational approach to cross-national diversity in corporate governance. *Journal of Management Studies*, 54(3), pp. 261-303. <https://doi.org/10.1111/joms.12247> [details]
- Hotho, J. and Pedersen, T. (2012). *Beyond the “rules of the game”: Three institutional approaches and how they matter for international business*. Cheltenham: Edward Elgar.
- Ivang, R. and Rana, M.B. (2019). Better world fashion: Circular economy and competitive advantage. In *IVEY Teaching Case 9B19A021* (pp. 1-16). Western University, Canada: Ivey Publishing.
- Jackson, G. and Deeg, R. (2008). From comparing capitalisms to the politics of institutional change. *Review of International Political Economy*, 15(4), pp. 680-709. <http://www.jstor.org/stable/25261991>
- Kazi, M.R. and Rahman, S.(2021). Governance mechanism for the sustainability of global garment production networks: perspectives from rule-takers. In M.B. Rana and M.M.C. Allen (eds.) *Upgrading the global garment industry*. Cheltenham, UK: Edward Elgar Publishing. doi: <https://doi.org/10.4337/9781789907650.00023>
- Khan, Z., Lew, Y.K. and Sinkovics, R.R. (2015), The mirage of upgrading local automotive parts suppliers through the creation of vertical linkages with MNEs in developing economies. *Critical Perspectives on International Business*, 11 (3/4), pp. 301-318.
- Kolk, A., Pinkse, J.(2008) A perspective on multinational enterprises and climate change: Learning from “an inconvenient truth”?. *Journal of International Business Studies*, 39, 1359–1378, <https://doi.org/10.1057/jibs.2008.61>
- Kolk, A. (2016). The social responsibility of international business: From ethics and the environment to csr and sustainable development. *Journal of World Business*, 51(1), pp. 23-34.
- Kostova, T., Marano, V. and Tallman,S. (2016). Headquarters–subsidiary relationships in MNCs: Fifty years of evolving research, *Journal of World Business*, 51(1), 176-184.
- Kristensen, P.H., & Morgan, G. (2018) Danish foundations and cooperatives as forms of corporate governance: Origins and impacts on firm strategies and societies. In N. Boeger & C. Villiers (Eds.), *Shaping the Corporate Landscape: Towards Corporate Reform and Enterprise Diversity*: 271–288. London: Hart Publishing.

Lee, J. and Gereffi, G. (2021). Innovation, upgrading, and governance in cross-sectoral global value chains: The case of smartphones. *Industrial and Corporate Change*, 30(1), pp. 215-231.

Lund-Thomsen, P. and Lindgreen, A. (2014). Corporate social responsibility in global value chains: Where are we now and where are we going?. *Journal of Business Ethics*, 123(1), pp. 11-22.

Marchant, N. (2021). *This is how climate change could impact the global economy*, World Economic Forum. Accessed at <https://www.weforum.org/agenda/2021/06/impact-climate-change-global-gdp/>, on 23 September 2021.

Meyer, J.W. and Brian, R. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83, pp. 340-63.

Morgan, G. (2007). National business system research: Progress and prospects. *Scandinavian Journal of Management*, 23(2), pp. 127-145.

Morgan, G., Campbell, J. L., Crouch, C., Pedersen, O. K., and Whitley, R. (eds.). (2010). *The Oxford handbook of comparative institutional analysis*. Oxford: Oxford University Press.

Morgan, G., Whitley, R., and Moen, E. (2005). Introduction: Changing capitalisms? In G. Morgan, R. Whitley and E. Moen. (eds.) *Changing capitalisms? Internationalisation, institutional change and systems of economic organisation*. Oxford: Oxford University Press.

North, D. (1991). Institutions. *Journal of Economic Perspectives*, 5(1), pp. 97-112. doi:10.1257/jep.5.1.97.

News European Parliament (2021) <https://www.europarl.europa.eu/news/en/headlines/society/20210208STO93327/the-impact-of-textile-production-and-waste-on-the-environment-infographic>, accessed on 01.01.2021.

Okereke, C. (2006). Global environmental sustainability: Intragenerational equity and conceptions of justice in multilateral environmental regimes, *Geoforum*, 37 (5), pp. 725-738,

Parsons, T. (1951). The social system. Glenco, IL: *Free Press Journal of Economics*, 48(3), p. 511.

Peng, M. W., Wang, D. Y. L. and Jiang, Y. (2008). An institution-based view of international business strategy: A focus on emerging economies. *Journal of International Business Studies*, 39(5), pp. 920-936. <http://www.jstor.org/stable/25483310>

PACT (2021) <https://www.textilepact.net/>, accessed on 06.02.2022

- Pinkse, J., Kolk, A. (2012) Multinational enterprises and climate change: Exploring institutional failures and embeddedness, *Journal of International Business Studies*, 43, 332–341. <https://doi.org/10.1057/jibs.2011.56>
- Romilly, P. (2007) Business and climate change risk: a regional time series analysis, *Journal of International Business Studies*, 38, 474–480, <https://doi.org/10.1057/palgrave.jibs.8400266>
- Rahman, F.M. (2020). Bangladesh gets \$256.5m Green Climate Fund, *The Daily Star*, Nov 18, 2020.
- Rana, M.B. and Allen, M. (2018). Business systems perspective on entrepreneurship. In R. Turcan, and N. Fraser (eds.), *The Palgrave Handbook of Multidisciplinary Perspectives on Entrepreneurship, I* (pp. 271-291). Palgrave Macmillan. https://doi.org/10.1007/978-3-319-91611-8_13
- Rana, M.B., Allen, M., and Servais, P. (2021). Supplier’s internationalization in global apparel value chain from Bangladesh to Ethiopia: buyer’s business model, institutions, and entrepreneurial capability. In M.B. Rana and M. Allen (eds.), *Upgrading the global garment industry: Internationalization, capabilities, and sustainability*. UK: Edward Elgar Publishing. New Perspectives on the Modern Corporation series.
- Rana, M.B., Hoque, I. and Allen, M. (2019). *MNE’s business model, governance & relational condition, and suppliers’ capability development: A comparative study on cross border dyads*. Abstract from European International Business Academy, Leeds, United Kingdom.
- Rana, M.B. (2014). *Rethinking business system theory from the perspective of civil society, transnational community, and legitimacy: Strategies of European MNCs in Bangladesh*. Unpublished PhD Thesis, Department of Business and Management, Aalborg University, Denmark.
- Rana, M.B. (2015). Tri-space framework for understanding MNC behaviour and strategies: An institutionalism and business system perspective, In S. Marinova (ed.), *Institutional Impacts on Firm Internationalization*. UK: Palgrave Macmillan. pp. 299-333
- Rana, M.B. and Morgan, G. (2019). Twenty-five years of business systems research and lessons for international business studies. *International Business Review*, 28(3), pp.513-532.
- Rana, M.B. and Allen, M. (2021a). Upgrading the global garment industry: internationalisation, capabilities and sustainability. In M.B. Rana and M. Allen (eds.), *Upgrading the global garment industry: internationalization, capabilities and sustainability*. UK: Edward Elgar Publishing, New Perspectives on the Modern Corporation series, pp. 1.

- Rana, M.B. and Allen, M. (2021b). Why apparel suppliers are locked into the upgrading ladder in Bangladesh: A institutional and business systems perspective. In M.B. Rana and M. Allen (eds.), *Upgrading the global garment industry: internationalization, capabilities and sustainability*. UK: Edward Elgar Publishing, New Perspectives on the Modern Corporation series.
- Rana, M.B. and Sørensen, O.J. (2021). Levels of legitimacy development in internationalization: Multinational enterprise and civil society interplay in institutional void, *Global Strategy Journal*, 11 (2), pp. 269-303. <https://doi.org/10.1002/gsj.1371>
- Rana, M. B. (2015). Tri-space framework for understanding MNC behaviour and strategies: An institutionalism and business system perspective. In S. T. Marinova (Ed.). *Institutional impacts on firm internationalization* (pp. 287–299). London: Palgrave Macmillan.
- Redding, G. (2005). The thick description and comparison of societal systems of capitalism. *Journal of International Business Studies*, 36(2), pp. 123-155.
- Sako, M. and Zylberberg, E. (2017). Supplier strategy in global value chains: Shaping governance and profiting from upgrading. *Socio-Economic Review*, 17(3), pp.687-707.
- Scott, W. R. (2008). *Institutions and organizations: Ideas and interests*. 3rd ed. London: SAGE
- State of Green (2021) <https://stateofgreen.com/en/>, accessed on 07.12.2021
- Whitfield, L. and Staritz, C. (2020). The learning trap in late industrialisation: local firms and capability building in Ethiopia's apparel export industry. *The Journal of Development Studies*, 57(6), pp. 980-1000.
- Whitley, R. (1987). Taking firms seriously as economic actors: Towards a sociology of firm behaviour. *Organization Studies*, 8(2), pp.125-147.
- Whitley, R. (1991). The social construction of business systems in East Asia. *Organization Studies*, 12(1), pp.1-28.
- Whitley, R. (2005). How national are business systems? The role of states and complementary institutions in standardizing systems of economic coordination and control at the national level. In G. Morgan, R. Whitley, and E. Moen. (eds.) *Changing capitalisms? Internationalization, institutional change, and systems of economic organization*. Oxford: Oxford University Press.

Whitley, R. (2007). *Business systems and organisational capabilities: The institutional structuring of competitive competences*. Oxford: Oxford University Press.

Whitley, R. (2010). The institutional construction of firms. In G. Morgan, J. L Campbell, C. Crouch, O. K. Pedersen, and R. Whitley (eds.), *The Oxford handbook of comparative institutional analysis* (pp. 422-453). Oxford: Oxford University Press.

Whitley, R. (ed.). (1992). *European business systems: Firms and markets in their national contexts*. London: Sage Publications.

Williamson, O.E. (1975). *Markets and hierarchies, analysis and antitrust implications: A study in the economics of internal organization*. New York: Free Press.

Witt, M.A. and Redding, G. (2014). *The Oxford handbook of Asian business systems*. Oxford: Oxford University Press.

Zhan, J.X. (2021). GVC transformation and a new investment landscape in the 2020s: Driving forces, directions, and a forward-looking research and policy agenda. *Journal of International Business Policy*, 1(15). Advance online publication. <https://doi.org/10.1057/s42214-020-00088-0>

Acknowledgement: First author greatly acknowledges the grant for this research from the Ministry of Foreign Affairs of Denmark-DFC- 20-10-CBS. We are also grateful to Peter Lund-Thomsen from Copenhagen Business School and Olav Jull Sørensen from Aalborg University Business School for their insightful comments on the early draft of this paper.