

# 1. Introduction and overview

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## 1.1 INTRODUCTION

The noted international trade lawyer and legal jurist John H. Jackson once defined international economic law as embracing ‘trade, investment, services when they are involved in transactions that cross national borders, and those subjects that involve the establishment on national territory of economic activity of persons or firms originating from outside that territory’.<sup>1</sup> He left out competition, although it can be argued that competition by its nature would be encompassed indirectly by reference to ‘economic activity’. The failure of the trade negotiations at Seattle, and the collapse of the negotiations at Doha, have brought increased attention to the issue of international economic law and development, specifically, the implementation of special and differential rights in favour of developing countries. This book examines one aspect of the many issues facing developed and developing countries in the negotiations that lie ahead: how *International Economic Law* (IEL) can be used as an instrument in the regulation of technological processes to help address the Digital Divide.

In Jackson’s terms, IEL would include a combination of Public International Law as well as including all branches of law concerned with international economic issues.<sup>2</sup> Subedi has defined IEL as including ‘a vast array of topics ranging from public international law of trade to private international law of trade to certain aspects of international commercial law and the law of finance and investment’.<sup>3</sup> Atik similarly speaks of IEL as including monetary law, competition, intellectual property and law and development.<sup>4</sup> The American Society of International Law defines IEL as encompassing

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<sup>1</sup> Jackson, J., *The World Trading System*, MIT Press, 1989, pp. 21–2.

<sup>2</sup> See also Qureshi referring to Jackson in ‘Perspectives in International Economic Law – An Eclectic Approach to International Economic Engagement’ in *Perspectives in International Economic Law* (ed. Asif Qureshi), Kluwer Law International, 2002, p. 19.

<sup>3</sup> Subedi, S.P., ‘Sustainable Development Perspectives in International Economic Law’ in *ibid*, p. 262 (footnote 9).

<sup>4</sup> Atik J., ‘Introductory Essay: Uncorking International Trade, Filling the Cup of International Economic Law’, *American University International Law Review* 15(6) (2000) 1231–47 at 1232.

international trade law, international economic integration law, private international law, international business regulation (including competition law), international financial law (including FDI), law in development, international tax law, and international intellectual property law.<sup>5</sup> In his thought-provoking book *Perspectives in International Economic Law*, Qureshi poses three questions as critical to the understanding of IEL:<sup>6</sup> (i) what interests does IEL serve?; (ii) what interests drive it?; and (iii) what interests exist in international economic relations? He argues ‘that the questions most focused upon and often evocative are the ones which centre on the interests that drive IEL, and the interests it serves’.<sup>7</sup> This would include the decision-making practices of international economic organisations and the influence of the role of Transnational Corporations (TNCs) and developed economy States in shaping international economic relations. According to Qureshi, an under-explored area of IEL would be the international economic interests that exist in international economic relations. Exploring this area would be the most ‘critical to the complete and wholesome development of the international economic order’.<sup>8</sup> This book does not attempt to do that, the scope of such an undertaking would be well beyond its boundaries, but it does seek to cover at least in part the issue that Qureshi is addressing and by looking at a specific sector of IEL, that of technology and international development, specifically the Digital Divide. In regulating technology, States use a combination of *ex-ante* or sector-specific (telecommunications) measures, merger regulation and *ex-post* measures, such as competition law. Also included within the umbrella of IEL is the regulation of property rights, specifically intellectual property and the balance to be achieved between innovation and control of monopoly. As outlined above, all these issues can safely fall under the umbrella of IEL. Also falling under the same umbrella is international development law, and this book is primarily concerned with the use of technology in international development specifically in the context of Developing Countries (DCs) and Least Developing Countries (LDCs).

There is in current thinking an emphasis on development and the needs of developing countries, and that such development needs to be *sustainable*.<sup>9</sup>

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<sup>5</sup> See website of the International Economic Law group at [http://www.fletcher.tufts.edu/inter\\_econ\\_law/ielgm.html](http://www.fletcher.tufts.edu/inter_econ_law/ielgm.html), date accessed August 2005.

<sup>6</sup> *Supra* note 2 at p. 11.

<sup>7</sup> Qureshi, A., ‘Perspectives in International Economic Law – An Eclectic Approach to International Economic Engagement’ in *Perspectives in International Economic Law* (ed. Asif Qureshi), Kluwer Law International, 2002, p. 19.

<sup>8</sup> *Ibid.*

<sup>9</sup> The concept of sustainable development was introduced at the *World Commission on Environment and Development*, where sustainable development was defined as ‘development that meets the need of the present without compromising the

There is also greater attention to the role that Information Communications Technologies (ICTs) can play in helping to enforce basic human rights. It is widely recognised now that ICTs can help support the achievement of several of the *Millennium Development Goals* (MDGs),<sup>10</sup> such as reducing poverty, improving literacy and healthcare. The eradication of poverty will be dependent on sustainable growth. Research reviewed in Chapter 2 indicates that growing information technology levels leads to growth of GDP. Also, by broadening the availability and quality of educational material and improving educational administration and policy, ICTs can help support the development of primary education. ICTs can also help improve healthcare provision by providing channels for the provision of treatment, consultation and diagnosis.<sup>11</sup> By making positive attempts to reduce the Digital Divide, DCs and LDCs will be in a better position to access the technology required to address the MDGs. *The World Summit on the Information Society* (WSIS) conducted in two phases in Geneva (2003) and then Tunis (2005) has set an agenda for addressing the Digital Divide as between developed and developing countries, and making ICTs a central part of an overall process of development. The WSIS is discussed in Chapters 7 and 9 of this book.

At the international level, developing countries will increasingly encounter problems with interconnecting with the digital backbone network of the internet. Controlled by powerful (mainly) developed country operators, the risk that costs for access and interconnection will increase with time perhaps on a non-discriminatory and non-transparent basis is high. Increased access prices will inevitably be passed down the chain to domestic DC/LDC ISPs and in turn to end-users in these countries, accelerating the Divide (for a more complete discussion of the implications of internet interconnection for DCs/LDCs see Annex G of the *DFID Internet Costs report*, compiled by the author and referenced at note 16 below, and also his chapter on 'Interconnection Access and Peering: Law and Precedent' in *Telecommunications Law*, referenced at note 20 below). There is recognition now in the developed world that as data surpasses voice, interconnection of internet networks should be regulated. Increased market access by DC and LDC operators into OECD markets for electronic intangible products will be crucially dependant on equitable interconnect and access to the underlying backbone infrastructure. Both the WTO and ITU will have a role to play here.

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ability of future generations to meet their own needs': World Commission on Environment and Development (WCED), *Our Common Future*, Oxford: Oxford University Press, 1987 at p. 8. Approved by UN General Assembly Resolution GA 187, 42 UN GAOR (96<sup>th</sup> plenary meeting) UN Doc. A/42/821 Add.5 (1987).

<sup>10</sup> Discussed in Section 10.4.2.

<sup>11</sup> UNCTAD, *Information Economy Report*, 2005, pp. xvi-xvii.

In fact, we are seeing the increased convergence of international institutions, such as the WTO and ITU in the area of technology and development (discussed in Chapter 3). The ITU has recently published *The Internet of Things*<sup>12</sup> to give us a perspective of how technology can be used by developing countries in the future to help expand trade with developed countries, for example in the use of radio frequency identification sensor technology to track shipments of beef to the European Union to verify their origin. One aim of such technology could be to improve market access into mainly OECD markets for products sourced from developing nations. Another aim might be to help enforce rules of origin under the GATT (Chapter 6). Also, the Doha Sixth Ministerial Conference in Hong Kong completed with the publication of the Sixth Ministerial Declaration in December 2005. The Doha Round was termed the ‘Development Round’. With the outcome of the Doha talks still to be determined we will have to wait and see whether commitments to technology transfer (for example under Article 66.2 TRIPS) and the enforcement of special and differential rights to DCs and LDCs will have any meaningful outcome (Chapter 8).

Given these developments on the global stage and the sometimes ‘fuzzy’ nature of the recommendations and goals that multilateral negotiations inevitably produce, the aim of this book is to give greater clarity in terms of the operation of IEL as it relates to the high technology sector and how such law can help address the Digital Divide. The idea is to review current law and provide specific recommendations for change. The book seeks to define those areas in IEL that are crucial to the Digital Divide, including: regulation of international telecommunications; information technology; competition law; intellectual property law; the trade in digital goods and services; and international development. Current international regulation in these areas is assessed at a (mainly) multilateral level, as is how such regulation might be changed to help address Digital Divide issues. Change at the multilateral level or even legislative change in the trade acts of some of the more powerful trading actors, such as the Quad countries of the United States, Canada, Japan and the European Communities, is not sufficient however to address the Divide. Research reviewed in Chapters 2 and 10 indicate that the international Digital Divide between developed and developing nations will not truly be addressed unless and until host (developing) states begin to realise and enforce civil and political rights, and economic, social and cultural rights (ESCR) at home. Addressing the Digital Divide then becomes not just a question of access to appropriate technology through technology transfer licensing or FDI for

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<sup>12</sup> See the executive summary at: [http://www.itu.int/dms\\_pub/itu-s/opb/pol/S-POL-IR.IT-2005-SUM-PDF-E.pdf](http://www.itu.int/dms_pub/itu-s/opb/pol/S-POL-IR.IT-2005-SUM-PDF-E.pdf), accessed December 2005.

example, but also a question of encouraging plurality, freedom of expression and unrestricted access to content, subject to the public interest: enforcing human rights at home will help address the Digital Divide. Some would argue that mixing trade with human rights is a bad thing. We need to remind ourselves however, and as mentioned above, that research does exist to link the enforcement of human rights with helping to address the Digital Divide. Also, we have seen that international development can be regarded as one aspect of IEL. This book takes the position that the plans, policies and processes of development should incorporate human rights standards, that is, the objectives of development should incorporate the norms, standards and principles of the international human rights system. If we can regard enforcement of human rights as part of the development process and development as an aspect of IEL, then there needs to be some discussion of the relationship between human rights, trade and development. Chapter 10 (Section 10.7) discusses (in outline) this thorny issue of human rights and trade, and particularly in the context of the UN *Right to Development*. The book raises three questions:

- (i) What are the primary sectors in IEL that relate to the Digital Divide?
- (ii) How are these sectors regulated and how can current regulation be improved to help address the Digital Divide?
- (iii) Is it possible to define a relationship in IEL between civil and political, economic, social and cultural rights as a collective, for example in the form of the much debated and somewhat controversial *Right to Development* (the ‘RTD’ as defined in this book) on the one hand, with the Digital Divide on the other? And if such a link does exist, how can the RTD be enforced so as to help address the Digital Divide?

Chapter 2 addresses the first question; Chapters 3 to 9 the second question, and Chapter 10 the last question. Clearly the first task is to explore what is meant by the term ‘Digital Divide’. The book seeks to apply principles of IEL in addressing the Digital Divide, but without a clear idea of what the term ‘Digital Divide’ means, there can be no foundation upon which to anchor the legal rules. Further, it is necessary to distinguish in law between what is meant by a Developing Country (‘DC’) and Least Developing Country (‘LDC’). Chapter 2 explores these issues, expanding on the concept of IEL and seeking to arrive at working definitions to be used later in the book.

Chapters 3 to 6 are more focused on the international ‘rules of the game’ that regulate international telecommunications networks and also the WTO rules that might apply to the electronic content that will flow *over* these networks (Chapter 6). The next four chapters (7 to 10) are dedicated to reviewing the sectors of IEL that relate to the Digital Divide from the viewpoint of

developing countries. The identification of the applicable laws will be carried out by asking: (i) which of the rules in IEL are designed to *facilitate* international development and address the Digital Divide; (ii) which of the rules in IEL hinder international development and possibly widen the Digital Divide? The majority of the author's recommendations for change are to be found within Chapters 7 to 10. Two of the most significant recommendations are introduced below.

In reviewing the relevant law, the book identifies two major *problems* in using IEL to address the Digital Divide: **(1)** the inadequacy of current telecommunications law in the developed world to regulate advanced telecommunications incumbents who enjoy monopoly power in controlling the international digital (backbone) networks that act as the delivery mechanism for electronic products and services (electronic intangibles), and where effective regulation would facilitate access and interconnection to these networks, and export by DCs and LDCs of electronic intangibles over these networks into developed country (mainly OECD) markets (and vice versa); and **(2)** the lack of international regulation encouraging Transnational Corporations (TNCs), the primary source of technological know-how, to provide beneficial technology transfer to producers in DCs and LDCs.

The author therefore suggests new tools to address these two fundamental legal problems. These include:

- (a) a new *Layering Theory* to be applied at the national level by National Regulatory Authorities (NRAs)/National Competition Authorities (NCCs), at the regional level by the European Commission, and at the multilateral level by the WTO for the regulation of advanced communications networks to address (1) above; and
- (b) a new *Right to Development Theory*, which seeks to link FDI with the RTD both in law and simple economic theory, and which results in the implementation of a *Right to Development Tax Relief* to address problem (2) above.

Chapter 5 introduces a Layering Theory developed by the author for the regulation of electronic networks and services which the author contends will (inevitably) require implementation in regulatory frameworks in developed countries with advanced digital networks within the next five to ten years, if such regulatory frameworks are to effectively regulate for abuse of dominance by undertakings in the provision of advanced electronic networks and services. The author suggests how at the regional level the Layering Theory could at first be incorporated into the EC's new regulatory framework for electronic networks and services (upon which the Layering Theory is based), and then how multilateral instruments, such as the WTO's regulatory Reference Paper,

could in turn be amended in light of the Layering Theory, subject to member state agreement post-Doha. The author also argues that the adoption of the Layering Theory in EC and WTO policy could allow for increased market access by DCs and LDC country operators into developed country communications markets by virtue of the principle of MFN and non-discrimination, and third party access to communications infrastructure. In failing to gain such access on anti-competitive grounds for interconnection and access, the Layering Theory could allow developing country operators who allege discrimination, unfair pricing, abuse of dominance etc., by operators controlling the international internet backbone networks and/or operators in the developed world controlling national telecommunication markets (mainly OECD markets) to lodge complaints to developed country NRAs/NCAs, or as part of dispute resolution at the WTO (similar for example to the interconnection dispute between the US and Mexico in the *Mexico-Telmex* case). The Layering Theory provides for the accurate definition of a relevant market, and only once a market can be defined, can an investigation of abuse of dominance in that market or an anticompetitive agreement to foreclose that market truly commence. The author also argues that the growth in international trade in electronic intangibles in the OECD area could be dramatically influenced by potential new WTO rules on classification of such electronic intangibles (Chapter 6). Chapter 6 envisages an international market for the trade in electronic intangibles (goods and services). The recent WTO Dispute Settlement Appellate Body case *United States – Measures affecting the cross-border supply of gambling and betting services* (April 2005) ('*US-Gambling*') creates a crucial precedent for trade in electronic services under mode 1 (cross-border) GATS. *US-Gambling* is discussed in Chapter 6 (Section 6.6).

The second of the two major recommendations is located in Chapter 10, where the author sets out a new *Right to Development Theory*. One of the assumptions of this book is that enforcing civil and political rights, and ESCR will stimulate technology transfer, innovation, and the narrowing of the Digital Divide, effectively generating a 'positive feedback' loop. A further assumption is that civil and political rights, and ESCR can all be represented by one *composite* right, the UN Declaration on the *Right to Development* (RTD), and that enforcing the RTD will help address the Digital Divide. However, what does enforcement of the RTD mean? What is the RTD? Is it correct to establish a relationship between the RTD and the Digital Divide? In answering this last question for example, the author refers in Chapter 2 to research indicating the relationship between civil and political rights, and ESCR and the Digital Divide: In Chapter 10, the author argues that these human rights can be represented by one *composite* right, the RTD, a contentious issue given that the United States has never even ratified the RTD. The RTD states that the right to development is a human right. The UN General Assembly through

Regulation 4/128 adopted the RTD on the 4 December 1968. This book assumes that the RTD *can* be classed as a composite right and following this assumption and the evidence of published research linking civil and political rights, and ESCR with the Digital Divide (Chapter 2), the author argues that enforcing the RTD in DCs and LDCs will help address the Digital Divide. The author also recognises that there is disagreement as to the validity of considering ESCR as human rights. Clearly many states regard the right to education, right to health, food and clean drinking water as basic human rights, but for a more complete discussion see the excellent book by James Nickel, *Making Sense of Human Rights* (2<sup>nd</sup> edition, Blackwell Publishing, 2007).

In linking the RTD with FDI, the author suggests that the RTD can be enforced through a form of national-level tax relief promoting technology transfer, and to do so, he develops the concept of a national measure, the *RTD Tax Relief*. The author argues that one reason for choosing the RTD as an example of a development theory to help address the Digital Divide (as opposed to any of the other theories on development<sup>13</sup>) is that the RTD represents the culmination of efforts by DCs and LDCs over half a century to use international law to encourage developed countries to assist with international development.<sup>14</sup> As such, the RTD is very closely associated with the interests of DCs and LDCs. Furthermore, research exists to link the separate civil and political rights, and ESCR with the Digital Divide, providing a framework for linking the composite RTD with the Digital Divide, provided of course that the RTD *can* be classed as a composite of the separate rights. Chapter 10 reviews the literature both for and against the RTD and evaluates whether, in law, such a right can have justiciability.

This book takes the view that human rights standards should be integrated into the plans, policies and processes of development, and that development is

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<sup>13</sup> For example, the author is not attempting to discuss the many specific theories on development proposed by different financial institutions such as the Bretton Woods institutions (for example, World Bank and IMF), development theories on sustainable development, micro-development, women-centred development, endogenous development, appropriate development, and 'Basic Needs' development etc. For a more complete analysis in general development theory looking at alternative models of development see: *The Right To Development: A Primer*, Sage Publications, 2004; K. de Feyter, *World Development Law: Sharing Responsibility for Development*, Intersentia, 2001; A. Wood, *The ABC of the PRSP*, Bretton Woods Project, 2000; Human Rights Council, *The Rights Way to Development: A Human Rights Approach to Development Assistance*, 2001; S. Skogly, *The Human Rights Obligations of the World Bank and the IMF*, Cavendish Publishing, 2001; A. Sen, *Development As Freedom*, 1999; S.R. Chowdhury (ed.) *The Right To Development in International Law*, Martinus Nijhoff Publishers, 1992.

<sup>14</sup> Gordon, R., and Sylvester, J., 'Deconstructing Development', *Wisconsin International Law Journal*, 22(1) (2004), 3.

part of IEL. In discussing the various sectors of IEL that relate to the Digital Divide, the author draws widely on primary and secondary sources of law, but also on a number of commissioned research studies. The first includes a case study on Jamaica on the use of Information Communications Technologies (ICTs) in development.<sup>15</sup> The case study forms part of research commissioned by the Berkman Centre for Internet and Society (Harvard Law School). The author also draws on additional research carried out by the author in conjunction with Antelope Consulting for the United Kingdom's Department for International Development (DFID) in the area of reducing internet costs in developing countries,<sup>16</sup> and the use of ICTs in Central and Eastern Europe.<sup>17</sup> These studies are mainly discussed in Section 10.3 on ICTs and Development (Chapter 10). Chapter 10 explores the conflicting schools of thought on the appropriate use of ICTs in development, whether to follow modern Western best practice (the 'Modernisation' school) or to follow a system which encourages the use of ICTs at the local community level, and where benefits trickle-up to the national level (the 'Alternative Development' school), and which has its origins in Schumacher's credo, 'small is beautiful'. There is a growing body of thought that current Western best practice which seeks to use modernisation methods of using ICTs to enhance development is now outmoded and should be replaced with Appropriate Technologies (AT) that seek to integrate local community needs with the use of ICTs. The author explores these issues in Chapter 10.

A further assumption of this book is that encouraging DCs and LDCs to take advantage of existing measures in IEL to export electronic intangibles will help such countries address the Digital Divide. However, the conflicting

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<sup>15</sup> Kariyawasam, R., *Readiness for the Networked World: Jamaica Assessment* (Jamaica Report), published on-line at <http://cyber.law.harvard.edu/home/2002-01>, vol. 2002-01, pp. 1–65, Harvard Law School.

<sup>16</sup> Kariyawasam, R., Collins, H., Dixon, M., Garthwaite, N., Gillwald, A., Groves, T., Hunter, J., Jensen, M., Lucas, W., Milne, C., Unadkat, C., and Wirzenius, A., *Reducing the Costs for Internet Access in Developing Countries*, Report produced for Department for International Development, UK Government (2001), Antelope Consulting, 2001, published on the internet at: <http://www.wesra.com/cost1.htm> (DFID Internet Costs Study).

<sup>17</sup> DFID report, 'Improving the Quality of Transition in Central and South Eastern Europe through Information and Communication Technologies' (hereafter 'ICT Report'), Kariyawasam, R., Lundy, P., Stewart, I., Souter, D., Swain, N., Milne, C., and Garthwaite, N., Antelope Consulting and Commonwealth Telecommunications Office for UK Department for International Development's Central and South Eastern Europe Department, 2000, available on the internet at: [http://66.249.93.104/search?q=cache:IK2S4DYh0foJ:www.antelope.org.uk/telecommunications\\_development/CSEED\\_report.pdf+CSEED,+antelope+consulting&hl=en&gl=uk&ct=clnk&cd=1&client=firefox-a](http://66.249.93.104/search?q=cache:IK2S4DYh0foJ:www.antelope.org.uk/telecommunications_development/CSEED_report.pdf+CSEED,+antelope+consulting&hl=en&gl=uk&ct=clnk&cd=1&client=firefox-a), accessed April 2006.

view is that DCs and LDCs could end up specialising their export industries to serve the developed world, which would neither be of benefit to developing countries, nor alleviate poverty. These views are discussed in Chapter 7 (Developing Countries and Telecommunications), Chapter 10 (International Development), and further examined in Chapter 11 (Conclusion).

Finally it can be argued that in most developed markets, separate legal rules have emerged for the regulation of goods and services mainly because of the different economic treatment; services generally requiring a direct relationship between supplier and consumer, whereas goods are traded independently of such a relationship.<sup>18</sup> The WTO is no different: the GATT regulates goods and the GATS services. As such, the future trade in electronic intangibles will depend to a great extent on how such intangibles are to be classified in international economic (WTO) law, whether as goods under the GATT, as services under GATS, or even as a form of intellectual property under the TRIPS. As mentioned above and further explored in Chapter 6, the *US-Gambling* case has confirmed the rule of technological neutrality as regards the trade in cross-border services under mode 1 GATS, although no decision has yet been reached on whether the TRIPS, GATS, or GATT should specifically apply. *US-Gambling* confirms that all GATS mode 1 commitments include the electronic form of delivery of the 'like' service. This is an important precedent, as international rules on the movement of electronic intangibles will have a direct effect on the ability of DCs and LDCs to export to relevant markets (developed country, mainly OECD markets). Rules on classification are discussed in Chapter 6.

## 1.2 LIMITATIONS

In this book, the author makes a number of assumptions primarily to limit its scope to a manageable level, for example that a discussion of policy level issues on economic sovereignty and good governance, although important to the economic well-being of a country, will not be discussed in detail here other than in the examination of state sovereignty in relation to bilateral and free trade agreements. Furthermore, the author will not discuss in detail the vast and complex subject of law and international development, other than in the context of the UN Right To Development as mentioned above. That the RTD can be classed as a composite right of the separate civil and political, economic, cultural and social rights is an assumption, that although argued for

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<sup>18</sup> Hill, P., 'Tangibles, Intangibles and Services: A New Taxonomy for the Classification of Output', *Canadian Journal of Economics*, 32(2), 1999.

by the (then) UN Independent Expert on the RTD, Arjun Sengupta,<sup>19</sup> has not been universally accepted. However in following this assumption and based on the evidence of published research linking civil and political, economic, social and cultural rights and the Digital Divide, the author argues that enforcing the RTD will help address the divide. The author does not however elaborate on the advantages and/or disadvantages of the different schools of thought as to whether an individual rights-based approach to development is better or worse than for example enforcing the RTD. Both ways will require defining the objectives of development in terms of rights as legally enforceable entitlements, which will mean integrating the norms, standards and principles of the international human rights systems into the plans, policies and processes of development. This work will require human rights impact assessments together with human rights obligations being taken into account at every stage of the development project (needs assessment, project identification, implementation, monitoring and evaluation).

Also not discussed in detail is the role of various IEL institutions, such as the World Bank and IMF, other than as they appear in the context of answering the three main questions posed above, for example in discussing the position of DCs and LDCs in negotiations for the RTD, and in multilateral negotiations on trade and investment. Debt relief and fiscal monetary policy is not covered (for example, the G8 group of major developed countries agreement on debt relief agreed at the Gleneagles Summit in July 2005). In terms of IEL institutions, the focus for discussion remains those institutions and programs central to the regulation of technology and trade, including the WTO, ITU, WIPO, UNDP, UNCTAD, OECD, Asia Pacific Economic Cooperation (APEC), ICANN, the Federal Communications Commission (FCC) in the US and the European Commission. Also discussed in the context of the RTD, is the UN Commission on Human Rights.

The issue of the markets to study within the vast sector of technology and trade is also problematic. There are many markets for export that DCs and LDCs have historically been involved in, including agriculture, commodities, textiles, movement of labour to name a few, but also new markets that such countries are increasingly being drawn to including software and hardware, electronic goods and services, biotechnology, plant products, and semiconductors etc. However, a full investigation of the application of economic law to both the high and low technology sectors would be beyond the scope of this book. The author has focused therefore on the communications sector and specifically

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<sup>19</sup> Sengupta, A., 'The Right to Development as a Human Right', 2000, at [http://www.hsph.harvard.edu/fxbcenter/FXBC\\_WP7—Sengupta.pdf](http://www.hsph.harvard.edu/fxbcenter/FXBC_WP7—Sengupta.pdf), accessed September 2005.  
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the market for electronic intangibles as being most directly linked to the Digital Divide to explore the three broad questions that the book investigates.

In terms of ‘Western best practice’ in the regulation of the communications sector, the author has looked specifically at EU and US markets, given that these two markets were the first to introduce competition in the delivery of telecommunications services by their national incumbent telecommunication carriers (AT&T in the US, and the various national incumbents, such as BT, France Telecom and Deutsche Telekom in Europe) and on which many of the regulatory regimes of other countries are based.<sup>20</sup> Only recently, in the early 1990s did the Japanese government consider detailed regulation to take account of the dominant position that both NTT (domestic market) and KDD (international market) had on Japanese telecommunications markets.<sup>21</sup> The Layering Theory is based on EU and US telecommunications law and computer science theory, and is the reason why chapters 4 and 5 have been included in this book so as to give the necessary theoretical background to the theory. Note also that the impact of reform of domestic regulation measures under Article VI GATS, particularly on mutual recognition agreements and standards setting in the communications sector, is also an area that needs to be addressed by the WTO, but is beyond the scope of this book.

In developing a new *Layering Theory* (Chapter 5) for the regulation of advanced digital networks, and suggesting how the Layering Theory could be applied to WTO telecommunications measures such as the Reference Paper to the WTO’s Fourth Protocol or Basic Agreement on Telecommunications (Chapter 5), the author does not discuss the detailed WTO procedures that would need to be followed in order to bring about suggested amendments to the Reference Paper (the subject of potential further research). The discussion here is restricted by necessity as to the merits of such an amendment in terms of increasing access and interconnection to international backbone internet networks, particularly from the viewpoint of DCs and LDCs, one of the central themes of the book. Also, in developing a new *Right to Development Theory* (RTD Theory) (Chapter 10), the author recognises that to prove the validity of the symbolic equation (*Equation 5*) in IEL that he derives from

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<sup>20</sup> Kariyawasam, R., ‘Interconnection Access and Peering: Law and Precedent’, in *Telecommunications Law* (eds Walden, I., and Angel, J.), Blackstone Press, 2001, pp. 153–6. Mention must also be made of the market in New Zealand, where the regulator introduced competition between the incumbent Telecom New Zealand, and Clear Communications. However, the regulation of interconnection in that jurisdiction posed particular problems and long-standing litigation between the two carriers.

<sup>21</sup> See Fransman, M., ‘Evolution of the Telecommunications Industry in the Internet Age’ in *Telecoms in the Internet Age From Boom to Bust to?*, Oxford University Press, 2002 for a more detailed explanation of the Japanese fixed and wireless mobile sector and deregulation in that sector since the 1990s.

the other equations already proven and cited, and which indicate a relationship between the RTD and economic indicators, such as FDI and GDP, further empirical research in developing countries that already attract FDI, such as India and China, will be required. Such empirical work however is outside the scope of this book.

In the context of the RTD Theory, which relies on the adoption of national measures in the domestic law of developed countries providing for tax relief to MNCs that offer beneficial technology transfer to DCs and LDCs (discussed in Chapter 10), there may also be issues of *State Aid* which will need to be examined, for example in Europe, under Community competition rules on State Aid found in Articles 87 and 88 EC Treaty and relevant case law specifically defining the meaning of aid in terms of its effect, for example preferential tax treatment (Case 173/73 *Commission v. Italy* [1974] ECR 709) and the application of the ‘market economy investor principle’ as set out in Case C-39/94 *Syndicat Français de l’Express International (SFEI) v. La Poste* [1996] ECR I-2547, and Cases C-278-280/92 *Spain v. Commission* [1994] ECR I-4103. Furthermore, there may be issues of State subsidies at the multilateral level given that the WTO has certain rules (Subsidy Rules under the WTO *Agreement on Subsidies and Countervailing Measures*) on States offering support to private industry. For example under the WTO subsidies agreement, subsidies contingent on the export of *goods* are prohibited. Therefore any tax relief must be contingent on the export of services only, for example technology transfer in the form of know-how and not goods. The analysis of State Aid/WTO subsidy rules is however outside the scope of this book.

In discussing *ICTs and Development* (Chapter 10), the author is not attempting to address the myriad ways in which ICTs can be used, so-called examples of ‘Modernisation theory’<sup>22</sup> which would entail a detailed discussion of the many different types of technology and service sectors, and which is beyond the scope of a book in law. Instead the author focuses on assessing the appropriate use of ICTs in development at a *conceptual policy level*: should DCs and LDCs focus on the use of ICTs as a specialist sector or include ICTs in a more integrated way across different sectors (health, education etc.)? To what extent should international donor organisations, such as DFID, UNCTAD and the UNDP be involved with local communities (so-called Alternative

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<sup>22</sup> Modernisation has been described as ‘the process by which a society comes to be characterized by a belief in the rational and scientific control of man’s physical and social environment and the application of technology to that end’. *Supra* note 14, p. 6, citing Sardar Ziauddin, ‘Development and the Locations of Eurocentrism, in *Critical Development Theory*’, *Contributions to a New Paradigm* (eds Munck, Ronaldo and O’Hearn, Denis), Zed Books, 1999, p. 117.

Development) or national government (following standard Modernisation Theory) in promoting ICTs and development?

Finally, the interface between trade and human rights that the author briefly discusses in Chapter 10 is a very wide area and a full discussion is outside the scope of this book. However, in proposing a RTD Theory that seeks to enforce the RTD through IEL, the author is effectively bringing together principles of IEL (telecommunications, competition, intellectual property, technology transfer) with human rights. There are problems with this approach as Addo comments:

In seeking to review IEL from the human rights perspective, one is often confronted with interesting doctrinal obstacles. There is often the suggestion that human rights belong in the public law domain where the restraint of governmental excesses is its primary if not sole concern. As a corollary, the economic domain is essentially a private domain that is regulated by the principles of the market place and any welfare benefits to individuals and society are only incidental to profit making.<sup>23</sup>

Addo argues that the separation of IEL from other disciplines of international law ‘fetishises’ IEL into an untouchable domain, and that this separation and fetishisation are unjustifiable. As mentioned above, a full investigation of trade and human rights is beyond the scope of this book, but in discussing the RTD Theory in Chapter 10, the author does attempt to address (in some aspects) the potential marriage of IEL and human rights, and to provide the historical context in the debate on the RTD. Also in discussing how the RTD Theory could be adopted, in Chapter 11, the author addresses Franck’s discourse on fairness and Leader’s concept of a civic or functional approach to the (potential) role of IEL institutions (such as the WTO) in the area of trade and human rights.<sup>24</sup> The reason for this discussion lies in the author’s suggestion that the WTO’s working group on trade and transfer of technology needs (WGTT) to recognise the increasing role of human rights in development and trade and to have an active role in implementing the Right to Development Tax Relief mentioned above.

In the context of setting out the WTO’s potential role to act in helping to

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<sup>23</sup> Addo, K.M., ‘Human Rights Perspectives’ in *Perspectives in International Economic Law* (ed. Asif Qureshi), Kluwer Law International, 2003, p. 146, citing Friedman, M., ‘The Social Responsibility of Business is to make Profits’ in *Issues in Business and Society* (ed. Steiner, G.), Random House, 1977, p. 168.

<sup>24</sup> Franck, T.M., *Fairness in International Law and Institutions*, Oxford University Press, 1995. See also Rawls, J., *A Theory of Justice: Revised Edition*, Oxford University Press, 1999, and Leader, S., ‘Trade and Human Rights II’ in *The World Trade Organisation: Legal, Economic and Political Analysis* (eds Macrory, P.F., Appleton, A.E. and Plummer, M.G.), Springer, 2005, pp. 663–96.

implement the RTD Tax Relief, the author also discusses in Chapter 10: Petersmann's view of the WTO taking up the mantle of enforcing human rights and a rights-based reading of WTO law (right to trade);<sup>25</sup> Alston's response to Petersmann indicating the dangers of such an approach;<sup>26</sup> and Cass's view of a constitutionalised WTO giving greater effect to the economic development needs of States (*trading democracy*).<sup>27</sup> A full discussion of any potential right to trade and the constitutionalisation of the WTO is however beyond the scope of this book, which must focus on the application of IEL to the Digital Divide. The main concern is to examine the nature of the obligation, if any, of the WTO to act in this area.

The final section of the book, Chapter 11 (Part IV), brings together the differing strands of IEL: telecommunications; e-commerce; competition; IPRs; technology transfer; bilateralism and international development law into a final conclusion suggesting the possible ways ahead for DCs and LDCs, and setting out conclusions as to whether each of the questions set out by the author in this Introduction has been effectively addressed.

Chapter 2 starts with a review of the rise of international digital networks and whether it is possible to come to a single point of definition for the term 'Digital Divide'. It also sets in context the relevance of enforcing civil and political, economic, social and cultural rights to addressing the Digital Divide, a point that is later returned to in Chapter 10.

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<sup>25</sup> Petersmann, E., 'Time for a United Nations "Global Compact" for Integrating Human Rights into the Law of Worldwide Organizations: Lessons from European Integration', *EJIL*, 13 (2002) 621.

<sup>26</sup> Alston, P., 'Resisting the Merger and Acquisition of Human Rights by Trade Law: A Reply to Petersmann', *European Journal of International Law*, 13 (2002) 815.

<sup>27</sup> Cass, D.Z., *The Constitutionalization of the World Trade Organization*, Oxford University Press, 2005.