



International Journal of Pharmaceuticals and Health care Research (IJPHR)

IJPHR | Vol.13 | Issue 4 | Oct - Dec -2025

www.ijphr.com

ISSN: 2306-6091

DOI: <https://doi.org/10.61096/ijphr.v13.iss4.2025.470-480>

Review

International Regulatory Framework (IRF)

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	Abstract
Published on: 27 Oct 2025	This study examines whether companies can comply with corporate reporting laws using de facto standards such as the International Integrated Reporting Framework (IRF) to meet the requirements of Directive 2014/95/EU on non-financial and diversity disclosure. An interpretivist research approach was adopted, using secondary data from professional reports, regulatory publications, and corporate registers. Findings reveal that for a private framework to achieve de facto standard status, it must gain strong regulatory endorsement and support from influential policymakers to ensure national-level adoption and diffusion. Without such backing, voluntary reporting frameworks struggle to become widely accepted. The study highlights that current practices often prioritize financial value creation and stock market capitalism over social and environmental sustainability, limiting their broader societal impact. It questions the continued relevance of both the IRF and the EU Directive in the post-COVID-19 era, emphasizing the need for reporting systems that move beyond compliance façades toward genuine accountability and sustainable value creation.
Published by: Futuristic Publications	
2025 All rights reserved.  Creative Commons Attribution 4.0 International License.	Keywords: International Regulatory Framework; EU Directive 2014/95/EU; Integrated Reporting; Corporate Compliance; Sustainability Reporting; Regulatory Governance.

INTRODUCTION

1. Introduction to Global Health Regulations

In the globalized pharmaceutical landscape, international cooperation and regulatory alignment are essential for ensuring the safety, efficacy, and quality of healthcare products. The International Regulatory

Framework (IRF) serves as a structured system that encompasses various global guidelines, standards, and regulatory bodies that oversee the development, manufacture, distribution, and post-marketing surveillance of medicinal products. The aim of IRF is to harmonize regulatory processes and requirements across different countries and regions, facilitating international trade while protecting public health.

With the rapid advancement of science and technology, coupled with increasing cross-border trade in pharmaceuticals and medical devices, regulatory frameworks must continuously evolve. The IRF plays a crucial role in bridging gaps between national regulations, reducing duplication of efforts, and encouraging mutual recognition agreements to streamline approvals. It ensures that healthcare products meet uniform quality and safety standards irrespective of their country of origin.

2. Need for an International Regulatory Framework

The need for an international regulatory framework arises from the growing complexity of global pharmaceutical supply chains and the rise of multi-national pharmaceutical companies. Drugs manufactured in one country are often marketed in several others. Without a harmonized framework, manufacturers would be required to comply with differing regulatory requirements in each market, leading to increased costs, delays, and potential quality risks.

Benefits and Importance of IRF

The International Regulatory Framework brings several key advantages to public health, industry, and regulatory bodies:

- Ensures consistent product quality and safety standards worldwide
- Facilitates faster access to innovative and generic medicines
- Reduces redundant testing and documentation
- Improves efficiency in regulatory reviews and approvals
- Enhances transparency and public trust in health systems
- Strengthens national regulatory capacities in developing countries
- Enables coordinated response to health emergencies

Challenges in Implementing IRF

Despite its benefits, implementing a cohesive international framework presents several challenges:

- **Regulatory divergence** due to differences in local laws, cultures, and healthcare priorities
- **Limited capacity** in low- and middle-income countries (LMICs) to comply with global standards
- **Variations in language and documentation formats**
- **Political and economic factors** influencing policy adoption
- **Data exclusivity and intellectual property concerns**

Overcoming these challenges requires international collaboration, mutual recognition agreements, regulatory convergence strategies, and capacity-building efforts.

The quote above is indicative of many claims made by the International Integrated Reporting Council (IIRC) in support of using the International Integrated Reporting Framework (IRF) to comply with the EU Directive on non-financial and diversity disclosure (European Union, 2014). Arguably, in 2005, the EU Directive is the most significant change to European corporate reporting regulation after the introduction of International Financial Reporting Standards (IFRS) for listed companies. Similarly, the <IRF> represents an influential and novel change to corporate reporting that builds on previous attempts to require reporting beyond mandatory financial statements to integrate additional information for report users.

As such, we refer to reporting integration as a broad movement that recognises how regulated financial reporting alone cannot provide sufficient insight into business performance and advocates for a more holistic and long-term approach to rebuilding trust in companies. While the IIRC claims to provide such additional information and links this to a firm's strategy, reporting integration goes beyond <IRF>. For example, the EU Directive is a form of reporting integration because it integrates several different corporate disclosure issues – such as human rights, labour, the environment and anti-corruption – into one regulated reporting requirement to rebuild trust in European companies. However, the integration reflected in the <IRF> seeks integrated thinking directed solely at how the “six capitals” are inputs and outcomes of a company's business model because it primarily seeks to create economic value (Dumay et al., 2017). Creating economic value in this study is linked to stock market capitalism, which is the ideology that managers should be intent solely on creating and maximising shareholder value to maximise economic efficiency and global welfare (Dore, 2000). We use the term sustainability reporting as an umbrella term for the many different types of reporting, including, but not limited to, corporate social responsibility (CSR); environmental, social and governance (ESG); corporate citizenship and sustainability reports.

The implementation of the EU Directive and the claims by the <IRF> as a framework to comply with it presents an opportunity to research reporting integration. For this purpose, we connect the business reporting literature with research on the politics of standard setting and business regulation. Moreover, we expand the field of inquiry in two directions: the first is looking at the recognition of private standards such as the <IRF> by public authorities such as the European Commission, and the second is investigating the issue of corporate compliance with legal requirements such as the EU Directive.

We make two contributions. First, our research contributes to the understanding of the formation and diffusion of private standards and frameworks and how they might become de facto binding rules in a national jurisdiction, e.g. the <IRF> has in South Africa as a means of complying with the King IV Corporate Governance Guidelines (Institute of Directors in Southern Africa (IoDSA), 2016). Second, we show how the de facto standard-setter needs a powerful coalition of actors who can influence the policymakers to allow the adoption and diffusion of the de facto standard at a national level such as the role the IoDSA played in the adoption of the <IRF>. Without regulatory support, it is difficult for a private and voluntary reporting standard or framework to be adopted and diffused.

While the two contributions we make are valid in a normal context whereby policymakers and private standard setters vie for compliance in international jurisdictions, the world as we know it has changed irreversibly after the COVID-19 crisis. Thus, we are in unprecedented territory that will require even more the collaboration of all members and institutions in society to overcome the pandemic and the economic, social and environmental implications. Thus, reporting on how we all participate in overcoming the crisis are overriding goals that should alter the previous intentions of the IIRC to promote stock market capitalism through the <IRF> (La Torre et al., 2020) and the European Commission to develop trust in business through the EU Directive (European Union, 2014).

The remainder of the paper is structured as follows. Section 2 presents a literature review to conceptualise setting the standards for reporting integration and highlights the gap in the literature that raises our research question. Section 3 describes the context by introducing the EU Directive and the <IRF>. Section 4 illustrates the methodology we followed to address the research question. Section 5 contains a discussion of our findings by critically exploring the link between the two initiatives. Finally, Section 6 provides the conclusion by outlining our contributions to the recognition of private standards and for legal compliance, and the implications for future research.

AIM AND OBJECTIVE

AIM

To understand and analyze the structure, principles, and significance of the International Regulatory Framework (IRF) that governs the development, approval, distribution, and monitoring of pharmaceutical products, medical devices, and healthcare practices across global markets.

OBJECTIVES

1. To identify key international regulatory bodies (e.g., WHO, ICH, EMA, FDA, TGA) and their roles in global healthcare governance.
2. To examine the harmonization efforts and guidelines (such as ICH Q, S, E, and M series) that promote consistency in regulatory standards across countries.
3. To evaluate the impact of the IRF on pharmaceutical product lifecycle management—from R&D to post-marketing surveillance.
4. To understand the challenges and opportunities faced by pharmaceutical companies in complying with diverse international regulatory requirements.
5. To analyze the influence of the IRF in facilitating safe, effective, and quality healthcare products in global markets.
6. To encourage regulatory convergence and mutual recognition agreements among countries for faster and more efficient access to medicines.

DISCUSSIONS

The advent of the *new economy* has already produced a sizable body of literature. This paper does not attempt to discuss all the issues involved in the new economy, but aims to extract the implications for the international regulatory framework and to provide guidelines for necessary changes. It will thereby focus on the establishment of standards, on policy co-ordination and on taxation. The new economy is sometimes seen as the herald for a truly borderless world. However, since the internet requires substantial prerequisites concerning technical infrastructure and human capital, some worry that the developing countries will be left behind. The paper addresses this fear of a growing "technological apartheid" between the industrialized and the developing countries and looks at policies to overcome the digital divide.

The structure of the paper is as follows: The paper first clarifies the various catchwords of the new economy, examines the rapid growth of e-commerce and looks at the digital divide between countries. It then discusses the necessary modifications for the multilateral framework concerning the establishment of standards, the need as well as the scope for policy coordination, taxation and the overall treatment of e-commerce. Finally, the paper looks at strategies to tackle the digital gap between countries.

Catchwords and Concepts for the New Economy

Various catchwords have been coined to capture the essence of the economy- wide consequences resulting from an increased use of processed digital information and from the application of the internet for a wide array of services (software programming, webpage maintenance, ticket and hotel reservations, on-line information and support, ordering facilities, publishing, indexing or abstracting etc.) as well as transactions (delivering music, movies, documents, literature or software in digital form).¹ The following catchwords aim at different characteristics of this phenomenon but are frequently used as synonyms: "digital economy", "information economy", "knowledge-based economy", "weightless economy", "virtual economy", "internet economy", "electronic commerce", "e-commerce", "e-conomy", or maybe more capacious "new economy". Some authors have tried to assign distinguishing concepts to this variety. For example, Kling and Lamb (2000) suggest to use the term "information economy" to include all informational goods and services like publishing, research, legal and insurance services, entertaining, and teaching in all of its forms, and the term "digital economy" to address (only) the goods and services whose development, production, sale, or provision is critically dependent upon digital technologies. Furthermore, the term "new economy" is associated for them to possible consequences of the information economy and the digital economy, namely high growth, low inflation, and low unemployment.

However, in many papers – including the present one – the concept of the "new economy" is wider and includes the characteristics of the "information economy" and of the "internet economy" as subsets. In the following, the term "new economy" describes an economy where both final output and intermediate input predominantly consist of information and where the modern (digital) information and communication technologies provide world- wide access to almost any available information. These new technologies might have the potential to enable an increase in the productivity of conventional business practices, but also facilitate the establishment of new processes and products. Consequently, the evolution of the new economy should not be considered as being restricted to the information sector, but as a far reaching process that might alter and extend the products and production processes within the whole economy.

This description of the new economy does not necessarily imply growth rates for the whole economy above the average growth rate of past decades. In fact, doubts about sustainable higher growth rates have been voiced, for example, by Gordon (2000), who critically reviews the potential for productivity gains within the new economy. Furthermore, Gundlach (2001) questions the usefulness of residual measures of total factor productivity growth to deduct the existence of higher growth paths. With the failure of several new economy enterprises ("dotcoms") during the year 2000 and the slow-down of the US economy in 2001, a more realistic assessment of the changes induced through the new economy will become more widely spread.

Growth of International E-Commerce

The various indicators for the use of telecommunication in the years 1990 to 2002 (projected data) show a steady growth of the use of personal computers and main telephone lines and, particularly, the rapid increase in the number of internet users and mobile cellular subscribers. Comparing the expected level of 2002 with the actual level of 1990, the amount of main telephone lines will more than double (factor 2.1) in this period and the amount of personal computers will increase by the factor 5.6, whereas the mobile phone subscribers will go up by the factor 90 and the number of internet users will explode by the factor 192.

This rapid development in the use of the internet is also reflected in the accelerating growth of the number of internet hosts. From mid-1994 to January 2001 world-wide internet hosts multiplied by the factor 22 from 4.8 millions to more than 105 millions.

Linked to the increase in internet users and internet hosts is a mounting importance of the internet for business transactions. Due to limited availability of secure on-line payment devices in previous years, many users were initially reluctant to purchase goods and services via the internet. However, the standard of encoding and, consequently, the security of transaction have improved in the last years, and electronic commerce has become more popular so that it is set to gain quickly in significance relative to overall business. According to a survey conducted by the UNCTAD (2000: 7) about the various projections, the importance of on-line business for total cross-border trade flows is estimated to range between 10 and 25 per cent of world trade by the year 2003. This range of estimation exhibits on the one hand the considerable uncertainty concerning the rate of growth of e-commerce, but on the other hand underlines the expectation that e-commerce will become a major component of business life and cross-border trade even if a more cautious assessment turns out to be true.

Electronic Commerce" expects that on-line business to business will amount to more than US\$ 7 trillion annually (Global Business Dialogue 2000a: 2). Furthermore, the association expects that more than one billion people will be connected to the internet by that date.

Related to the progress of electronic commerce, the OECD (1999: 21) envisions a significant rise in international trade, especially in electronically delivered products. These products are frequently services that are, until now, only traded to a limited amount and that are predominantly supplied on an international level within multinational firms. These shifts in business practices could be detrimental for sectors that have been protected until now by regulatory or structural barriers. Furthermore, the OECD expects from this development considerable pressures to reduce differences in regulatory standards concerning especially accreditation, licensing or restrictions on activity for these newly tradable products.

The Digital Divide between Countries

The previous section has documented the exponential rise of the use of the internet and the expected future importance of electronic commerce. However, it could be claimed that the internet age has arrived only in some parts of the world. Table 1 presents the density of the five main tools of the communication and information era (television sets, telephone mainlines, mobile phones, personal computers and internet hosts per 1000 people) according to an income classification of countries. The classification of countries follows the World Bank (2000a): "Low income" are countries with a Gross National Product (GNP) of less than US\$ 731 for the year 1998, "lower middle income" are countries with a GNP between US\$ 731 and US\$ 3030, "upper middle income" are countries with a GNP between US\$ 3031 and US\$ 9360, whereas "high income" countries are the remaining ones with a GNP of more than US\$ 9361.

Shows that the gap between the low income and the high income countries increases considerably with the state of technology of the communication and information equipment. Whereas the low income countries achieve with their density of television sets 56 percent of the world average, with their density of telephone mainlines 25 percent and with their density of mobile phones still 15 percent, the gap is more pronounced in internet related equipment: The density of personal computers in the low income countries is less than 10 percent of the world average and the density of internet hosts is even less than half of one percent of the world average. This gap is sometimes denominated "digital divide" (cf. OECD, 2001b). It is also interesting to note that the countries classified as upper middle income achieve quite high density values (above 70 percent) relative to the world average for four categories (television sets, telephone mainlines, mobile phones and personal computers per 1000 people) but fall to just 26 percent of the world average concerning the diffusion of internet hosts. Since the internet hosts contain the data that are world-wide available, the density of hosts in a country indicate how much this country can influence the contents of the internet. 2 displays the regional distribution of internet hosts and internet users and underlines the assessment of a digital divide separating the high income countries from the rest of the world. 91 percent of all internet hosts are in the EU, the USA, Canada and Japan. These countries account also for more than 80 percent of world total of internet users. Developing regions like South America or Africa account only for 1.1 or 0.2 percent of internet hosts, respectively, and 3.4 or 0.6 percent of the world total of internet users, respectively. country for the spread of the internet. The United Kingdom or Germany, the two EU countries with the most internet hosts and internet users, have only a twentieth of the internet hosts of the USA.

The existing economic divide between the industrialized and the developing countries is, of course, partly the reason for the digital divide between the high income countries and the rest of the world. Lack of computers, unstable electricity infrastructure, shortage of telephones and capacity of telephone lines aggravate the introduction of the necessary information technology for the digital economy. Furthermore, the fees for new software and internet services are prohibitive for many users in developing countries.

The threatening danger of the digital divide has important economic implications. If the projected exponential rise of on-line business as percentage of total trade turns out to be true, the low participation rate of the developing countries at the internet may impede these countries to profit from the growing cake of business activities and will widen the economic gap between nations.

There are also some more optimistic assessments. The latest technological innovations might enable developing countries to install fully digital wireless networks in order to leapfrog expensive analog terrestrial exchanges. For example, Hudson (2000) sets out that in Uganda there are now more cellular customers than fixed lines, and that the African Communication Group installs wireless kiosks for Internet access to enable small business to get established in the global market place. There are some success stories where villages in developing countries were able to offer their products directly to consumers in the developed world, thanks to lower barriers to entry and improved contact facilities provided by the internet. Furthermore, the rapidly increasing exports of software services from Indian firms to OECD countries have almost attained proverbial status in the discussions about the catching-up of developing countries (cf. Langhammer, 2000).

Unfortunately, it is quite likely that – despite some success stories and selective leapfrogging within the developing countries – it will not be possible to close or even significantly narrow the digital divide, since the

new technologies are heavily dependent on physical capital (for infrastructure, hardware and software), human capital (for installation, maintenance, updates and efficient usage of the computers) and the general economic policy environment (for functioning payment systems).

Necessary Modifications for the International Framework

The rapid spread of the internet as a means for business transactions has not yet been accompanied by corresponding modifications of the international framework. An interdependent transborder network of business activities requires international policy coordination in order to ensure clear, predictable and non-discriminatory rules. A failure to establish these kinds of rules will restrain investment and, consequently, growth. The following sections discuss the necessary changes to create an international regulatory framework that helps to foster an undistorted development of e-commerce in order to maximize the world-wide benefits of the new economy.

Establishing Standards and the "Country of Origin" Principle

A high percentage of trade among nations is based on different endowments and production processes to make the exchange of goods and services beneficial for the involved parties. However, trade requires common norms and standards to facilitate the exchange of good and services by reducing transaction costs. Consequently, it can be said that standards foster and impede trade at the same time (cf. Sykes, 1995). The need for uniform technical standards is especially pronounced for electronic commerce that is depending to a wide extent on functioning and compatible networks. The provider of standards is, however, able to achieve a kind of monopoly power, and there might be a danger of commercial policy abuse by establishing standards and norms that favor one specific company or the companies of a specific country.

For the new economy, important standardization issues concern questions like who determines the network norms, who decides on domain names, how is the compatibility between software programs ensured or how can new improved technological advances substitute obsolete, but still widely spread practices. The overriding principle to answer these question should be the desire to guarantee open network access and open electronic commerce practices. This means, that the use of existing business approaches can yield the benefit of common standards while the possibility of introducing enhanced applications or processes limits the monopoly power of the established firms. The frequent interaction between market participants encourages the formation of uniform standards within networks and e-commerce in a gradual market oriented approach. However, it will be the responsibility of policy authorities that are independent from specific companies and individual countries to ensure the contestability of all market segments.

Of course, the preeminence of the US companies within most sectors of the new economy will cause certain dependencies of such policy authorities on the US government or large US firms. Furthermore, examples like the persistence of the English "QWERTY" or the German "QWERTZ" typing keyboards show that ingrained standards are sometimes very hard to replace. Nevertheless, in order to maximize overall welfare, it will be decisive to approximate as closely as possible an open access approach to networks and electronic commerce.

Policy Co-ordination

The arguments for establishing open common standards point to an increased necessity for policy co-ordination that can take into account new technological developments. In general, the decentralized nature of the internet will be also best served by decentralized regulations. Even if the internet restricts the ability of governments to effectively implement their laws, it is neither foreseeable nor preferable that countries convey their legislative means to global legal institutions.

Rather, it will be necessary to increase co-ordination on multi- and bilateral bases in order to help countries to establish sound and internationally compatible regulatory frameworks. While national differences in regulations are possible and even desirable to foster competition, they have to be reconcilable with the participation of all nations in the global economy. The international policy co-ordination has to lead to clear code of practices including also a predictable schedule of responsibilities, if national laws differ.

Various international organizations have tried in the last years to establish feasible common ground for co-ordination and possible joint implementation. An "Electronic Commerce Task Force" of the World Trade Organization (WTO) has examined various fields for increased co-operation like common product and service categories, consistent rules of origin, synchronized assessment of customs values of goods and services, increased transparency and improved copyright as well as brand name protection (cf. WTO, 2001). Furthermore, in the context of the increasing importance of e-commerce the WTO has repeatedly pointed to the necessity to advance further the opening of markets, to equalize and reduce the level of customs burdens between countries and categories, and to extend the most favored nation principle for services (cf. WTO, 1998). It has also been recommended to focus on the alignment of competition rules within the General Agreement on Trade in Services (GATS) (cf. Bronckers and Larouche, 1997). In the year 2000, work formally began at the WTO to re- launch

service negotiations with the overall aim to broaden and deepen market access commitments in the GATS and to strengthen the GATS rules and principles.

The new economy leads to increased demands on the multilateral regulatory system, since the increasing interdependencies require a substantial increase in policy coordination. However, national differences in preferences have not become smaller or at least have not converged at the same speed as business practices. Consequently, it could be argued that establishment of common and non-ambiguous trade rules has become even more difficult - despite or because of the new economy. This development might jeopardize the beneficial effects of the rule based trade policy. The debacle of the Seattle round and substantial differences in assessments between countries concerning ways and means to liberalize all modes of cross-border supply of services highlight the difficulties in advancing the liberalization of services that are important for the new economy.

Even countries on comparable per-capita income level differ considerably in their assessment of liberalization needs for services. For example, the EU tends to prefer state intervention in order to protect consumers and to support local culture as well as national identity, whereas the US tends to promote liberalization of trade regardless of historical or cultural particularities of other nations. These differences in assessment of liberalization requirements for services are even more pronounced between industrialized and developing countries. Therefore, it is not surprising that the process of finding common denominators in the co-ordination of service trade liberalization uses considerable and even increasing time with the cumulative complexity of service liberalization.

Consequently, the WTO has two main sets of tasks. The first set is to continue further the approach of step-wise liberalization. These liberalization issues have to cover services, especially the provision of national treatment and market access for the decisive sectors of the e-commerce "value chain" and of the information technology.⁵ However, it is likely that the negotiations about future additional liberalization between 140 (as of early 2001) WTO members will require considerable time. The second set of tasks is to generate a level playing field for e-commerce. This should be done with the establishment of an open trade environment by ensuring that national regulations for e-commerce are transparent, predictable, neutral concerning the technical mode of service and in the least possible way trade restricting (cf. Senti, 2000).

Within the scope of the WTO, it might be also feasible to establish in the medium run coordinating bodies that address the issues of trade related consumer protection and data privacy. Concerning privacy, the EU Commission has tried to introduce with its privacy directive a harmonization of privacy standards. With this directive the Commission aims implicitly not only at a harmonization within the EU, but also at setting a world-wide standard. However, due to the – at present – unspecific location of the on-line business, it is likely that this endeavor is going to fail. As long as regulatory authorities are not able to specify the position of a computer the implementation of the privacy directive will remain fragmentary. Consequently, it will depend on the customers to ensure that the standards concerning privacy of the on-line business correspond to their preferences. As described above, this comparison of customers' preferences and site policies could be done automatically.

Taxation and Duties

With the increasing share of electronic – and therefore hardly tangible – transactions, it will be more and more difficult for the government keep control on the tax base and to impose taxes and levies. Due to difficulties in raising taxes on purely electronic transactions, the US had introduced a tax moratorium for these activities concerning indirect taxation, i.e. product taxes, sales taxes and value added taxes. Such a tax moratorium was also recommended for the EU (Siebert, 2000: 30).

Electronic transmissions crossing borders are right now also duty free due to the moratorium on customs duties for electronic transactions that was introduced in the year 1998. Consequently, electronic commerce as one mode of business conduct (sending software, literature, music and pictures via the internet) receives at present a preferential treatment over other modes of supply (sending these information embodied in documents, books, tapes, compact discs or films via the conventional channels). The effect of this preference concerning duties is similar to trade preferences of one region granted to another region, as examined within the Vinerian customs union theory. Consequently, Mattoo and Schuknecht (2000) expect also from this preference for one mode "trade-diversion" to the detriment of other modes.⁶ Therefore, this duty exemption of electronic commerce questions the concept of technological neutrality, that prohibits discriminations among products on the basis of their means of delivery. This concept or better principle of technological neutrality is, however, decisive to make sure that the GATS system is applied in a consistent way to electronic commerce. A similar distortion is also introduced into national tax systems if one mode of supply is singled out for different treatment. This has been examined by various authors like Chan (2000), Goolsbee (2000), Goolsbee and Zittrain (1999) or Watanabe (2000).

While at present electronic commerce tends to be favored in its tax treatment, there are also some provisions within countries that discriminate against electronic products. Publishers in Germany have complained about the discrimination of the e-commerce through tax regulations. The same product faces two different tax rates depending on its distribution as either a printed text or an electronic copy. In Germany, there is a reduced sales tax of 7 percent on books, journals and newspaper compared to a sales tax of 16 percent on electronic sales

and compact discs.⁷ The publishers have pointed out that this constellation leads to a discrimination of digital services by the government, despite repeated pledges to foster the right environment for the new economy. It has to be noted, however, that it is not the German parliament or the German finance ministry that can change this constellation. This could only be done by the EU, which has confined in 1977 in its 6th directive concerning value added taxes the reduced tax rates to books, journals, newspapers and booklets for painting and music.

These examples highlight the unsystematic treatment of electronic commerce. In order to achieve consistency of tax and duty systems, it is necessary to eliminate exemptions. Through special treatment of electronic commerce within the tax system considerable distortions might be introduced. A special treatment of electronic commerce concerning duties is also questionable. Previous experiences have shown that temporary waivers for certain sectors within the GATT / WTO system (like for agriculture or textile) often become resistant to change (cf. Siebert, 1999: 284). The danger of large distortions is especially pronounced for areas that will become increasingly important in the future.

Strategies to Overcome the Digital Divide between Countries

The establishment of the basic requirements set out in the previous chapter will be decisive to establish a framework that does not discriminate against countries or companies of certain regions. It is necessary, however, to address the particular concerns that hinder developing countries to participate fully in the new economy. As it was set out at the beginning of this paper, there is a pronounced digital divide between the rich countries and the rest of the world. It might be that this digital divide is smaller than the gap for previous new technological developments (steam engines, telephones, electricity) five or ten years after these innovations came to the markets since the connection to the world-wide web and the implementation of digital devices require less sunk costs than the former main technological waves. In that respect, it could be argued that also the digital divide will diminish with time until the gap in the density of computers and internet hosts just reflects the different economic development stages during the catch-up process. Yet, the rapid rising importance of the internet within the last decade and the prediction about the enormous on-line business within a few years highlight the necessity to overcome and erode any "technological apartheid" that would even reinforce the existing economic divide.

The success of the Indian cities of Bangalore, Bombay, Hyderabad and New Delhi in exporting computer software services is based on the relatively advanced capital accumulation as embodied in the local infrastructure and a relatively high level of human capital for certain segments of the population. These levels of physical and human capital accumulation are, however, lacking in most other areas of India and also in many other developing countries. Some emerging markets like Brazil, China, Russia, Mexico, and South Korea will be able to establish comparable local hubs of physical and human capital accumulation that have a comparative advantage in offering software and services for the internet. However, most regions in the developing world do not yet have a broad enough base of educated and trained people and lack until now the required infrastructure to compete in the new economy.

Experience, education, and technology induce continuous changes in the relative productivity and value of economic inputs, resulting in what the economist Joseph Schumpeter referred to as "creative destruction" in a market economy that continuously reallocates property rights. The four areas of law that are the focus of this paper are essential for such reallocation of property rights. The market mechanism must allow such adjustments and reallocations of economic inputs, which are not painless to market participants and result in the shifting of property rights among them. In a state-planned economy, the changing value of economic inputs is not reflected in price adjustments determined in the market, and state bureaucrats will be generally resistant to the forces of creative destruction. As a result, over time, state-planned economies will become less and less competitive with market economies.

The paradox of creative destruction is that it results in renewal of the market economy, which has the flexibility and strength to adjust to changes. This renewal is based on innovation, risk-taking, and competition, all of which must be supported and encouraged by the legal and regulatory framework. Western market economies experience incremental creative destruction with a well-developed rule of law. In the transition and emerging economies, wholesale and rapid creative destruction must occur within a poorly developed rule of law. Obviously, this will be a disruptive process. And with a poorly developed rule of law, the process will inevitably result in corruption, which will be stifling to the entrepreneurial efforts of many market participants.

This paper will briefly examine the causes of the financial crises in East Asia and Russia in order to set the backdrop for analysis. It will then survey these four areas of law in the six countries. The legal survey is not intended to be a definitive description of the law in the six countries but rather is intended to provide a legal overview, to serve as a basis for analysis of how the status of the legal and regulatory framework in these six countries affected their economies during the financial crises.

CAUSES OF THE FINANCIAL CRISES

The financial contagion that swept East Asia beginning in the summer of 1997 was the result of economic and institutional factors. The Asian financial crisis was not the direct result of a weak legal and regulatory framework.

The principal economic factors behind the Asian financial crisis were the very high domestic savings relative to the size of the respective economies, combined with a very large inflow of foreign capital. Strong economic growth, low government deficits, high savings, and stable currency exchange rates had encouraged the inflow of foreign direct investment and the buildup of short-term external debt. In 1996, over \$160 billion of net private capital flowed into East Asia. Overinvestment resulted in inefficient allocation of capital. The East Asian economies could not provide adequate profitable opportunities at reasonable risk to absorb the domestic and foreign investment funds. This was manifested in a booming stock market and inflated real estate prices, causing speculative bubbles in equity and real estate markets. Further, capital was often allocated at the direction of governments.

At the same time, overvalued currency exchange rates caused a decline in exports and an increase in imports, resulting in large current account deficits that were financed in large part by short-term external debt. External economic factors also played a significant role. The Japanese recession contributed to the decline in exports, and the depreciation of the Japanese yen against East Asian currencies reduced the competitiveness of Asian goods in the important Japanese market and also decreased the attractiveness of East Asia as a place for Japanese companies to produce goods. East Asian countries ran up large trade deficits in 1996 (South Korea, \$23 billion; Thailand, \$15 billion; Indonesia, \$7.5 billion) and incurred increasing unhedged, short-term indebtedness denominated in foreign currency. In June 1997, South Korea had close to \$120 billion of foreign debts and less than \$40 billion of foreign exchange reserves; Thailand had about \$90 billion of foreign debts and about \$30 billion of foreign exchange reserves; and Indonesia had about \$115 billion of foreign debts and \$20 billion of foreign exchange reserves. By contrast, Taiwan had virtually no foreign debt and about \$90 billion of foreign exchange reserves.

The institutional factors behind the Asian financial crisis were fixed currency exchange rate systems which ultimately collapsed and weak financial systems with lax supervisory regimes. Downward pressures on currency exchange rates caused foreign creditors to demand payment on their short-term, foreign-currency-denominated loans, which led to further weakness as debtors sold local currency to make such payments. This vicious spiral downward caused the fixed exchange rate systems to collapse. Weak, poorly supervised financial systems allowed systemic mismatching of assets and liabilities and excessive foreign currency and market risks.

These economic and institutional factors contributed to growing financial turbulence. The abandonment of fixed currency exchange rates, the demands for repayment of the high levels of unhedged, short-term external debt, the declining demand for exports, and the weak financial systems transformed such financial turbulence into the Asian financial crisis. The “herd” instinct took over and creditors and investors exited the region, together and at the same time. Little institutional infrastructure was available to contain the crisis, which spiraled out of control. The financial crisis in Russia that began in August 1998 was caused by entirely different factors than the financial crisis in East Asia. Russia’s financial crisis was caused by the collapse of its fiscal system. The infrastructure for tax collection in Russia was woefully inadequate, there were incentives not to pay taxes, and a “culture of nonpayment” had descended from the Soviet days, during which it was accepted conduct to attempt to beat the system. As a result, by the summer of 1998 the Russian government had insufficient resources to run a credible government. In 1999, on a per capita basis, the Russian government spent the equivalent of roughly \$1 for every \$35 the U.S. government spent.

The collapse of the fiscal system caused the banking system to fail. The assets on the balance sheets of Russian banks consisted predominantly of Russian government securities, and the banks had extensive off-balance-sheet foreign exchange exposure. With the default by the Russian government and the currency devaluation in August 1998, caused by the government’s lack of fiscal resources, the banking system immediately, and inevitably, failed. The fiscal crisis brought down the banking system. One great irony is that transactions in the government securities market, which is a very important component of a market economy, caused the failure of the banking system. The failure of the Russian banking system does not reflect a failure of financial system reform efforts in Russia.

It has been recognized that “sound macro-policies were an absolutely necessary, but not remotely sufficient, condition for sustained growth and rising living standards.”³ A developed legal and regulatory framework and a well-supervised and regulated financial system are necessary for sustained growth. While a poorly developed legal and regulatory framework was not the proximate cause of the financial crises in East Asia and Russia, once the crises began, the weakness in legal systems meant that important tools to contain the crises and to work to restore financial stability and confidence were not available. Thus, the magnitude of the financial crises was amplified. The discussion that follows presents evidence of the weaknesses in legal and regulatory frameworks in East Asia and Russia.

CONCLUSION

Our research contributes to the understanding of the formation and diffusion of private standards and frameworks and how they might become de facto binding rules. In the case of the , it is arguably already a de facto binding rule in South Africa because of the endorsement of the King IV guidelines to produce integrated reports (Institute of Directors in Southern Africa (IoDSA), 2016, p. 28). However, it is still considered a voluntary framework. Similarly, the IFRS are binding rules because, in many jurisdictions, they are mandated as a condition of listing on stock exchanges or as part of national corporate laws. However, in the case of the , it has arguably failed to become adopted as the de facto framework for complying with the EU Directive considering the relatively few integrated reports issued compared to GRI reports in Europe in 2018.

So why has the failed? In our view, it is because the was trying to get companies to prioritise the against an already well-established reporting framework in the GRI, which arguably can be used to comply with the EU Directive (GRI and Global Sustainability Standards Board, 2017). For most companies, complying with the EU Directive using the GRI is a business as usual approach to reporting rather than implementing a significant change to established reporting practices (Dumay and Hossain, 2019). Thus, companies do not need to take on board the IIRC's façade of compliance because they already have a tool in the form of the original GRI guidelines or the current GRI Standards that they can use to comply with the EU Directive, regardless of whether they comply in substance or just form.

It is interesting to note that both the EU Directive and the will undergo changes in 2020 and beyond. For the EU Directive, these changes are in keeping with the need to build a socially, environmentally and economically sustainable economy for Europe. For the , despite IIRC claims that it wants to have further links with the UN SDGs, the changes proposed are limited to three relatively minor issues. Stock market capitalism still appears to be the driving force behind the IIRC and reporting integration (La Torre et al., 2020). The IIRC needs to understand that if the is to become a de facto private standard in a specific national jurisdiction, it needs the support of corporate regulators to mandate it (Flower, 2015).

ACKNOWLEDGEMENT

The Authors are thankful to the Management and Principal, Sri Indu Institute of Pharmacy, Sheriguda (V), Ibrahimpatnam, Telangana, for extending support to carry out the research work. Finally, the authors express their gratitude to the Sura Pharma Labs, Dilsukhnagar, Hyderabad, for providing research equipment and facilities.

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