

Insurance and Risk Management for Disruptions in Social, Economic and Environmental Systems

EMERALD STUDIES IN FINANCE, INSURANCE, AND RISK MANAGEMENT

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Insurance and Risk Management for Disruptions in Social, Economic and Environmental Systems: Decision and Control Allocations within New Domains of Risk

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Foreword

Is the world sleepwalking into a crisis? Global risks are intensifying but the collective will to tackle them and to collect on opportunities appears to be available but are we lacking in our response? The world may be moving into a new phase of state-centered politics as noted in the Global Risks Report (2019, 14th Edition – http://www3.weforum.org/docs/WEF_Global_Risks_Report_2019.pdf). The idea of “taking back control” – whether domestically from political rivals or externally from multilateral or supranational organizations – resonates across many countries and many issues. The energy now being expended on consolidating or recovering national control risks and weakening collective responses to emerging global challenges. We are drifting deeper into global problems from which we may struggle to extricate ourselves.

A new, highly complex and destabilized “domain of risk” is emerging. This includes the risk of a collapse in key social, environmental and economic systems, at local and potentially even global levels. This new risk domain affects virtually all areas of policy and politics, and it is doubtful that societies around the world are adequately prepared to manage this risk.

Financial structure decisions have evolved, from treating profitability as given, to acknowledging that human actions affect profitability, to recognizing that value depends on the allocation of decisions or control.

Therefore, as noted above the focus of this book series is on five areas of concern, highlighted in the Global Risks Perception Survey, which frame much of the analysis in subsequent chapters: (1) economic vulnerabilities; (2) geopolitical tensions; (3) societal and political strains; (4) environmental fragilities; and (5) technological instabilities. This in the end all lead to financial distress and in turn societal problems.

In this book series we argue that the decision or control approach is useful, even though it is at an early stage of development, and that the approach has some empirical content. It can throw light on the structure of capital contracts and the reasons for the diversity of objectives.

Hence, this Emerald book series: “Emerald studies in Finance Insurance and Risk Management Edition Volume 03” brings together in one volume 13 chapter/studies about Insurance and Risk Management responses to disruptions caused by social, economic and environmental challenges to try and stabilize the economy in an effort to ensure sustainability.

xx *Foreword*

Challenges destabilize the norm and create distresses and disruptions in, for example, the culture, the technology, regulations, the environmental, etc., that influence the pace of finance and economic activities since it requires a change to the norm.

Professor Simon Grima

Chapter 1

Mapping Out Cross-sectoral Collaboration and Multi-level Governance Within Single Use Plastic Policy: An Analysis

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Abstract

Undeniably, plastic usage is predominant in our daily lives, featuring in an endless list of items such as bottles, disposables, packaging and fabric. *At prima facie*, plastic disposal causes irreversible damage to the natural environment, especially oceans. However, it also impacts human health and wellbeing, especially since its toxins or microplastics find themselves in the food chain. Since plastic causes a myriad of negative effects on the natural environment and human health, the urgency to ban it has been addressed by international organizations and the European Union (EU). Being the smallest member state within the EU, Malta presents an insightful case study of how different levels of governance and a plethora of state and non-state actors engage in a game-like interaction. To this effect, this chapter sheds light on the implications of plastic pollution vis-à-vis sustainability and wellbeing, addressed through multi-level governance. The research core revolves around an investigation on the institutional intricacies in addressing the wicked problem of single-use plastic by mapping out the different layers of policy-making mechanisms that are involved, ranging from local to European and international governance, and from governmental to civil society centric strategies. A positivist ontology is activated to underpin the exploratory nature of this study. Through the application of content analysis of selected documentation, the extent of coordination and synergies among the different policy actors across a multi-layered governance platform is put under scrutiny. Quantitative findings are utilized to validate or contradict the original set of hypotheses and to propose a number of policy and governance recommendations that

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are useful to researchers and practitioners in the fields of public policy, politics, environmental science, public health and wellbeing, as well as insurance and risk management.

Keywords: Plastic; sustainability; network governance; multi-level governance; cross-sectoral collaboration; Malta

Introduction

The etymology of the word “plastics,” a term which essentially encompasses a number of polymers, stems from the Greek word “plastikos” signifying “fit for molding” (Richardson & Lokensgard, 2004). This appropriately describes the item, which includes the conversion of natural products or synthesis from oil, coal or gas (Morris, 1986; Thompson, Swan, Moore, & vom Saal, 2009 as cited in Hammer, Kraak, & Parsons, 2012). It is touted as a widely held axiom that single-use plastic has been a necessity throughout the years, used in a plethora of products. In fact, 300 million tons of plastic are produced annually, 50% of which are single-use products such as plastic bags, cutlery, straws and drinking bottles (Nerland, Halsband, Allan, & Thomas, 2014). The popularity of this product is attributed due to positive characteristics such as its low cost, versatility, light weight and formability (Andrady, 2015). However, it indeed has a darker side to it and is subject to loathing by many.

At *prima facie*, it seems a burgeoning problem, described appropriately by Landon-Lane (2018) as a “wicked” multiplicity of challenges. This is because Ten Brink, Schweitzer, Watkins, and Howe (2016) outline, throughout its extraction, transportation, manufacturing, use and disposal, plastic impacts injuriously not only the environment but also human health. This is done directly and indirectly via ingestion, inhalation and skin contact (Center for International Environmental Law (CIEL), 2019). Plastics are derived from fossil fuels, and the associated activities involved with its extraction, disposal and incineration, cause the emission of various pollutants, which cause climate change.

Also, plastic fragments find themselves in the food chain, and as a result of biomagnification and bioaccumulation, are transferred from one organism to another until they are finally consumed by humans. In fact, Van Cauwenberghe and Janssen (2014 as cited in Morrissey, 2019) estimated that up to 11,000 microplastic particles per year are ingested by individuals in European countries with high shellfish consumption, whereas an average of 1,800 microplastics per year are ingested by people in European countries with low shellfish consumption.

In response to an awakening in addressing this problem, the notion of sustainable development, albeit at times obvious and trite, has never been befitting to the situation. Time and again, a myriad of strategies or measures were designed to address this challenge. Cross-sectoral collaboration (CSC) through the engagement of a plethora of actors and policy mechanisms is crucial to bring about a paradigm shift within the institutional framework and attitudinal

formation to combat plastic pollution. Implementing sustainability through multi-level governance (MLG), starting from minute structures at the local level to transnational ones at a global level, is deemed a must to address this problem in an effective manner.

Research Scope

Many researchers among them [Peng, Wang, and Cai \(2017\)](#), [Rochman, Hoh, Kurobe, and Teh \(2013\)](#), Vergara and Tchobanoglous (2012 as cited in [Nielsen, Hasselbalch, Holmberg, & Stripple, 2019](#)) postulate that the need for more studies in plastic governance is required, especially vis-à-vis public health ([Mederake & Knoblauch, 2019](#)). Hence, the significance of this study is pertinent not only to the international and European level but also to the institutional capacity of nation states.

Research is marshaled from the perspective of Malta, the European Union's (EU) smallest member state, whose population has moved beyond half a million for the very first time ([The Malta Independent, 2020](#)) in a microarea of 316 square kilometres ([NSO, 2014](#)). The study seeks to expose the institutional intricacies in addressing the reduction of single-use plastic by mapping out the different layers of policy-making mechanisms that are involved, ranging from local to European and international governance, and from state- to non-state-centric strategies. To achieve its scope, this research inquiry rests on the theoretical underpinnings proposed by the concepts of MLG and CSC. Rooted in the selected documents regulating the fight against single-use plastic, six hypotheses lie at the core of this exploratory research, namely:

- I. There is a correlation between state and non-state actors.
- II. There is a correlation between local and international levels of governance.
- III. There is a correlation between lowest strands of MLG (i.e., local) and the multi-actor scenarios (i.e., citizen).
- IV. There is a correlation between CSC and MLG.
- V. There is a correlation between MLG and stakeholders.
- VI. There is a correlation between Maltese plastic governance and international regulatory regimes.

This chapter is divided into five parts. The first part focuses on the historical setting to understand the evolutionary process of the plastic narrative since its inception after World War II. The focus will then turn to the legal and regulatory frameworks that were gradually developed over the multi-layered platform of global, regional and domestic governance to tackle waste management, in particular single-use plastic. The theoretical parameters resulting from MLG and CSC are presented next, followed by the methodological strategy. The fourth section rolls out the findings resulting from a scientific inquiry stemming from content analysis of selected documents. The testing of the original hypotheses is reserved to the concluding part, together with a set of policy and governance recommendations.

Historical Setting

The study starts by tracing the evolutionary narrative of the plastic problem to facilitate a better understanding of the contextual, legal and theoretical underpinnings in later sections. Lasswell (1971, p. 9) promotes the “policy history” approach because

the significance of contemporary developments is illuminated when we take a long view of the past ... if the past is approached contextually, it is possible to achieve novel perspectives on the configuration of all events.

Policy histories are particularly useful in studying multiple stakeholders using an evidence-based, longitudinal approach (Effland, 2012, p. 192). This enhances the prospects of acquiring an even “more in-depth assessment of actors’ preferences” (Dür & De Bièvre, 2007, p. 8). To this effect, a timeline of critical junctures as a corollary of international events, multilateral regulatory regimes, market dynamics, unilateral actions and the rise of the global green movement is presented in Fig. 1.

In 1945, after a prolonged, widespread austerity during the Great Depression and World War II, the growing plastics industry embraced a message to “buy more” (Freinkel, 2011). After three decades of mass production and consumption driven by neoliberal economies, in the mid-1970s, packaging companies started urging municipalities to run taxpayer-funded recycling programs to avoid criticism stemming from the rise of environmental awareness. After 20 years since pioneering recycled plants, in the 1990s the transnational packaging industries pursued with their agenda to fight restrictions on disposables, while they continued to promote municipal-funded recycling (Schlosberg, 2019). In the midst

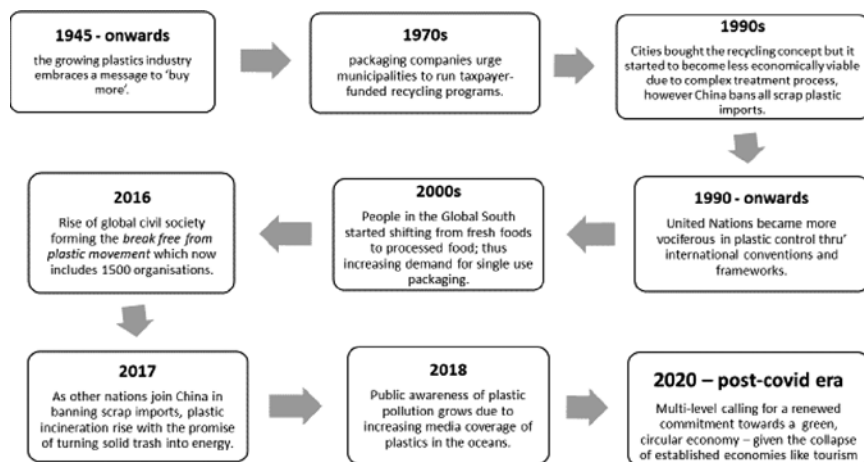


Fig. 1. Critical Junctures in the History of Plastics.

Source: Authors.

of international developments triggered by unilateral actions by states, the United Nations (UN) and its agencies opted to become global regulatory protagonists by releasing international frameworks and conventions to control the ever-growing plastic plague. Such an advent of multi-dimensional global and regional governing regimes is discussed at greater length in the section that follows.

At the turn of the new millennium, the “fast-moving consumer goods” industry experienced slowing growth for the first time and triggered aggressive marketing to the rapidly-developing middle class in the Global South where people started shifting from fresh foods to processed food; hence leading to the “pandemic of obesity” and single-use packaging (Popkin, Adair, & Wen Ng, 2012; Schlosberg, 2019).¹ This global reach by the transnational industries intensified over the next few years, particularly when the 2008 financial crisis led to the collapse of the banking sector, market failures and massive deficits in public finance in the USA and the EU. Consequentially, the plastic emergency became global as now both developed and developing countries were entrenched within a “consumerist psyche which shifts and warps from the desire to *become* to the desire to *have*; thus prolonging environmental damage at the expense of materialistic gratification” (Wolff, 2013, p. 328).

The next critical juncture occurred around 2016, when in response to the global plastic crisis, a civil society movement was incubated and started to grow very fast. Equipped with evidence-based data, concerned citizens and groups started the #BREAKFREEFROMPLASTIC (BFFP)² movement, which over a span of few years, encapsulated 2,600 organizations (BFFP, 2020). This new set-up of public activists postulates that sporadic clean-up initiatives are not the solution, unless the international community, states and local authorities address the roots of the problem. Groups that have been sporadically fighting against particular segments of the fossil fuels economy became committed to form alliances, thus transforming themselves into a global movement that looks at the whole chain of damage from resource extraction to waste incinerators (Carpenter, 2019; Freinkel, 2011). Given the inexorable concerns on climate change and the proliferation of plastic polluted mountains, rivers and oceans, together with more intense acid rain and toxic air, Pope Francis (2015) does not mince his words when he condemned,

Economic power [that] continues to justify the current and global system where priority tends to be given to speculation and the pursuit of financial gain. As a result, whatever is fragile, like the environment, is defenceless before the interests of deified markets which become the only rule. (p. 56)

¹According to the World Bank, ‘the Global South’ embrace Asia (with the exception of Japan, Hong Kong, Macau, Singapore, South Korea and Taiwan), Central America, South America, Mexico, Africa and the Middle East (with the exception of Israel).

²The core of the Break Free from Plastic strives to bring systemic change through a holistic approach tackling plastic pollution across the whole plastics value chain, focusing on prevention rather than cure and providing effective solutions (BFFP, 2020).

Both the Vatican and the global green movement are in tandem when advocating that solutions must be designed at MLG, so as the principle of subsidiarity can marshal the whole process to ensure that local authorities are participatory in decisions and projects pioneered by national and global authorities.

The year 2020 brought about an unprecedented global calamity – the Covid-19 pandemic – resulting in epoch economic and social transformations. Freedom of movement in public spaces was massively restricted to contain the spread of the coronavirus, as new rules for social distancing, public transport, mass events and traveling have had drastic effects not only on people’s lifestyles but also on economic performance and political leadership. Despite the catastrophic economic effect that has been termed as “having no parallel in the recent past” by the UN Secretary General (BBC News, 2020), the pandemic did bring hope of a “new normal” in environmental affairs. Even though human health might have benefited from decreased air pollution levels, all this falls short in relation to the plastic footprint during this pandemic. In fact, many waste management policies and bans have been reversed or temporarily postponed (Prata, Silva, Walker, Duarte, & Rocha-Santos, 2020) to give precedence to human health, causing an increase in the use of gloves, masks and hand sanitizer bottles. Indeed, Prata et al. (2020) estimate that 129 billion face masks and 65 billion gloves are used monthly around the globe during such extraordinary times. Even though single-use plastic may be deemed essential in combating COVID-19, it might however pave the way for future environmental problems.

Dealing with such situations requires the urgency of serious commitment for a multi-level and multi-actor synchronized approach toward re-assessing a new plastic governance model based on a green and circular economy. The latter may hold the key to circumvent the fragility and volatile nature of traditional economies based on mass tourism, excessive construction and insatiable consumerism (Kechichian & Mahmoud, 2020).

Given that the major critical junctures in the 75-year history of plastics have been chronologically plotted and analyzed, the next section will turn its attention to the plethora of legal and regulatory frameworks that have been formulated over the decades to limit the devastating consequences of the “miracle invention that now threatens our planet” (Dodwell, 2018).

Multi-dimensional Regulatory Context

Being an ubiquitous problem which weaves across environmental, economic, cultural and political boundaries, single-use plastic is enmeshed in multi-faceted interdependencies. This involves a complex array of state and non-state actors across different layers of governance ranging from local structures (Armitage, 2007; Ostrom et al., 2002) up to the global ones (Vince & Hardesty, 2018); thus necessitating new understandings, processes and tools (Conklin, 2005). Such tools embrace various regulatory approaches utilized to reduce plastic pollution, which can either be binding – meaning that they are verifiable and enforceable – or non-binding signifying that they are non-enforceable (D’Agostino & Lisciandra, 2018). In the past three decades there has been momentum for this legal approach, with

binding frameworks such as the UN Convention on the Law of the Sea (UNCLOS), the Basel Convention and MARPOL forming the foundations of international regulation (Nielsen et al., 2019). The formulation of these frameworks share similarities and differences, often surfacing inconsistencies in the way they tackle the problem of plastic pollution. A case in point is The International Convention for the Prevention of Pollution from Ships (MARPOL) in 1973 and the UNCLOS (1994). While the former lacks to pinpoint unintentional losses of waste (including plastic) and the precautions needed (Gold, Mika, Horowitz, Herzog, & Leitner, 2013, p. 13), the latter covers a vast range of pollution sources, without highlighting the utilization of adequate instruments and rules. Similarly the Basel Convention (1992) omits reference to plastics, despite focusing on the prohibition of the trade of hazardous waste. However, its recent amendment in 2019 aims to increase transparency and tighten the conditions at which plastic is exported (Nielsen et al., 2019). Unlike other regulations, the London Convention (1975) introduced a “reverse list” highlighting items that can be disposed at sea, but lack effective compliance just like UNCLOS (1994). Overall, in all these regulatory frameworks, reference to waste is quite generic, contrasting The Stockholm Convention (2001) which emphasizes the prohibition of plastics containing persistent organic pollutants.

At a regional level the EU has also been vociferous, with its most recent milestone being its Strategy for Plastics in a Circular Economy (2018). It aims at promoting a new vision how plastics are designed, produced, used and recycled through a circular economy. Emphasis is placed on this term, which is an arduous task to achieve, since it requires a shift in worldview from a linear model, colloquially referred to as the “take-make-waste” economy substituting bountiful resources to a circular model based on “the design-use-reuse” model (Akenji et al., 2019). Moreover, the EU directive 2019/904 promotes non-toxic re-usable items and the reduction of plastic waste generation (Environment Resource Authority (ERA), 2019).

The marine convention “Our Ocean 2017” held in Malta served as a springboard to initiate national action toward the abolishment of single-use plastic. In fact, this led to the formulation of the Single Use Plastic Strategy 2020–2030, which aims at reducing single-use plastic in Malta, while increasing recycling options for plastic, in view of protecting human health and the natural environment (ERA, 2019).

Other non-binding frameworks, but equally important, include The Global Action Programme for the Protection of the Marine Environment from Land Based Activities (GAP) (1995). It aims at reducing land-based marine pollution through national, regional and international collaboration. It did not foresee a compliance mechanism, nor did it provide sufficient funding for the implementation of the objectives in developing countries (Meier-Wehren, 2013). In parallel, the Honolulu Strategy (2011) did not provide any measurable targets or timelines, even though it delineated monitoring and progress evaluation on marine litter, strengthened through a Global Partnership on Marine Litter at the UN Conference on Sustainable Development (2012).

Other important milestones include the Ocean Charter (2018) by G7 which addressed remedial actions, education, research and outreach. Furthermore,

The 2030 Agenda for Sustainable Development (2015) encompasses 17 Sustainable Development Goals (SDGs) and 169 targets, out of which at least 12 target plastic waste and marine litter (Löhr et al., 2017), especially SDG 14 – Life Below Water.

While such an exhaustive list of regulatory frameworks display the impetus brought about by the various milestones in plastic governance, it also brought to light its fragmented politics, mirroring its political rather than its politicized nature, confirming that,

compared to other environmental problems, plastic stands out for having “no one in the cockpit” (Hajer et al., 2015). There is no centrally recognized global scientific or political authority tasked with addressing the plastic problem ... this is because there is no common agreement on how exactly to define “the plastic problem” – instead, there are many plastic problems, focus areas and solutions. (Nielsen et al., 2019, p. 2)

This complexity sheds light on plastic governance as being “characterized by fragmented authority, weak international institutions, uneven regulations, uncoordinated policies, and business-oriented solutions” (Dauvergne, 2018, p. 22). Hence, the effectiveness of such a governing process requires CSC across MLG, thus securing adaptability, accountability, flexibility, responsiveness and harmonization of efforts. Nils et al., (2018, p. IV) assert that “there is a need for significantly enhanced CSC, for substantially boosted multi-stakeholder-driven collaborative efforts and for much closer intergovernmental cooperation.” The theoretical exposition revolving around CSC and MLG is presented next.

Theoretical Underpinnings

The theoretical backdrop for this empirical study stems from the conceptual progression of “government” to “governance.” The traditional polity with its nation state-centric model embedded in centuries-old traditions and patterns of centralized authority (Warrington, 1994; Wettenhall & Thynne, 1994) has morphed into more complex inter/intragovernmental networks characterized by interdependence among state and non-state actors, as well as by game-like interactions negotiated and agreed by network participants (Smith, 2003).

Kitsing (2020, p. 117) calls the “network governance” – based on decentralization, evidence-based decision-making and multi-stakeholder engagement – an “utopian” model that has the potential to democratize and, thus, legitimize, public policy mechanisms. With its drive toward multi-stakeholders’ partnerships, consensus-seeking, collective response and diverse voice promotion, “networked governance” has the necessary political and administrative credentials to score high on the “utopian dimensions” stipulated by the Good Governance checklist of the World Bank, as well as the SDGs proclaimed by the UN for 2015–2030 (Bouckaert, 2020, p. 76).