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Constitutional pluralism or constitutional unity? An empirical study of international commitment (1945–2007)

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Abstract. This article asks whether international law is moving towards a more unified constitutional order or whether differentiated types of constitutional processes are emerging. We study the sequencing and ratification pace of 32 'quasi-constitutional' international agreements containing procedural guidelines for inter-state relations and fundamental human rights provisions for individuals drawn up between 1945 and 2007. We do so in a comparative and quantitative fashion applying sophisticated statistical tools, namely event history techniques combined with counting processes. On the basis of our multi-treaty framework, the findings do not lend support to a unified and quick process of global constitutionalisation. Rather, they provide evidence for the idea of a 'multi-speed globe' of differentiated constitutionalisation. We also make a first attempt to study antecedents to global constitutionalisation. Our findings show that processes of global constitutionalisation vary across regime types and world regions (while there is no effect for new and old states).

Introduction

The topic of 'global constitutionalisation' or 'constitutionalisation beyond the state'[1] is moving to the forefront in international law and international politics. In the coming of age of the 'world society',[2] constitutionalisation[3] is a project which is concerned with the strengthening of international law and supranational institutions, and the fostering of a global 'rule of law' based on the principles of equality and human rights.[4] It is associated with a shift from the 'Westphalian'

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[1] Joseph H.H. Weiler and Marlene Wind (eds), *European Constitutionalism Beyond the State* (Cambridge: Cambridge University Press, 2003).

[2] Mathias Albert, 'Complex Governance and Morality in World Society', *Global Society*, 13 (1999), pp. 77–93.

[3] Note that we use the terms 'constitutionalisation' and 'global constitutionalisation' synonymously.

[4] Jean L. Cohen, 'Whose Sovereignty? Empire Versus International Law', *Ethics & International Affairs*, 18 (2004), p. 3.

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sovereignty paradigm in international relations towards a cosmopolitan legal order.[5]

Initially, the concept of 'constitutionalisation beyond the state' was addressed in the context of European integration. However, processes of constitutionalisation are not unique to the European Union. Recently, the concept has gained considerable attention on the international plane, for instance within the framework of the World Trade Organization.[6]

Despite widely varying perceptions, we identify two stylised views of constitutionalisation: constitutionalisation as a unitary and all-embracing process on the one hand, and constitutionalisation assembling several differentiated processes on the other hand. In other words, while global constitutional unity aims at the creation of a global unitary constitution, differentiated constitutionalisation in contrast seeks to realise a multiplicity of autonomous subsystems in international politics – it suggests global constitutional plurality.

So far, processes of global constitutionalisation have been mainly studied from a normative angle. This is not surprising since the concept has a strong anchor in international law. Notwithstanding the importance of normative reasoning, we think that it is crucial to investigate *empirically* which 'constitutional model' – the unitary or the differentiated one – is the most suitable to describe real developments in international law.

In concrete terms, we ask whether international law is moving towards a more unified constitutional order or whether differentiated types of constitutional processes are emerging. We do so in a comparative and quantitative fashion. First, we study the sequencing (that is, the time of treaty inauguration) and the ratification pace of 32 so-called 'quasi-constitutional' international agreements that entered into force between 1945 and 2007 containing (1) *institutional and organisational guidelines* for inter-state relations and (2) *fundamental human rights* provisions for individuals. Second, we also make a first attempt to study antecedents to global constitutionalisation. Thereby, we focus on democratisation levels, state duration, and regional variation.

But why should scholars of international relations be interested in the different shapes of global constitutionalisation? We see two reasons. First, systematic empirical research on global constitutionalisation is scant. It is far from clear how far the international order has moved towards a unitary or a pluralist conception. In this regard, our goal is not so much to establish *whether* the global legal order is unitary or plural; rather, we seek to explore the *degree* of unitarism or pluralism. The dearth of empirical research on global constitutionalisation also combines with inappropriate methodology. Even though studies concerned with patterns of commitment to international agreements are numerous, they merely focus on one particular agreement or a selection of a few agreements rather than on the broader

[5] Ibid., p. 7, p. 17.

[6] See Deborah Z. Cass, *The Constitutionalization of the World Trade Organization. Legitimacy, Democracy, and Community in the International Trading System* (Oxford: Oxford University Press, 2005); Robert Howse and Kalypso Nicolaidis, 'Enhancing WTO Legitimacy: Constitutionalization or Global Subsidiarity?', *Governance: An International Journal of Policy and Administration*, 16 (2003), pp. 73–94; Hannes L. Schloemann and Stefan Ohlhoff, '"Constitutionalization" and Dispute Settlement in the WTO: National Security as an Issue of Competence', *American Journal of International Law*, 93 (1999), pp. 424–51.

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process of global constitutionalisation.[7] In addition, these empirical analyses do not take into account the possibility of multiple ratification events across agreements. Using event history techniques combining the marginal risk set approach of Wei, Lin and Weissfeld[8] (WLW) with a counting process style of data input, we provide a more comprehensive empirical picture of global constitutionalisation. Second, the debate on unitary and pluralist conceptions of the 'global constitutional order' also taps into an efficiency and effectiveness debate. Building on economic 'complementarity' approaches, Hall and Soskice argue that 'two institutions can be said to be complementary if the presence (or efficiency) of one increases the returns from (or efficiency of) the other.'[9] This line of reasoning – being prominent in the context of the political economy of national states – can be extended to the process of global constitutionalisation. In this regard, we think that coherence – as in line with the unitary conception – is an important condition for the efficiency and effectiveness of global regimes. If both the sequencing and the ratification pace of 'quasi-constitutional' international agreements occur with a substantial gap in time, then the emerging global legal order may have efficiency or effectiveness gaps. For instance, if there is a substantial time gap between general provisions and related legal instruments with a high degree of precision, or between political and related social rights, then effective and efficient governance at the international plane tends to be undermined. Such reasoning is also in line with functional theories in international relations.[10] From a functional perspective, incomplete integration undermines the effectiveness of existing policies, thereby creating pressures for additional policy co-ordination. Thus, from an efficiency vantage point, it is crucial to better capture which type of global constitutionalisation is emerging.

Certainly, by focusing on the ratification of 'quasi-constitutional' international agreements, we only capture part of the constitutionalisation process. We do not claim to capture global constitutionalisation with its all-embracing characteristics including societal forces and judicial review. Nonetheless, ratification of 'quasi-constitutional' agreements represents a *conditio sine qua non* – or a necessary

[7] Examples are Jay Goodliffe and Darren G. Hawkins, 'Explaining Commitment: States and the Convention against Torture', *Journal of Politics*, 68 (2006), pp. 358–71; Emilie M. Hafner-Burton and Kiyoteru Tsutsui, 'Human Rights in a Globalizing World: The Paradox of Empty Promises', *American Journal of Sociology*, 110 (2005), pp. 1373–411; Oona A. Hathaway, 'Why Do Countries Commit to Human Rights Treaties?' *Journal of Conflict Resolution*, 51 (2007), pp. 588–621; Eric Neumayer, 'Death Penalty Abolition and the Ratification of the Second Optional Protocol', *International Journal of Human Rights*, 12 (2008), pp. 3–21; Beth Simmons, 'International Law and State Behavior: Commitment and Compliance in International Monetary Affairs', *American Political Science Review*, 94 (2000), pp. 819–36; James R. Vreeland, 'Political Institutions and Human Rights: Why Dictatorships Enter into the UN Convention Against Torture', *International Organization*, 62 (2008), pp. 65–101; Christine M. Wotipka and Franzisco O. Ramirez, 'World society and human rights: an event history analysis of the convention on the elimination of all forms of discrimination against women', in Beth Simmons, Frank Dobbin and Geoffrey Garrett (eds), *The Global Diffusion of Markets and Democracy* (London: Cambridge University Press, 2007), pp. 303–43.

[8] Lee-Jen Wei, Danyu Y. Lin and Lisa A. Weissfeld, 'Regression Analysis of Multivariate Incomplete Failure Time Data by Modeling Marginal Distributions', *Journal of the American Statistical Association*, 84 (1989), pp. 1065–73.

[9] Peter A. Hall and David Soskiece, *Varieties of Capitalism, The Institutional Foundation of Comparative Advantage* (Oxford: Oxford University Press, 2001), p. 17.

[10] Ernst Haas, *The Uniting of Europe: Political, Social, and Economic Forces, 1950–1957* (Stanford, Calif.: Stanford University Press, 1958).

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condition – for the emergence of a 'global constitutional order'. While societal actors might be pivotal in advocating global constitutionalisation, it is the states which *produce* international law.

The article proceeds as follows: first, we focus on some definitional and conceptual questions of global constitutionalisation. Second, we outline how we can study constitutionalisation empirically. Third, we discuss our methodological approach. Fourth, we present the results of our empirical investigation. This is followed by the conclusion where we discuss some normative and empirical implications of our study.

Global constitutionalisation: some conceptual notes

To better understand what global constitutionalisation is and how it differs from other related approaches, let us first turn to the conceptual distinction of three related terms: constitution, constitutionalism, and constitutionalisation.

A *constitution*[11] is first and foremost associated with the national context. Following Western templates it is a framework which refers to the bulk of basic legal norms organising and institutionalising a polity.[12] The link between the constitution and political institutions is captured by the concept of the 'rule of law'[13] (as legally employed in the Anglo-American context).[14] It reflects a common idea of a constitution 'that the state's bodies act according to the *prescriptions of law*, and law is structured according to principles restricting arbitrariness'.[15] Put simply, the term constitution is closely linked to the 'rule of law' which provides for a formal requirement guaranteeing the special relationship between the branches of power.[16] Translated to the international sphere, it implies that political entities must act within established legal frameworks and according to established procedures.[17]

[11] The term constitution is far from having a clear definition; see Giovanni Sartori, 'Constitutionalism: A Preliminary Discussion', *American Political Science Review*, 56 (1962), pp. 853–64. However, most scholars would consider the issue of written versus unwritten constitutions (writtenness), flexible versus rigid constitutions (rigidity with regard to constitutional amendments), constitutional revolution (constitutional big-bang) versus evolution, the concept of the 'rule of law' and the hierarchy of law to be the fundamental formal features of a constitution. See Ruth Gavison, 'What Belongs in a Constitution?', *Constitutional Political Economy*, 13 (2002), pp. 89–105; Arend Lijphart, *Patterns of Democracy. Government Forms and Performance in Thirty-Six Countries* (New Haven: Yale University Press, 1999); Anne Peters, 'Compensatory Constitutionalism: The Function and Potential of Fundamental International Norms and Structures', *Leiden Journal of International Law*, 19 (2006), pp. 579–610.

[12] Peters, 'Compensatory Constitutionalism', p. 581, p. 585.

[13] The principle of the 'rule of law', in a strict national context, means the control and limit of political power, including a scheme of checks and balances through the separation of powers. See Lon L. Fuller, *The Morality of Law* (New Haven: Yale University Press, 1964), pp. 33–94; Herbert L.A. Hart, *The Concept of Law* (Oxford: Clarendon Press, 1961); José María Maravall and Adam Przeworski (eds), *Democracy and the Rule of Law* (Cambridge: Cambridge University Press, 2003); András Sajó, *Limiting Government. An Introduction to Constitutionalism* (Budapest: Central European University Press, 1999), pp. 205–6.

[14] The rough equivalent used in Europe is known in German as *Rechtsstaat* or in French as *état de droit*.

[15] Sajó, *Limiting Government*, p. 205.

[16] Hart, *Concept of Law*; Maravall and Przeworski, *Democracy*; Fuller, *Morality of Law*, pp. 33–94.

[17] John H. Jackson, *Sovereignty, the WTO and Changing Fundamentals of International Law*

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Constitutionalism, by contrast, implies more than the term constitution. Constitutionalism goes beyond the simple articulation of formal rules and procedures of a constitution. It is a 'mindset' providing also for a tradition and a sensibility about how to act in a political world.[18] Constitutionalism defines rights of and obligations to individuals. Weiler and Wind concur that

> there is a difference between constitution and constitutionalism. Constitutionalism [. . .] embodies the values, often non-stated, which underlie the material and institutional provisions in a specific constitution. At this level, separating constitution from constitutionalism would allow us to claim, rightly or wrongly, for example, that the Italian and German constitutions, whilst very different in their material and institutional provisions, share a similar constitutionalism vindicating certain neo-Kantian humanistic values, combined with the notion of the *Rechtsstaat*.[19]

Constitutionalism explicitly refers to the safeguard of *fundamental human rights*. Proceeding from the value premise of 'normative individualism', several scholars define *global constitutionalism* in the context of a citizen's perspective.[20] Such a value-laden constitutional reading is strongly linked to the recognition of individuals as the new subject of international law via the promotion of fundamental rights.[21] This implies that modern international law is no longer exclusively concerned with the regulation of state-to-state relations but also with individual-state relations.[22] In sum, constitutionalism can be captured as a 'mindset' or what Weiler calls an 'academic artefact'.[23]

Constitutionalisation, in turn, indicates a process towards the emergence, creation and identification of constitution-like elements. It embeds a time dimension, which implies that a constitution or constitutional elements can come into being as part of a process extending through time. In short, it denotes a constitution-in-the-making.[24] Constitutionalisation as a process of creating constitution-like elements also contrasts with the *moment* of constitutional creation.

(Cambridge: Cambridge University Press, 2006), p. 45; Henry J. Steiner and Philip Alston, *International Human Rights in Context. Law, Politics, Morals* (Oxford: Oxford University Press, 2000), p. 990.

[18] Martti Koskenniemi, 'Constitutionalism as Mindset: Reflections on Kantian Themes about International Law and Globalization', *Theoretical Inquiries in Law*, 8 (2007), pp. 9–36.

[19] Weiler and Wind, *European Constitutionalism*, p. 3.

[20] See Ernst-Ulrich Petersmann, *Constitutional Functions and Constitutional Problems of International Economic Law* (Fribourg: University of Fribourg Press, 1991); Ernst-Ulrich Petersmann, 'Human Rights, Constitutionalism and the World Trade Organization: Challenges for World Trade Organization Jurisprudence and Civil Society', *Leiden Journal of International Law*, 19 (2006), p. 641; Richard Bellamy, 'The Political Form of the Constitution: the Separation of Powers, Rights and Representative Democracy', in Richard Bellamy and Dario Castiglione (eds), *Constitutionalism in Transformation* (Oxford: Blackwell Publishers, 1996), p. 43.

[21] Ernst-Ulrich Petersmann, 'Multilevel Trade Governance in the WTO Requires Multilevel Constitutionalism', in Christian Joerges and Ernst-Ulrich Petersmann (eds), *Constitutionalism, Multilevel Trade Governance and Social Regulation* (Oxford: Hart Publishing, 2006), p. 6, p. 9; Bellamy, 'Political Form', p. 43. There is a rough parallel to the perception of constitutionalism as an 'essentially liberal legalistic conception', which is 'a formal framework of rights', on the one hand, and a 'political and republican understanding of constitutionalism' that acknowledges the historically embedded role of politics, as the 'art of balancing, reducing and managing conflicts', on the other hand; see Richard Bellamy and Dario Castiglione, 'Introduction: Constitutions and Politics', *Political Studies*, 44 (1996), p. 414; also Bellamy, 'Political Form', p. 24.

[22] Hersh Lauterpacht, *International Law and Human Rights* (London: Stevens, 1950), pp. 60–7.

[23] Joseph H.H. Weiler, *The Constitution of Europe* (Cambridge: Cambridge University Press, 1999), p. 223.

[24] Peters, 'Compensatory Constitutionalism', p. 582.

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The 'constitutional moment' refers to the act of constitution-making in a revolutionary event.[25]

Two further conceptual notes on constitutionalisation are in order. First, while constitutionalism describes a 'mindset' denoting what (international) law 'ought to be', constitutionalisation describes the concrete process towards the 'global constitutional order'.[26] Second, constitutionalisation should not be put on a par with legalisation.[27] Although both concepts refer to the process of creating legal arrangements, they differ with regard to the type of legal process they induce and the scope of legal arrangements they cover. Legalisation refers to the formal practices creating legal arrangements which gain in binding force through bureaucratic details, such as precision, the degree of obligation and the possibility of delegation.[28] Constitutionalisation, to the contrary, covers a much broader process. It not only refers to the formal process,[29] but also involves political and social practices that establish law-like rules and institutions in the international community.[30] Thus, it raises considerably more substantial questions about the systemic and substantive quality of international law.

Having provided a conceptual understanding of global constitutionalisation, we now turn to the pivotal distinction between global constitutionalisation as a unitary and all-embracing process on the one hand, and constitutionalisation assembling several differentiated processes on the other. Although in practice the positions we present fall more or less onto a continuum, for illustrative purposes we simplify the task by distinguishing between the two extreme types.

Some theorists – especially European law scholars – understand constitutionalisation as a process that has a tendency towards international legal *unity*.[31] In this respect, constitutionalisation is about the legal integration of states. Several scholars have postulated a universal world constitution beyond the nation-state, which legitimises the exercise of global political power. In this regard, the UN

[25] See Bruce Ackerman, 'Constitutional Politics/Constitutional Law', *The Yale Law Journal*, 99 (1989), pp. 453–547. In a recent contribution, Slaughter and Burke-White have denoted the fight against terror to be a 'international constitutional moment'. They argued that the global events following 11 September 2001 have galvanised the international system to action in a short period of time, which consequently gave rise to new rules transforming international norms on the prohibition of the use of force. Anne-Marie Slaughter and William Burke-White, 'The International Constitutional Moment', *Harvard International Law Journal*, 43 (2002), pp. 1–21. More prominent constitutional moments having far-reaching effects on the development of the international legal order were the Second World War or the breaching of the Berlin Wall.

[26] Cf. Bellamy and Castiglione, 'Introduction', pp. 413–6; Andreas Fischer-Lescano, 'Redefining Sovereignty via International Constitutional Moments?', in Michael Bothe, Mary E. O'Connell and Natalino Ronzitti (eds), *Redefining Sovereignty: The Use of Force after the Cold War* (Ardsley: Transnational Publishers, 2005), pp. 335–64; Koskenniemi, 'Constitutionalism as Mindset'.

[27] Kenneth W. Abbott, Robert O. Keohane, Andrew Moravcsik, Anne-Marie Slaughter and Duncan Snidal, 'The Concept of Legalization', *International Organization*, 54 (2000), pp. 401–19.

[28] Ibid.

[29] Martha Finnemore and Stephen J. Toope, 'Alternatives to "Legalization": Richer Views of Law and Politics', *International Organization*, 55 (2001), pp. 743–58.

[30] Antje Wiener, 'Editorial: Evolving Norms of Constitutionalism', *European Law Journal*, 9 (2003), pp. 1–13.

[31] Peters, 'Compensatory Constitutionalism'; Erika de Wet, 'The Emergence of International and Regional Value Systems as a Manifestation of the Emerging International Constitutional Order', *Leiden Journal of International Law*, 19 (2006), pp. 611–32; Bardo Fassbender, 'The UN Charter as Constitution of the International Community', *Columbia Journal of Transnational Law*, 36 (1998), pp. 529–619; Bardo Fassbender, *UN Security Council Reform and the Right of Veto: A Constitutional Perspective* (The Hague: Kluwer Law International, 1998).

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Charter in particular is referred to as the constitutional document of the international community. Accordingly, the UN is viewed as *the* primary institution which furnishes the international community with organs.[32]

The alternative to constitutionalisation in terms of global constitutional unity is global constitutional *pluralism*.[33] Walker – being a staunch critic of the global constitutional unity – argues that there exist a range of different constitutional sites and processes. In his view, constitutionalism and constitutionalisation are a 'set of loosely and variously coupled factors' which allow one to distinguish between different forms of constitutionalism and to identify modes and degrees of constitutionalisation. This contrasts with a constitutional reading in terms of black-and-white and all-or-nothing.[34] Krisch for instance understands pluralism in the context of global administrative law as an alternative to the attempts at constitutionalising the global political order into a coherent unified framework. He argues that a unified understanding of constitutionalisation tends to downplay 'the extent of legitimate diversity in the global polity'. This diversity is triggered, on the one hand, by the variety of global constituencies which cannot claim full regulatory legitimacy and on the other hand, by the diverging ways of exercising participatory rights in the determination of the scope of the polity.[35]

Another strand of the pluralist conception is inspired by the sociological approach of Niklas Luhmann. Teubner, the most influential proponent of Luhmann's systems theory within legal studies, describes the difference between constitutional unity and constitutional plurality as follows:

> The constitution of world society does not come about exclusively in the representative institutions of international politics, nor can it take place in a unitary global constitution which overlies all areas of society, but, instead, emerges incrementally in the constitutionalisation of a multiplicity of autonomous sub-systems of world society.[36]

Global constitutional pluralism is thus associated with the emergence of different constitutional sites and processes which are configured in a horizontal rather than a hierarchical, vertical pattern.[37] It is concerned with the fragmentation of international law – 'the rise of specialized rules and rule-systems that have no clear relationship to each other'[38] – emerging from the horizontal nature of the international legal system. Constitutionalisation, in this regard, does not seek to overcome fragmentation by creating legal unity in the international sphere, but

[32] Fassbender, 'UN Charter', pp. 567–8; Fassbender, *A Constitutional Perspective*; Pierre-Marie Dupuy, 'The Constitutional Dimension of the Charter of the UN Revisited', *Max Planck Yearbook of UN Law*, 1 (1997), pp. 1–33; Ronald St. J. Macdonald, 'The Charter of the UN in Constitutional Perspective', *The Australian Yearbook of International Law*, 20 (1999), pp. 205–31.

[33] International Law Commission, 'Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law', *Report of the Study Group of the International Law Commission*, finalised by Martti Koskenniemi, 13 April 2006 (UN-Doc. A/CN.4/L.682).

[34] Neil Walker, 'The Idea of Constitutional Pluralism', *Modern Law Review*, 65 (2002), pp. 339–40.

[35] Nico Krisch, 'The Pluralism of Global Administrative Law', *European Journal of International Law*, 17 (2006), pp. 248–9.

[36] Gunther Teubner, 'Societal Constitutionalism: Alternatives to State-centred Constitutional Theory?', in Christian Joerges, Inger-Johanne Sand and Gunther Teubner (eds), *Transnational Governance and Constitutionalism* (Oxford: Hart Publishing, 2004), p. 8.

[37] Walker, 'Constitutional Pluralism', p. 317; see also Gunther Teubner, 'Global Bukowina: Legal Pluralism in the World Society', in Gunther Teubner (ed.), *Global Law Without a State* (Dartmouth: Aldershot, 1997), pp. 3–28.

[38] International Law Commission, 'Fragmentation of International Law', p. 245.

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rather attempts to *adapt* to it by *acknowledging* the fragmented nature of the international system.

In this context it is crucial to distinguish between two debates: one focusing on the idealised distinction of unity versus plurality of international law and the other focusing on societal versus state-based constitutionalisation. In this article, we only deal with the first debate and do not reflect on the role of societal forces (such as non-governmental actors) in the constitutionalisation process. There are two reasons for this concentration on the state. First, current research is not able to quantify current societal developments in international relations. This forestalls any empirical research on this topic. Second, even though societal actors might be pivotal in advocating global constitutionalisation (for example, by stimulating the content of international law, setting the international legal agenda, promoting human rights, humanitarian and environmental law, or mobilising states and leveraging public opinion),[39] it is the states which produce international law. In this regard, Cohen also argues that the importance of the emerging societal forces is overestimated by systems theorists. According to Cohen, the 'international society of states' – in contrast to the cosmopolitan order of societal forces – remains the core of the world political system. Thus, by studying the commitment of *states* to constitution-like international norms, we capture one crucial aspect of the constitutionalisation process.[40]

So far, the distinction between global international legal unity and global constitutional pluralism is mostly a theoretical one. Almost no attempts have been made to assess the process of global constitutionalisation empirically. The exceptions are studies conducted in the European context.[41] They not only demonstrate that constitutionalisation as an ongoing project is empirically quantifiable when compared to the theoretical concept of constitutionalism. They also demonstrate that constitutional mechanisms such as judicialisation and politicisation of policy making,[42] as well as parliamentalisation and institutionalisation of human rights[43] have an impact on European Union and Member-State politics. In this study, we shall provide a systematic empirical analysis of the shape of constitutionalisation. In concrete terms, we explore whether international law in the post-1945 era is moving towards a more unified constitutional order or whether it takes the shape of differentiated types of constitutional processes. Our analysis focuses on the development of core international law documents containing

[39] Steve Charnovitz, 'Nongovernmental Organizations and International Law', *American Journal of International Law*, 100 (2006), pp. 359–61; Mathias Albert, Lothar Brock and Klaus-Dieter Wolf (eds), *Civilizing World Society. Society and Community beyond the State* (Lanham: Rowman & Littlefield Publishers, 2000); John W. Meyer, John Boli, George M. Thomas and Francisco O. Ramirez, 'World Society and the Nation-State', *American Journal of Sociology*, 103 (1997), pp. 144–81.

[40] Cohen, 'Whose Sovereignty?', p. 13, p. 24.

[41] Berthold Rittberger and Frank Schimmelfennig, 'Explaining the Constitutionalization of the European Union', *Journal of European Public Policy*, 13 (2006), pp. 1148–67; Alec Stone Sweet, *Governing with Judges: Constitutional Politics in Europe* (Oxford: Oxford University Press, 2000). See also Michael Kaeding, 'Determinants of Transposition Delay in the European Union', *Journal of Public Policy*, 26 (2006), pp. 229–53; Michael Zürn and Christian Joerges (eds), *Law and Governance in Postnational Europe. Compliance Beyond the Nation-State* (Cambridge: Cambridge University Press, 2005).

[42] Stone Sweet, *Governing with Judges*.

[43] Rittberger and Schimmelfennig, 'Explaining Constitutionalization'.

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(1) *organisational and institutional guidelines* for inter-state relations and (2) *fundamental human rights* provisions for individuals.

Empirical analysis: generations of rights and state commitment

Our aim is to examine whether international law is moving towards a more unified constitutional order or whether it takes the shape of differentiated types of constitutional processes. If the international order does indeed reveal constitutional pluralism, we might capture it in terms of issue-area-based sub-systems.

One way to think of different issue-areas in the field of international relations is in terms of generations of human rights.[44] A generation-based distinction of rights was originally proposed by Vasak.[45] He distinguishes between three generations of international human rights – *liberté* (civil and political rights – first generation), *égalité* (economic, social, and cultural rights – second generation) and *fraternité* (solidarity rights – third generation).

Human rights of the first generation refer to civil and political liberties,[46] such as freedom of speech, movement and religion, right to property, security of person and the right to political participation.[47] With regard to the international context, human rights of the first generation do not imply that a global political citizenship is feasible. Rather they indicate the opportunity of individuals to claim their personal freedoms, including the right to seek redress if injured by another, the right of peaceful protest and the right to a fair investigation and trial if suspected of a crime. This concept also refers to equal treatment of all individuals irrespective of race, sex or class. In other words, civil and political rights mean that individuals are protected from the coercive power of governing authorities and are granted the liberty to participate in (international) politics.

In addition, procedural guidelines organising inter-state relations also fall under this category of rights. These are formal provisions,[48] which structure the international legal system and provide an institutional setting in which international political and legal action takes place. They refer to the international 'rule of law' that ensures a set of guiding rules and procedures according to

[44] International human rights are considered an offshoot of human rights that were originally codified at the national level. Marshall conceptualises human rights in the national context by the notion of citizenship. He distinguished between civil, political and social citizenship. Thomas H. Marshall, *Citizenship and Social Class* (Cambridge: Cambridge University Press, 1950). A description of the nation-based development of human rights is presented in Christian Tomuschat, *Human Rights between Idealism and Realism* (Oxford: Oxford University Press, 2003).

[45] Karel Vasak, 'A 30-year struggle', *The UNESCO courier*, 29 (1977).

[46] Political rights emerged in history of national development for the supplementation of civil rights, since civil rights are bound to remain empty promises for those who lack even the economic means to make use of these fundamental civil rights. In a way, political rights are closely linked to the principle of the 'rule of law'. They serve as guarantor that the 'rule of law' will not systematically be turned to the advantage of certain groups over others. Ralf Dahrendorf, 'Citizenship and Beyond: The Social Dynamics of an Idea', *Social Research*, 41 (1974), pp. 680–1.

[47] Jack Donnelly, *The Concept of Human Rights* (New York: St. Martin's Press, 1985); Daniel Kaufmann, 'Human Rights and Governance: The Empirical Challenge', in Philip Alston and Mary Robinson (eds), *Human Rights and Development: Towards Mutual Reinforcement* (Oxford: Oxford University Press, 2005), pp. 352–402.

[48] In the following we refer to these formal and procedural provisions as formal rights or rules, and the (international) 'rule of law' principle.

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which political entities must act.[49] Even though these provisions do not address the relationship between individuals or individuals and states, they are a necessary requirement for the guarantee of individual rights in the international community.

Second-generation rights are social and economic in nature. Social rights include the right to work, education, health care, social security and a minimum standard of living. Economic rights, on the other hand, comprise market-enabling measures aimed at the abolition of protectionist rules and the redress of inequality of opportunities for economic activity between citizens of different nations.[50] The recent literature has also pointed to economic rights as elements of an enlarged concept of civil rights, including the right to trade and the right to market access, as well as the protection of civil liberties and properties.[51] Social and economic rights pursue the creation of a level playing field for all individuals by setting common standards with regard to economic liberalisation as well as social development.

Third-generation rights comprise rights such as the right to development, peace, environmental protection and self-determination. In contrast to rights of the first and second generation, these collective rights are less frequently embodied in international law documents but rather take the form of political proposals. In this article, we focus only on the first two generations of rights, since they are uncontroversial in the egalitarian liberal literature. Unlike human rights of the third generation, they are not subject to continuing disagreement regarding the holders, duty-bearers and their substance.[52]

Notice further that the 'generations' account of rights is often associated with the conception of 'negative' and 'positive' rights.[53] Negative rights closely resemble the first generation of human rights. They require prohibition of certain actions, as in the right not to be subjected to violent actions by governments. Positive rights, in turn, correspond to the second (and third) generation(s) of human rights. They impose a moral obligation on governments to provide public goods and services.[54]

[49] Jackson, *Sovereignty*, p. 45; Steiner and Alston, *International Human Rights*, p. 990.

[50] Donnelly, *Concept of Human Rights*; Cécile Fabre, 'Constitutionalising Social Rights', *Journal of Political Philosophy*, 6 (1998), p. 265; Kaufmann, 'Human Rights'; Tomuschat, *Human Rights*, p. 24.

[51] See Claude Barfield, *Free Trade, Sovereignty, Democracy: The Future of the World Trade Organization* (Washington D.C.: American Enterprise Institute, 2001); Tom Bottomore, 'Citizenship and Social Class, Forty Years On', in Thomas H. Marshall and Tom Bottomore (eds), *Citizenship and Social Class* (Chicago: Pluto Press, 1992); Ernst-Urich Petersmann, 'From 'Negative' to 'Positive' Integration in the WTO: Time for 'Mainstreaming Human Rights' into WTO law?', *Common Market Law Review*, 37 (2000), pp. 1363–82.

[52] See Fabre, 'Constitutionalising Social Rights', p. 263; Tomuschat, *Human Rights*, pp. 24, 50–2.

[53] Isaiah Berlin, 'Two Concepts of Liberty', in Isaiah Berlin and Henry Hardy (eds), *Liberty* (Oxford: Oxford University Press, 2002 (original 1958)), pp. 166–81. 'Negative' and 'positive' rights should be not confused with 'claim' rights ('rights' in a strict sense)' and 'liberty' rights (liberty). Both liberty and claim rights can take on 'positive' and 'negative' features. Claim rights impose a duty or obligation for a party (person, government). Liberty rights, by contrast, are associated with a freedom of duty. A positive claim right is the duty of one party to do something for another party, and a negative claim right is the duty of one party to refrain from doing something to another party. The freedom to do something is a positive liberty right, the freedom to refrain from doing something is a negative liberty right. John Finnis, *Natural Law and Natural Rights* (New York: Clarendon Press, 1980).

[54] Donnelly, *Concept of Human Rights*.

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Although the 'generations' concept is far from being a popular analytical tool in the scholarly literature,[55] we find it a useful framework for the purpose of our empirical analysis on emerging patterns of constitutionalisation. Our expectation is as follows: if international law is moving towards a more unified constitutional order, then we should see no difference in the sequencing and ratification pace according to the different issue-areas (as embodied in the 'generations' account of rights). Conversely, if international law takes the shape of differentiated types of constitutional processes, then we should see a difference in sequencing and ratification pace according to the different issue-areas.

In concrete terms, we study the sequencing (that is, the time of treaty inauguration) and the pace of state commitment to these agreements incorporating basic formal rules (the international 'rule of law' providing for an institutional setting of inter-state action) and human rights (comprising civil and political liberties as well as social and economic rights for individuals). We use the term 'international agreement' to refer to all international norms included in the sample. International agreements comprise the widest range of international instruments. Following art.2(1)(a) of the Vienna Convention on the Law of Treaties of 1969, an international agreement is 'concluded between States in written form and governed by international law, whether embodied in a single instrument or in two or more related instruments and whatever its particular designations'.[56] For the purpose of our analysis, we have compiled a data set containing ratification entries of international agreements. By ratification we mean several possible treaty actions – acceptance, approval, accession and succession – which all have the same legal effect as ratification and consequently lead to an internationally binding arrangement.[57]

The data set encompasses ratification entries for 32 international agreements[58] made since the Second World War over 199 nation states (1945–2007). The entries include ratifications of charters, conventions and covenants as well as documents of lower hierarchical order such as amendments and optional protocols.[59] A

[55] Note that issue of priority among types of human rights is however subject to controversy; see Charles Fried, *Right and Wrong* (Cambridge, Mass.: Harvard University Press, 1978), p. 178; Ruth Gavison, 'On the Relationship Between Civil and Political Rights, and Social and Economic Rights', in Jean-Marc Coicaude, Michael W. Doyle and Anne-Marie Gardner (eds), *The Globalization of Human Rights* (Tokyo: UN Universtiy Press, 2002), p. 36. Bedau and Cranston argue that due to the essential negative character of the first-generation rights, traditional civil and political rights deserve priority over social and economic rights. Hugo Adam Bedau, 'Human Rights and Foreign Assistance Programs', in Peter G. Brown and Douglas MacLean (eds), *Human Rights and US Foreign Policy* (Lexington, Mass.: Lexington Books, 1979), pp. 29–44; Maurice Cranston, *What are Human Rights?* (New York: Basic Books, 1964). Shue, on the other hand, maintains that the distinction between negative and positive rights bears no moral significance. He argues that all human rights have both negative and positive components. Henry Shue, 'Rights in the Light of Duties', in Peter G. Brown and Douglas MacLean (eds), *Human Rights and US Foreign Policy* (Lexington, Mass.: Lexington Books, 1979), pp. 65–81; Henry Shue, *Basic Rights: Subsistence, Affluence, and US Foreign Policy* (Princeton: Princeton University Press, 1980).

[56] Evans, Malcolm D. (ed.), *International Law Documents* (Oxford: Oxford University Press, 2006), pp. 129–30.

[57] Cf. Art.2(1)(b), Vienna Convention on the Law of Treaties of 1969.

[58] Note that the number of international agreements in force, and newly added each year is incredibly large, and by far exceeds the 32 selected agreements; Jackson, *Sovereignty*, p. 42. The choice of treaties presented serves the sole aim of covering the most important agreements containing some constitutional characteristics.

[59] The terms convention, charter and covenant embrace all formal international agreements, in the same way as the term 'treaty' does. They are normally open for participation by the international community as a whole and are negotiated under the auspices of an international organisation. Thus,

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detailed inventory is given in Table 1.[60] The selected agreements have in common that they are written and binding instruments that establish legal rights and duties and require ratification by the states. All provisions covered by these legal documents primarily address the protection of human rights of the first (civil and political rights) and the second generation (economic and social rights) and the international 'rule of law' principle. After careful consideration of all legal instruments related to the process of global constitutionalisation, we have decided to drop several international agreements. These concern the collective rights of the third generation (for example, legal instruments dealing with refugees, migrant workers and stateless persons). In so doing, we limit ourselves to the most important and fundamental constitutional documents.

Formally, these international law instruments are not ranked in any general order of priority. However, legal vocabulary indicates some informal hierarchy of international law.[61] The selected agreements differ with regard to the degree of universality (precision) and the level of formality. In order to obtain a realistic and relatively unbiased reflection of state commitment to these agreements, we need to distinguish between conventions, charters, and covenants on the one hand, and protocols and amendments on the other hand. To do so, we assigned weights to each international agreement. In assigning weights to the international agreements, we draw from the definition of international agreements as laid down in art.2(1)(a) of the Vienna Convention on the Law of Treaties of 1969. Consequently, an international agreement can be embodied in one instrument or in two or more related instruments. The coding rules are as follows: we assign a weight of 6 to an international agreement (such as treaty, charter, convention or covenant) of higher hierarchical order comprising only one particular legal instrument. International agreements of higher hierarchical order which embody several legal instruments concerning the same subject-matter are assigned proportional weightings. The theoretical range of these proportional weightings goes from 2 to 5; in practice, however, the range goes only from 3 to 5. We weight the instruments in such a way that their sum representing one particular international agreement does not exceed the value of 6. Thereby, instruments of lower hierarchical order such as protocols and amendments are assigned a value of 1. Instruments of higher hierarchical order (treaty, charter, convention or covenant) are assigned a value ranging between 3 and 5, depending on the number of additional issue-related instruments of lower hierarchical order. Since no international agreement is composed of more than three instruments of lower hierarchical order (each assigned a weight of 1) and one

in character they are rather formal and universal covering a relatively broad range of areas. Protocols and amendments, in contrast, generally refer to agreements less formal than those entitled treaty, convention or covenant. UN, *United Nations Treaty Collection. Treaty Handbook*, (2006), available at: {http://treaties.un.org/doc/source/publications/THB/English.pdf}.

[60] To name but a few examples, the Charter of the UN, core human rights treaties with amendments and optional protocols, the Geneva Conventions (1949), the Vienna Convention on the Law of Treaties, the Convention on the Law of the Sea and fundamental international labour standard conventions are incorporated. Due to the time-frame of the study (1945–2007), the Forced Labour Convention No.29 of 1930 is not incorporated into the analysis. We also include the General Agreement on Tariffs and Trade (1947) and the Agreement Establishing the WTO since they point to economic rights like the right to trade, market access and the protection of civil liberties and properties as an enlarged concept of civil rights.

[61] International Law Commission, 'Fragmentation of International Law', pp. 166–7.

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Agreement	Abbreviation	Adopted	N	%
Charter of the UN	CUN	1945	197	98.99
General Agreement on Tariffs and Trade 1947	GATT	1947	126	63.32
Convention on the Prevention and Punishment of the Crime of Genocide	CPPCG	1948	136	68.34
Freedom of Association and Protection of the Right to Organise Convention	C87	1948	147	73.87
Geneva Conventions	GC	1949	193	96.98
Right to Organise and Collective Bargaining Convention	C98	1949	156	78.39
Equal Remuneration Convention	C100	1951	163	81.91
Abolition of Forced Labour Convention	C105	1957	166	83.42
Discrimination (Employment and Occupation) Convention	C111	1958	165	82.91
Vienna Convention on Diplomatic Relations	VCDR	1961	188	94.47
International Convention on the Elimination of All Forms of Racial Discrimination	CERD	1965	176	88.44
International Covenant on Economic, Social and Cultural Rights	ICESCR	1966	159	79.9
International Covenant on Civil and Political Rights	ICCPR	1966	163	81.91
Optional Protocol to the International Covenant on Civil and Political Rights	OP-ICCPR	1966	112	56.28
Vienna Convention on the Law of Treaties	VCLT	1969	111	55.78
Minimum Age Convention	C138	1973	149	74.87
Convention on the Elimination of All Forms of Discrimination against Women	CEDAW	1980	187	93.97
UN Convention on the Law of the Sea	UNCLS	1982	154	77.39
Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment	CAT	1984	147	73.87
Vienna Convention on the Law of Treaties between States and International Organizations or between International Organizations	VCIO	1986	29	14.57
Convention on the Rights of the Child	CRC	1989	195	97.99
Second Optional Protocol to the International Covenant on Civil and Political Rights, aiming at the abolition of the death penalty	IIOP-ICCPR	1989	61	30.65
Amendment to article 8 of the International Convention on the Elimination of All Forms of Racial Discrimination	A-CERD	1992	43	21.61
Amendments to articles 17 (7) and 18 (5) of the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment	A-CAT	1992	27	13.57
Marrakesh Agreement Establishing the World Trade Organization	WTO	1994	147	73.87
Amendment to article 20, paragraph 1 of the Convention on the Elimination of All Forms of Discrimination against Women	A-CEDAW	1995	49	24.62
Amendment to article 43 (2) of the Convention on the Rights of the Child	A-CRC	1995	142	71.36
Worst Forms of Child Labour Convention	C182	1999	163	81.91

Table 1: *Selected international agreements (N, number of ratifications; %, percentage of ratifications)*

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Agreement	Abbreviation	Adopted	N	%
Optional Protocol to the Convention on the Elimination of All Forms of Discrimination against Women	OP-CEDAW	1999	86	43.22
Optional Protocol to the Convention on the Rights of the Child on the Involvement of Children in Armed Conflict	OP-CRC	2000	66	33.17
Optional Protocol to the Convention on the Rights of the Child on the Sale of Children, Child Prostitution and Child Pornography	IIOP-CRC	2000	67	33.67
Optional Protocol to the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment	OP-CAT	2002	35	17.59

Sources of ratification data: UN, *United Nations Treaty Collection*, available at: {http://treaties.un.org/Pages/UNTSOnline.aspx?id=2}; for GATT and WTO see WTO, *The 128 countries that had signed GATT by 1994*, available at: {http://www.wto.org/english/thewto_e/gattmem_e.htm} and WTO, *Members and observers*, available at: {http://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm}.

Table 1. *Continued*

instrument of a higher hierarchical order, the minimum value for an instrument of a higher hierarchical order is 3. The concrete weights are displayed in table 2.[62]

For this analysis we classified the selected 32 international agreements into issue-areas as presented in table 2. Our classification is based on the main aim of a particular treaty. We consider the designated function of a treaty to be the decisive factor for its classification into an issue-area-based subgroup. We acknowledge that classifying international agreements into specific issue-areas can entail ambiguity. It is not always easy to distinguish between different rights, or to decide whether a treaty providing both for a strong dispute settlement mechanism

[62] In order to demonstrate the assignment of weights to international agreements embodied in several legal instruments consider the following examples. The International Covenant on Civil and Political Rights (ICCPR) has two additional instrument – the Optional Protocol to the International Covenant on Civil and Political Rights (OP-ICCPR) and the Second Optional Protocol to the International Covenant on Civil and Political Rights, aiming at the abolition of the death penalty (IIOP-ICCPR). To assure that this international agreement providing for the guarantee of civil and political rights does not exceed the maximum weighting of 6, the ICCPR as a major document is assigned the value 4 and the two protocols each the standard value of 1. Rights of the child are embodied in 4 legal instruments: one major document – the Convention on the Rights of the Child (CRC), and three minor documents – the Amendment to article 43(2) of the Convention on the Rights of the Child (A-CRC), the Optional Protocol to the Convention on the Rights of the Child on the involvement of children in armed conflict (OP-CRC) and the Optional Protocol to the Convention on the Rights of the Child on the sale of children, child prostitution and child pornography (IIOP-CRC). The major document is assigned the weighting 3 the three minor documents the value 1 each. Except from the Convention no. 105 concerning the Abolition of Forced Labour which is assigned the full weight of 6, the remaining six fundamental ILO conventions represent three categories of labour-related rights: freedom of association (Convention no. 87 and no. 98), child labour (Convention no. 138 and no. 182) and discrimination (Convention no. 100 and no. 111). All are weighted with the value 3, since two each represent a particular labour principle. Note that an exception is made with regard to the weighting of the Vienna Convention on the Law of Treaties between States and International Organizations or between International Organizations (VCIO). The VCIO is embodied in a single instrument and is the only international agreement selected which is not yet in force. Considering this convention of being thus of secondary importance, it is only assigned the value 3 instead of 6.

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Agreement	Weights	1st generation			2nd generation	
		Civil rights	Political rights	Rule of law	Social rights	Economic rights
CUN	6			RoL		
GATT	6					E
CPPCG	6	C				
C87	3		P			
GC	6	C				
C98	3		P			
C100	3				S	
C105	6				S	
C111	3				S	
VCDR	6			RoL		
CERD	5		P			
ICESCR	6				*S*	*E*
ICCPR	4	*C*	*P*			
OP-ICCPR	1	*C*	*P*			
VCLT	6			RoL		
C138	3				S	
CEDAW	4	C				
UNCLS	6			RoL		
CAT	4		P			
VCIO	3			RoL		
CRC	3				S	
IIOP-ICCPR	1	*C*	*P*			
A-CERD	1		P			
A-CAT	1		P			
WTO	6					E
A-CEDAW	1	C				
A-CRC	1				S	
C182	3				S	
OP-CEDAW	1	C				
OP-CRC	1				S	
IIOP-CRC	1				S	
OP-CAT	1		P			

Note: C: civil rights; P: political rights; RoL: formal provisions; S: social rights; E: economic rights. Due to their overarching characters, four agreements are allocated twice: ICCPR, OP-ICCPR, IIOP-ICCPR are each assigned to the subgroup of political and of civil rights, and ICESCR is assigned to the subgroup of social and economic rights (double assignments indicated by italics). The key to treaty abbreviations is provided in Table 1.

Table 2. *Classification of agreements and corresponding weights*

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and regulating economic affairs should be classified as a 'rule of law' provision or as an 'economic right'. To deal with such classification ambiguities we strongly relied on legal expertise. In concrete, we studied the (available) *travaux préparatoires* as well as the literature outlining the history and purposes of each international agreement. In addition, we consulted scholars specialised in public international law.

Let us take the UN Charter to illustrate the classification process. The UN Charter is the most important international agreement and it is designed to introduce a comprehensive public order system. As mentioned before, a number of international law scholars call the Charter *the* constitutional document of the international community. However, the fact that the purposes of the Charter are relatively wide-ranging makes it difficult to provide a clear-cut classification of its main aim. The Charter established the UN, lays down its functions and prescribes its limitations, deals with the issues of peace, security and the use of force, and provides the base line for human rights. Nevertheless, its major objective is to promote international co-operation and to establish peaceful relations between nation states. Consequently, it is an instrument providing institutional and organisational guidelines for inter-state relations, and was therefore classified as a 'rule of law' (RoL) provision.

With regard to the operationalisation of the process of global constitutionalisation by way of the sequencing of international agreements and the pace of state commitment to these agreements, there are three alternatives to consider. First, we might focus on the creation and initiation of international agreements. This would allow exploring the negotiation and bargaining capabilities of states during the drafting process of an agreement. Empirically, this would require us to take an in-depth look at documentary sources from the years of preparatory discussions and negotiations (the *travaux préparatoires*). However, *travaux préparatoires* are not publicly accessible for all the international agreements under consideration. Thus, focusing on the drafting process might lead to a biased empirical investigation of the process of global constitutionalisation. Second, we could operationalise global constitutionalisation via the overall rates of compliance with international provisions. This approach, however, also has drawbacks. On the one hand, this would require extensive data gathering. On the other hand, it would also imply a standardised translation of qualitative materials into quantifiable levels of compliance rates. At this stage of research on global constitutionalisation, however, the paucity of relevant data forestalls such an analysis in a broad quantitative design. Third, we might simply focus on the overall ratification rate of international agreements. But this approach also has severe limitations. It would involve omitting the time dimension, thus confronting us with the problem of relatively low variance both among states and the generations of international rights. As such, this way of operationalising global constitutionalisation leads to a fairly simplistic empirical analysis. Consider the following example: Namibia and Egypt both ratified 75 per cent of the 32 selected 'quasi-constitutional' international agreements, but did so over a different period of time. While Namibia ratified these agreements within a time frame of 19 years (between 1983 and 2002), it took Egypt 57 years (from 1945 to 2002) to achieve the same rate of ratification. Thus, limiting our analysis to the simple rate of ratification, we would lose important information with regard to the sequencing and ratification pace of international agreements.

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Hence, compared to the alternatives, a method that takes into account the sequencing and ratification pace of international agreements provides a feasible way of operationalising global constitutionalisation. Furthermore, as argued above, such an approach represents a *conditio sine qua non* for global constitutionalisation. Nonetheless, we acknowledge that by measuring the sequence and ratification pace of international agreements, we capture only parts of the larger constitutional picture. Our analysis focuses only on the institutionalisation of some international 'rule of law' provisions and the legal protection of human rights. As such, we do not address structural issues of global authority, for example, principles and structures for the establishment of global 'legislation', the exercise of global 'executive power', or the operation of global adjudicatory capacity. Therefore, it would be misleading to call these international agreements 'constitutional'. Rather, we shall call them 'quasi-constitutional' norms: while they have some important constitutional characteristics, they do not refer to the entirety of a constitutional document.

Statistical techniques

In order to analyse the sequencing and ratification pace of international 'quasi-constitutional' norms, we use event history techniques. An event history model offers an appropriate method for analysing the timing of political change, which is the change in status from non-ratification to ratification. It not only considers which countries ratify international agreements, but also takes into account that some countries do so with different time lags. Furthermore, event history analysis can take into account that countries may resign from a particular treaty and re-ratify it later.[63] In addition, it can accommodate censored and truncated data.[64] In this study, we are confronted with fixed and random right-censoring as well as left-truncation.[65]

Finally, event history techniques can be applied to data with 'multiple events per subject'.[66] In this study, we do not examine ratification behaviour for each treaty separately, but are interested in finding a superordinate institutionalisation pattern of international 'quasi-constitutional' norms; thus we need to take into account that each country can ratify up to 32 international agreements.[67] Our data

[63] Janet M. Box-Steffensmeier and Bradford S. Jones, 'Time is of the Essence: Event History Models in Political Science', *American Journal of Political Science*, 41 (1997), p. 1414.

[64] John P. Klein and Melvin L. Moeschberger, *Survival Analysis. Techniques for Censored and Truncated Data* (New York: Springer-Verlag, 2003), pp. 63–4, pp. 72–3; Mara Tableman and Jong Sung Kim, *Survival Analysis Using S. Analysis of Time-to-Event Data* (London: Chapman & Hall, 2004), p. 17.

[65] Fixed right-censoring applies to all countries which have not yet ratified a particular international agreement (at termination of the analysis). Cases in point for random right-censoring are Czechoslovakia (state termination in 1992), the Socialist Federal Republic of Yugoslavia (terminated in 1991), the German Democratic Republic (1990), Zanzibar (1964) or South Yemen (1989). At the treaty-level of analysis random right-censoring affects only the GATT, which was adopted in 1947 and expired before the end of the study in 1994. Left-truncation is determined by a delayed entry time. Delayed entry times apply for instance to follow-up countries of the Socialist Federal Republic of Yugoslavia and the Soviet Union or countries which gained independence during the process of de-colonialisation.

[66] Terry M. Therneau and Patricia M. Grambsch, *Modeling Survival Data: Extending the Cox Model* (New York: Springer-Verlag, 2000), pp. 169–229.

[67] In the language of event history analysis, each country is potentially 'at risk' to ratify 32 international agreements; it is repeatedly 'at risk' of ratifying an international agreement.

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is formulated as a counting process according to Andersen and Gill[68] and combined with the marginal risk set approach of Wei, Lin and Weissfeld (WLW).[69] The WLW counting process data consists of multiple records and is set up as annual intervals.[70] By clustering on countries, the WLW counting process formulation accounts for the fact that ratifications of international agreements by a specific country are not independent, but are not bound to experience a prior event.[71] The defining characteristic of the WLW approach is that all subjects are 'at risk' for all events at all times prior to experiencing that event.[72]

In order to obtain a realistic account of the sequencing of the international agreements and the pace of ratification, we do not standardise the time of treaty inauguration, (that is, the time when the agreement becomes open for signature and ratification). Rather, we focus on the inauguration of each international agreement. At first glance, one might think that such an approach leads to a biased view of the process of global constitutionalisation. However, we believe that it is a more appropriate method to study both the sequencing of international agreements and the pace of ratification, since it takes into account additional information about the timing and emergence of international agreements. For an illustration, consider the provisions regarding rights granted to children as laid down in several issue-related legal international instruments. The International Covenant on Civil and Political Rights (ICCPR), adopted in 1966, recognises children as possessors of human rights at the international level without laying down the specific rights of children. More elaborate provisions – such as the protection of children from economic exploitation – were incorporated into the Convention on the Rights of the Child (CRC), which was only adopted by the UN in 1989. A state which ratified the ICCPR 7 years after its adoption (in 1973) and the CRC 1 year after its adoption (in 1990) would have ratified these two agreements on the rights of children with a time gap of 17 years. Standardising the adoption of agreements to zero, we would imply that both agreements were adopted in the same year. This would reduce the time gap to 6 years (ratification of the ICCPR 7 years after adoption minus ratification of the CRC 1 year after adoption) and would bias the actual time that has elapsed between the first and the second ratification. In statistical terms, standardisation does not enable us to depict the temporal relation between distinct 'outsets' of each international agreement (the time of opening an international agreement for signature and/or ratification). The ICCPR, for instance, was opened for signature and ratification in 1966, while the CRC was opened for signature and ratification in 1989. Standardising the time of outset of each international agreement to zero, we would omit information accounting for the difference in years between the launching of international

[68] Per K. Andersen and Richard D. Gill, 'Cox's Regression Model for Counting Processes: A Large Sample Study', *Annals of Statistics*, 10 (1982), pp. 1100–20.

[69] See n.8 above; see also Janet M. Box-Steffensmeier and Christopher Zorn, 'Duration Models for Repeated Events', *Journal of Politics*, 64 (2002), pp. 1069–94; Therneau and Grambsch, *Modeling Survival Data*, pp. 185–9; pp. 227–29.

[70] The data for a subject is presented as multiple rows or 'observations', each of which applies to an interval of observation [start, stop].

[71] Janet M. Box-Steffensmeier and Bradford S. Jones, *Event History Modeling. A Guide for Social Scientists* (Cambridge: Cambridge University Press, 2004), p. 158.

[72] Box-Steffensmeier and Zorn, 'Duration Models', p. 1074; Therneau and Grambsch, *Modeling Survival Data*, pp. 186–7.

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Global legal pluralism	no.events	rmean	se(rmean)	median	95% LCL	95% UCL
1st & 2nd generation						
1st generation	2396	4.244	0.292	0.5	0.5	0.5
2nd generation	1707	17.406	0.547	13.0	12.0	14.0
4 issue-areas						
Political rights & rule of law	1745	4.744	0.336	0.5	0.5	0.5
Civil rights	987	13.816	0.338	9.0	9.0	10.0
Economic rights	431	20.762	0.713	18.0	17.0	18.0
Social rights	1435	22.693	0.541	16.0	15.0	16.0

Note: Total number of subjects 'at risk' (country years) to ratify an international agreement is 128205; no.events: number of ratifications that occurred; rmean: restricted truncated mean time to ratification; se(rmean): standard deviation of the restricted truncated mean survival time; median: median time to ratification; 95% LCL and UCL: upper and lower confidence intervals (95%) for the median.

Table 3. *Descriptive statistics of treaty ratification (weighted values)*

agreements. In our analysis, we take into account both the sequencing of international agreements and the pace of ratifications.

Results of the analysis are reported on the basis of descriptive event history quantities.[73] Adjusting for the presence of left-truncated and right-censored data by Greenwood's formula,[74] we compute the modified Kaplan-Meier (hereafter K-M) estimate for the survival function together with the restricted mean survival time (time to ratification) and its variance, as well as the median and confidence intervals of the survivor function.[75]

Empirical findings – unitary or plural constitutionalisation?

Concerning the empirical analysis, we speak of constitutional pluralism when the difference in sequencing and ratification pace of distinct international 'quasi-constitutional' agreements is statistically significant. Conversely, a statistically insignificant difference in sequencing and ratification pace according to the issue-areas is an indicator for the emergence of a unified international constitutional order. We distinguish between statistically significant and statistically insignificant differences by means of confidence limits. Overlapping confidence limits suggest that distinct 'quasi-constitutional' subsystems are not evident. Non-overlapping confidence limits indicate that issue-area-based perception of global constitutionalisation is of considerable importance. An overview of descriptive summary statistics is provided in Table 3[76] (see above).

[73] Our estimations were computed in R project version 2.6.2 with survival R package version 2.34-1. R Development Core Team, *R: A language and environment for statistical computing. R Foundation for Statistical Computing*, 2008, available at: {http://www.r-project.org}. Thomas Lumley, *Survival version 2.34-1 R package*, S original by Terry M. Therneau, ported by Thomas Lumley, 2008, available at: {http://www.r-project.org}.

[74] See Klein and Moeschberger, *Survival Analysis*; Tableman and Kim, *Survival Analysis*; Therneau and Grambsch, *Modeling Survival Data*.

[75] A detailed and formal description of these measures is presented in the appendix.

[76] Results are presented for weighted values. As an alternative, we also examined ratification for non-weighted international agreements. The results are qualitatively similar.

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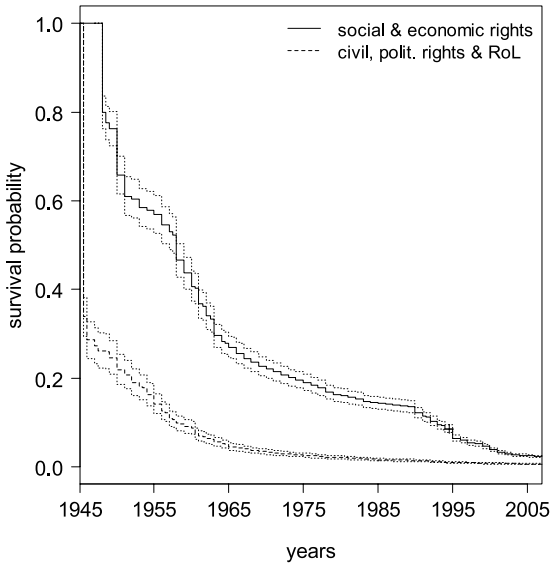


Figure 1. *Kaplan-Meier survivor curve for 1st and 2nd generation of rights (weighted values) covering 32 international agreements.*

Note: Survival probability refers to the probability that a state does not ratify a group of international agreements to a particular time.

A first picture emerges when we classify[77] the full sample of 32 'quasi-constitutional' international agreements into two issue-areas, representing the first and the second generation of rights – the formal-civil-political stratum and the socio-economic stratum. The sequencing and ratification pace differ significantly between these two subgroups with regard to the average year of ratification (see table 3) as well as the median time to ratification. Fifty per cent of international agreements within the formal-civil-political subgroup had been concluded in the first year after the drawing up of agreements. On the other hand, it took thirteen years to reach the median number of ratifications of socio-economic treaties. As indicated by the non-overlapping confidence limits, the two-step functions differ significantly (see figure 1). The ratification of socio-economic rights proceeds more slowly than the ratification of civil-political rights.

Our second categorisation is a more thorough refinement of 'quasi-constitutional' agreements into four issue-areas distinguishing between (a) civil rights, (b) political rights and the 'rule of law', (c) social rights, and (d) economic rights. K-M survival curves for the first three strata progress almost proportionally from the outset of the study, supplemented by the economic strata from the mid 1960s onwards (see figure 2). Significantly distinct confidence levels confirm the appropriateness of this four-fold stratification. Again, ratification of political rights

[77] Several other classification of international agreements into distinct issue-areas have been accomplished in the analysis. Here, we only present findings on the most important 'quasi-constitutional' distinctions.

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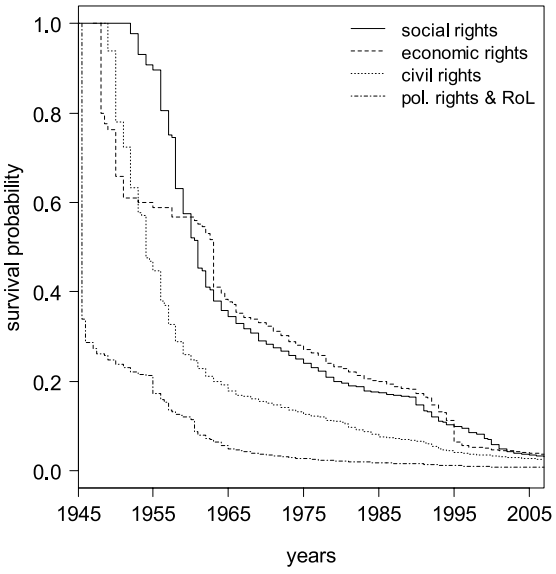


Figure 2. *Kaplan-Meier survivor curve for 4 issue-areas (weighted values) covering 32 international agreements.*

Note: For the sake of clarity, no confidence limits are displayed. Survival probability refers to the probability that a state does not ratify a group of international agreements to a particular time.

with 'rule of law' provisions and civil liberties is faster than ratifications of agreements containing social or economic rights.[78]

In sum, our results show that global constitutionalisation can be captured to some extent as the multiplicity of its functions, rather than as a fully-fledged integrative constitutional process. The emergence of 'quasi-constitutional' subsystems according to a two-tier generation-based conception of rights and a four-tier specification of those rights seem to provide a more accurate account of the present nature of international law than a constitutional reading of the ongoing developments as a unitary process leading towards global harmonisation.

Antecedents of global constitutionalisation

In this section, we make a first attempt to study antecedents of global constitutionalisation. Our goal here is not to identify the exact causal mechanisms underlying global constitutionalisation. Given the infant stage of this type of research, we merely seek to establish associations between specific factors and quasi-constitutional agreements. Since global constitutionalisation is of a plural nature, our analysis distinguishes between the two subgroups of international agreements, namely between the first generation and the second generation of rights.

[78] Note that a 'quasi-constitutional' divide into five constitutional subcategories – formal, civil, political, economic and social – has been tested. Overlapping confidence intervals indicate that this 5-group stratification is not statistically significant.

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First, we consider the effects of democratisation on the sequencing and pace of ratification of 'quasi-constitutional' agreements. There is widespread evidence that democratic states are more willing to ratify international agreements than autocratic states,[79] since international agreements are generally in accordance with their domestic practices. However, to properly explore the link between the *regime type* and ratification behaviour, we need to distinguish between autocracy, hybrid regimes, and full democracies.[80] To do so, we employ the Polity2 scale. The scale ranges from +10 (strongly democratic) to −10 (strongly autocratic), and provides data for 7294 country years between 1946 and 2003.[81] Following Epstein *et al.*,[82] we re-classify the Polity scale into three categories: values greater than 7 indicate a full democratic regime; values ranging from 1 to 7 indicate a hybrid political system; and values less than 1 indicate an autocratic regime. Our findings show that the sequencing and ratification pace of both treaty generations differ significantly within each polity regime (see figure 3 and table 4). On average, democratic states ratify international 'quasi-constitutional' agreements at a higher pace than autocratic states.[83] This confirms that democratic states are more willing to ratify international agreements than autocratic states. However, the ratification pace with regard to the two generations of international agreements differs across the regime types. In the case of authoritarian regimes it took nine years to reach the median number of ratifications of civil-political rights and 'rule of law' provisions, and eighteen for socio-economic treaties. This is in stark contrast to democratic regimes, where the median time to ratification is lower and the sequencing and ratification pace of the two treaty generations is reversed compared to the autocratic regime (3.25 years for second generation rights and seven years for provisions of the first generation). In the context of hybrid regimes, the ratification pattern is similar to fully democratic regimes (the median time to ratification was nine years for agreements of the first generation and five years for rights of the second generation). While second generation rights are ratified at a higher pace at the outset of the study, the ratification pace decelerates from the late 1950s and reverses the overall ratification pace of the two subgroups of agreements. The variance across regime types and treaty generations documents that the ratification pattern of 'quasi-constitutional' agreements is more complex than is captured by simple theoretical assumptions. Future research might need to adopt a sovereignty-centred view which emphasises national 'sovereignty costs' of

[79] See for instance Wade M. Cole, 'Sovereignty Relinquished? Explaining Commitment to the International Human Rights Covenants, 1966–1999', *American Sociological Review*, 70 (2005), pp. 472–95; Andrew Moravcsik, 'The Origins of Human Rights Regimes: Democratic Delegation in Postwar Europe', *International Organization*, 54 (2000), pp. 217–52; Neumayer, 'Death Penalty Abolition and the Ratification of the Second Optional Protocol'.

[80] See also Hathaway, 'Why Do Countries Commit to Human Rights Treaties?'.

[81] Marshall, Monty. G. and Keith Jaggers, *Polity IV project. Political Regime Characteristics, and Transitions, 1800–2002, Dataset Users' Manual* (College Park, MD: Center for International Development and Conflict Management, University of Maryland. 2002).

[82] David L. Epstein et al., 'Democratic Transitions', *American Journal of Political Science*, 50 (2006), pp. 551–69.

[83] As an alternative to the distinction of treaties according to the two generations, we also examined the effect of polity regimes in the context of the full sample of the 32 'quasi-constitutional' agreements. The results underline that democracies have a higher ratification pace than autocracies.

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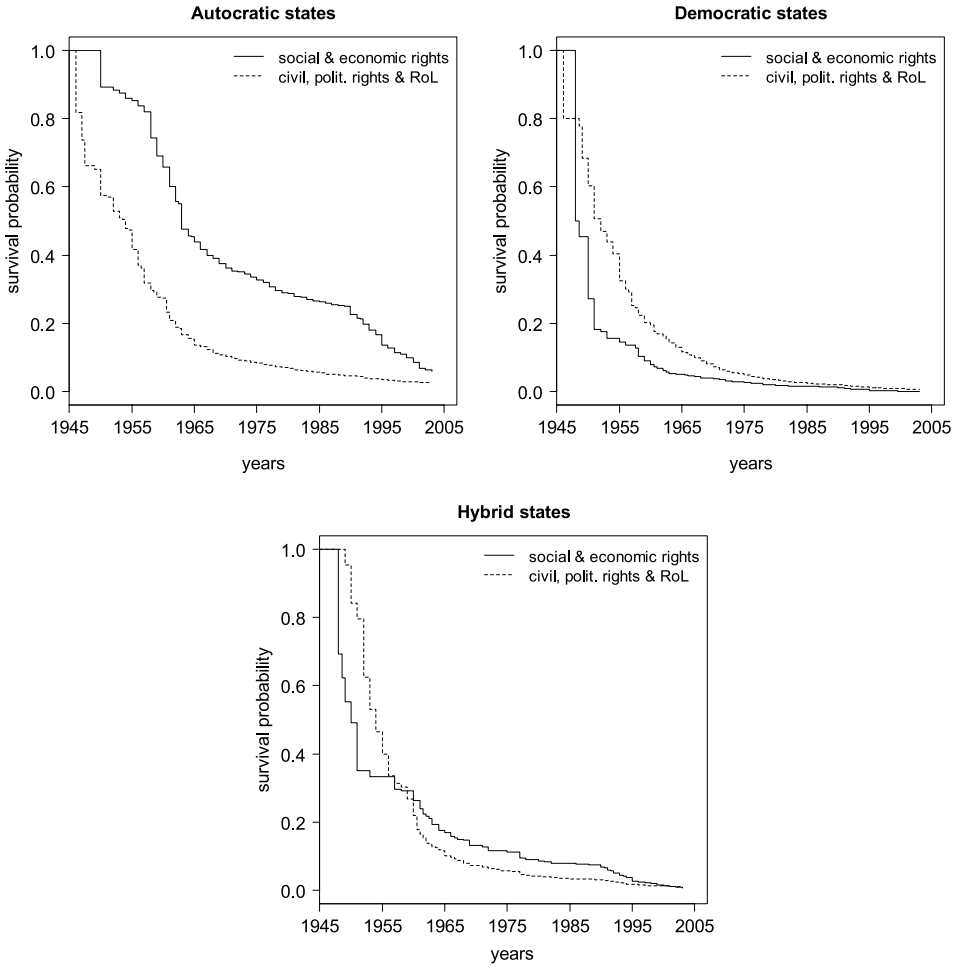


Figure 3. *Kaplan-Meier survivor curves for 1st and 2nd generation of rights according to polity regime (weighted values) covering 32 international agreements.*

Note: For the sake of clarity, no confidence limits are displayed. Survival probability refers to the probability that a state does not ratify a group of international agreements to a particular time.

policy change imposed by treaty ratification as well as by national interests and power.[84]

Second, we focus on *state duration*. State duration distinguishes between the ratification pace of countries which gained independence after 1945 (in the process of decolonisation or the collapse of the Soviet Union) and states which have a longer duration. We expect state duration to be negatively correlated with the commitment to 'quasi-constitutional' agreements. New states generally have no standing in the international community and must convince other states that they are willing to become good members of the international community. Thus, by

[84] Oona A. Hathaway, The Cost of Commitment', *Stanford Law Review*, 55 (2003), pp. 1821–62; Moravcsik, 'The Origins of Human Rights Regimes: Democratic Delegation in Postwar Europe'.

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Global legal pluralism	no.events	rmean	se(rmean)	median	95% LCL	95% UCL
1st & 2nd generation & polity regime						
1st gen. & autocratic	850	11.454	0.868	9.0	5.0	10.0
2nd gen. & autocratic	607	25.849	0.678	18.0	18.0	19.0
1st gen. & hybrid	379	11.698	0.473	9.0	8.0	10.0
2nd gen. & hybrid	309	11.762	1.209	5.0	4.0	6.0
1st gen. & democratic	614	9.781	0.866	7.0	5.0	9.0
2nd gen. & democratic	492	6.499	0.54	3.25	3.0	5.0
1st & 2nd generation & state duration						
1st gen. & new states	1378	9.255	1.16	6.0	2.5	10.0
2nd gen. & new states	1041	13.643	1.545	5.0	3.5	13.0
1st gen. & old states	981	5.011	0.365	0.5	0.5	0.5
2nd gen. & old states	651	18.329	0.635	13.0	11.0	14.0
1st generation & regions						
1st gen. & Asia & Pacific	310	8.113	1.313	1.0	1.0	2.5
1st gen. & Lat. Amer. & Car.	422	0.5	0	0.5	Inf	Inf*
1st gen. & Eastern Europe	447	5.6	0.836	0.5	0.5	0.5
1st gen. & Western countries	448	7.975	0.69	1.0	0.5	4.0
1st gen. & Africa & Mid. East	769	1.847	0.402	0.5	0.5	0.5
2nd generation & regions						
2nd gen. & Asia & Pacific	220	26.12	2.404	15.0	5.0	28.0
2nd gen. & Lat. Amer. & Car.	332	15.821	0.902	13.0	9.0	14.0
2nd gen. & Eastern Europe	261	28.073	1.359	26.0	21.0	28.0
2nd gen. & Western countries	271	11.009	0.826	5.0	5.0	6.0
2nd gen. & Africa & Mid. East	623	20.873	0.944	16.0	16.0	17.0

Note: Total number of subjects 'at risk' (country years) to ratify an international agreement is 128205; no. events: number of ratifications that occurred; rmean: restricted truncated mean time to ratification; se(rmean): standard deviation of the restricted truncated mean survival time; median: median time to ratification; 95% LCL and UCL: upper and lower confidence intervals (95%) for the median.
Notice that no reliable estimates can be reported in the case of Latin America & Caribbean for agreements of the first generation. In this case, all international agreements which were open for ratification in the first year of the study were ratified in the very same year. This leads to a zero survival rate after the first year (see figure 5) which is due to the nature of the K-M estimator modified for the presence of left-truncated observations on the country level. This measure takes into account that countries can enter the study with a delayed entry time and that times of treaty inauguration are not standardised. In general, the K-M estimator considers the temporal process of the ratification behaviour. However, due to the construction of the non-parametric K-M as product-limit estimator, the curve cannot decrease below the initial value of zero, which was already reached after the first year. For this specific case the survival curve obtained by the non-parametric K-M estimator provides no useful information about the process of ratifications.

Table 4. *Descriptive statistics of treaty ratification with antecedents (weighted values)*

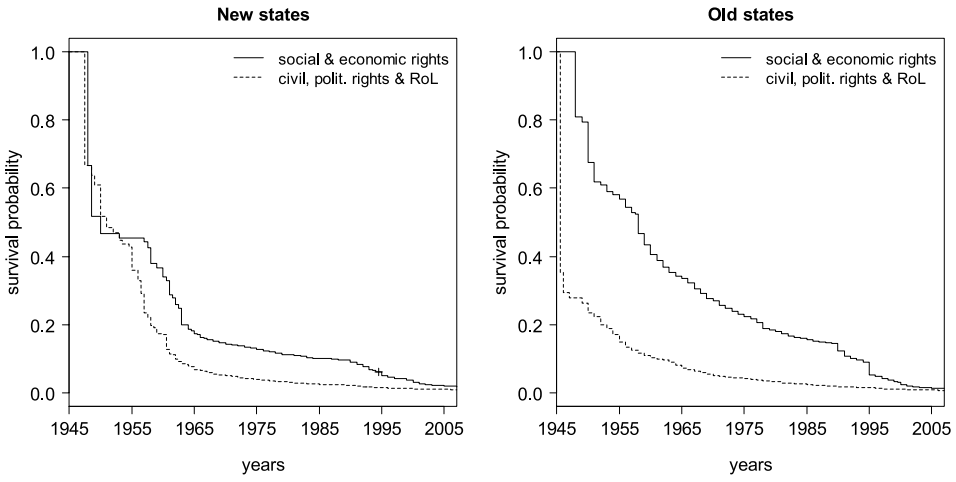


Figure 4. *Kaplan-Meier survivor curves for 1st and 2nd generation of rights according to state duration (weighted values) covering 32 international agreements.*

Note: For the sake of clarity, no confidence limits are displayed. Survival probability refers to the probability that a state does not ratify a group of international agreements to a particular time.

openly and publicly committing to international norms, new states can establish a reputation at the international level. In addition, new states may also feel a specific need to break with past practices of their country. They may want to distance themselves from prior abuses within the country in order to obtain collateral benefits such as investment, trade, and political support. By joining an international agreement, they may signal an intention to become a good member of the international community.[85] We therefore expect that new states are more likely to join an international agreement than older states. We capture state duration via state independence or via the introduction of the first national constitution.[86] For the purpose of graphical clarity, we transformed the variable 'state duration' into a binary measure distinguishing between 'old states' which existed before 1945 and 'new states' which came into existence after 1945. Focusing on the data presented in table 4 and figure 4, there are pace differences between the two subgroups of agreements. Both, new and old states ratify civil and political rights as well as 'rule of law' provisions on average at a higher pace than socio-economic treaties. However, the difference in ratification pace between old and new states is not statistically significant. Comparing the pace differences of each generation of

[85] Oona A. Hathaway, 'Between Power and Principle: A Political Theory of International Law', *University of Chicago Law Review*, 71 (2005), pp. 469–536; Hathaway, 'Why Do Countries Commit to Human Rights Treaties?'.

[86] Corresponding data has been taken from and verified by several sources: Birgit Albrecht et al., *Der Fischer Weltalmanach Staatenlexikon: Alle Staaten der Welt auf einen Blick* (Frankfurt a.M.: Fischer Taschenbuch Verlag, 2006); Central Intelligence Agency, *The World Factbook* (Washington, DC: Central Intelligence Agency, 2007); Redaktion Weltalmanach (ed.), *Der Fischer Weltalmanach 2008: Zahlen Daten Fakten* (Frankfurt a.M.: Fischer Taschenbuch Verlag, 2008). Furthermore, we have cross-checked these sources with the Correlates of War Project, *State System Membership List, v2008.1*, 2008, available at: {http://correlatesofwar.org}.

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treaties between new and old states, we do not find support for our assumption that new states have an overall higher likelihood of treaty ratification than old states.

Third, we focus on regional variation in the ratification of 'quasi-constitutional' agreements. We propose that there are similarities in ratification behaviour among states from the same geographical region. This argument draws from constructivist approaches in international relations. Finnemore, for instance, argues that dense networks of transnational and international social relations shape states' perceptions of the world and their role in that world.[87] As more states commit to international 'quasi-constitutional' norms, other states feel pressured to commit as well. Simmons introduced a global and regional measure to control for states among which the influence of norms is likely to exist.[88] Since our goal is to detect regional variation in ratification behaviour, we classify world regions into five categories: 1) Western countries (including Western Europe, Australia, New Zealand, US of America and Canada), 2) Asia and the Pacific, 3) Eastern Europe and post Soviet Union (including central Asia), 4) Africa and the Middle East, and 5) Latin America and the Caribbean.[89] Our results show that the ratification pace of agreements of the first and second generation differs significantly within each region. In all regions, agreements of the first generation are ratified more rapidly than second generation rights (see table 4). However, the difference in the ratification pace between the two generations is smaller in Western countries than in the other world regions (see figure 5). This finding is in line with Kagan's claim that Western democracies are the vanguards of international cooperation.[90]

Conclusion

In this study, we investigated the shape of global constitutionalisation. Defining global constitutionalisation in terms of state commitment to international 'quasi-constitutional' agreements, we explored the degree to which international law is moving towards a more unified constitutional order or whether it takes the shape of differentiated types of constitutional processes. To this end, we analysed the sequencing and ratification pace of 32 selected 'quasi-constitutional' agreements drawn up in the period between 1945 and 2007. The results of our study are sobering news for those devoted to the ambitious project of a unified 'global constitutional order', as they indicate that the development in international law displays a tendency towards differentiation. Following a generation-based distinction of rights, we find that the ratification of 'quasi-constitutional' agreements embodying political rights with 'rule of law' provisions and civil liberties is faster

[87] Martha Finnemore, *National Interests in International Society* (Ithaca: Cornell University Press, 1996).

[88] Beth Simmons, 'International Law and State Behavior: Commitment and Compliance in International Monetary Affairs', *American Political Science Review*, 94 (2000), pp. 819–36. For a similar application see also Goodliffe and Hawkins, 'Explaining Commitment: States and the Convention against Torture'.

[89] See Axel Hadenius and Jan Teorell, 'Assessing Alternative Indices of Democracy', *Political Concepts-Committee on Concepts and Methods Working Paper Series*, 6 (2005).

[90] Robert Kagan, *The Return of History and the End of Dreams* (New York: Knopf, 2008).

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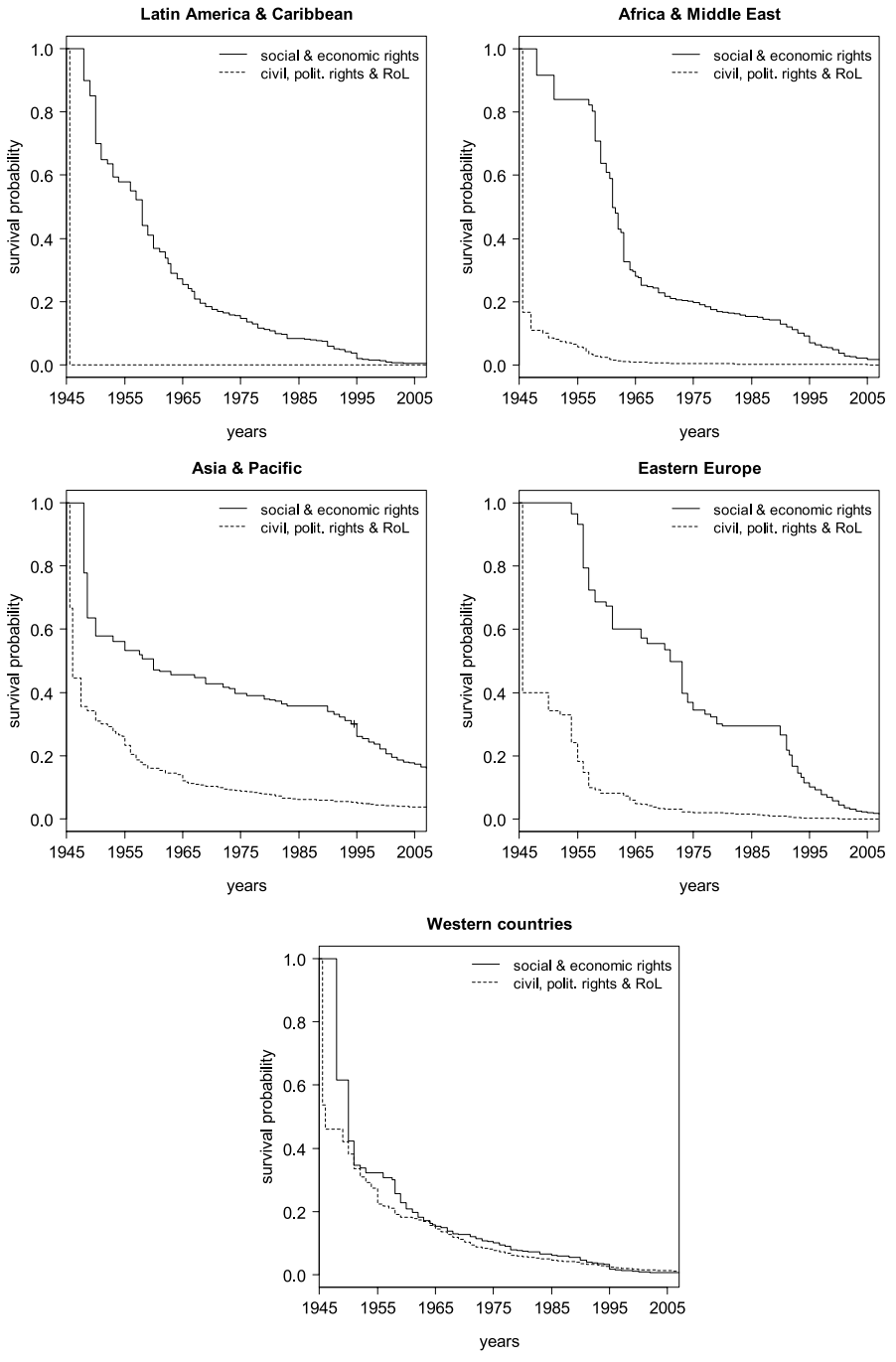


Figure 5: *Kaplan-Meier survivor curves for 1st and 2nd generation of rights according to geopolitical regions (weighted values) covering 32 international agreements.*

Note: For the sake of clarity, no confidence limits are displayed. Survival probability refers to the probability that a state does not ratify a group of international agreements to a particular time.

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than the ratification of agreements containing social or economic rights. Certainly, these findings may not come as a big surprise for many scholars; but our analysis is the first to examine the shape of 'global' constitutionalisation in a systematic and sophisticated manner.

Four implications follow from our study. First, the fact that global constitutionalisation has a distinct pluralist shape reflects challenges of effectiveness and efficiency. Substantial gaps in the sequencing and ratification pace mean a lack of coherence of the international legal order, and as such tend to imply a gap in effective and efficient governance.

Second, our analysis provides a starting point for further elaboration on the future legal and 'constitutional' shape of the international polity. Based on their experiences with the European Union, European lawyers enthusiastically started to employ the constitutional vocabulary on a global scale. Our findings, however, may dampen this enthusiasm. They do not lend support to a unified and quick process of global constitutionalisation, but rather lend support to the idea of a 'multi-speed globe' of differentiated constitutionalisation. Such a 'variable geometry' on the global scale could also acknowledge irreconcilable differences among nation states. Thus, proponents of global constitutionalism may be well advised to focus primarily on groups of states able and willing to pursue common objectives, while acknowledging that others may follow but with a considerable time lag.[91]

Third, we have also focused on three antecedents of global constitutionalisation, namely regime type, state duration, and regional effects. We could demonstrate that processes of global constitutionalisation vary across regime types and world regions (while there is no effect for new and old states). These findings provide an important starting point for more detailed, case-based analyses of the exact mechanisms underlying processes of global constitutionalisation.

Fourth, to study ratification patterns we employed sophisticated statistical tools, namely the analysis of multiple ratification events using the WLW formulation combined with a counting process style of data input. Most studies concerned with the issue of commitment to international agreements focus on one agreement or a selection of a few agreements.[92] This approach, however, is deficient since it raises the problem of generalisability. Our statistical tools (combining the WLW approach with the counting-process data imputation style) provide a more appropriate framework for studying cross-treaty ratification effects in an encompassing manner and for analysing multiple ratification events. By examining all 'quasi-constitutional' agreements since 1945, we have been able to draw more generalisable conclusions than is possible when analysing evidence from individual agreements. By studying ratification patterns of 32 international 'quasi-constitutional' agreements, we have been able to provide a more comprehensive evaluation of these agreements and to investigate research questions which cannot be tackled in a one-agreement analysis or a series of one-agreement analyses.

[91] For 'multi-speed Europe' and 'variable-geometry Europe' see for example, Alberto Alesina and Vittorio Grilli, 'On the Feasibility of a One-speed or Multispeed European Monetary Union', *Economics & Politics*, 5 (1993), pp. 145–65; Paul R. Krugman, *Geography and Trade* (Cambridge: MIT Press, 1991); Alexander C-G. Stubb, 'A Categorization of Differentiated Integration', *Journal of Common Market Studies*, 34 (1996), pp. 283–95.

[92] See n.7 above.

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Finally, we acknowledge that our analysis is mainly descriptive. While we made a first attempt to explore antecedents of global constitutionalisation, future research must take a more extensive look at the forces impeding or facilitating constitutionalisation processes, while at the same time specifying the exact mechanisms. These crucial issues should be tested and assessed in our comprehensive multi-treaty framework.

Appendix: applied event history quantities

The basic quantity employed to describe time-to-event processes is the survival function. It is the probability that a subject survives to time t.[93] With T denoting a nonnegative random variable representing the lifetime of subjects, the survival function is defined as

$$S(t) = \Pr(T > t).$$

Expressing this with regard to the analysis of ratification events, let us first consider a risk set with only one potential international agreement to be ratified. Then, the survivor function denotes the probability that a state does not ratify the international agreement under investigation to a particular time. Within the framework of multiple ratification events, the survivor function can be thought of as the proportion of not-ratified multilateral agreements over all states to a particular time. Over the course of time, the proportion of states that has not ratified the agreements must decrease; hence the survivor function is a monotonous decreasing function. It is the complement of the cumulative distribution function[94] $F(t)$ defined as

$$S(t) = 1 - F(t), \text{ where } F(t) = \Pr(T \leq t) = \int_0^t f(x)dx.$$

Therefore, it is also described by the integral of the probability density function[95] $f(t)$ as

$$S(t) = \int_t^\infty f(x)dx, \text{ where } f(x) = -\frac{dS(t)}{dt}.$$

However, given that the ratification data is left-truncated and/or right-censored, the upper limit of the integral of $S(t)$ is generally not ∞, and the lower limit not t. C denotes a mixed censor time[96] with the cumulative distribution function $G(y)$, the probability density function $g(y)$ and the survival function $S_g(y)$. Each subject i has a lifetime T_i, and a censored time C_i. On each of n subjects the pair (Y_i, δ_i) can be observed[97] where

$$Y_i = min(T_i, C_i) \text{ and } \delta_i = \begin{cases} 1 & \text{if } T_i \leq C_i \\ 0 & \text{if } C_i < T_i. \end{cases}$$

[93] Klein and Moeschberger, *Survival Analysis*, p. 22; Tableman and Kim, *Survival Analysis*, p. 5.
[94] Klein and Moeschberger, *Survival Analysis*, p. 22.
[95] Tableman and Kim, *Survival Analysis*, p. 5.
[96] C can either assume a fixed censor time at the termination of the study in 2007 or a random censor time for the termination of a state or an international agreement.
[97] Ibid., p. 13.

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Reflecting the presence of left truncation, each subject must be considered to have a left-truncation time (delayed entry time) X_i, a lifetime Y_i, and a censoring time C_i. Then each of n subjects observed is described by the triple $(X_i,\ Y_i,\ \delta_i)$ where

$$Y_i = min(T_i, C_i) \text{ and } \delta_i = \begin{cases} 1 & \text{if } X_i < T_i \leq C_i \\ 0 & \text{if } X_i < C_i < T_i. \end{cases}$$

Thereby, $k(x)$ denotes a probability density function of X, $f(t)$ and $S(t)$ the probability density function and the survival function of T, and $g(y)$ and $S_g(y)$ a probability density function and a survival function of C. The times X_i, T_i, C_i are assumed to be independent.[98]

In order to estimate the survival function, the nonparametric modified Kaplan-Meier (hereafter K-M) estimator is applied.[99] In contrast to the empirical survivor function which treats data as if there were no censored observations, the K-M estimator reflects the presence of right-censored observations, formulated by means of the survivor function. The K-M estimator is defined as

$$\widehat{S}(t) = \prod_{y_{(i)} \leq t} \widehat{p}_i = \prod_{y_{(i)} \leq t} \left(\frac{n_i - d_i}{n_i} \right) = \prod_{i=1}^{k} \left(\frac{n_i - d_i}{n_i} \right), \text{ where } y_k \leq t < y_{(k+1)},$$

and where $y_{(i)}$ denotes the ith distinct ordered censored or uncensored observation and the right endpoint of the interval I_i, $i = 1, 2, \ldots, n' \leq n$, and k the number of the interval endpoints. The K-M estimator is based on $\mathcal{R}(t)$ indicating the risk set just before time t (the number of subjects at risk at the beginning of the interval I_i equals the number of subjects which survived the previous interval I_{i-1}) and comprising

n_i = number of subjects in the risk set $\mathcal{R}(y_{(i)})$
= number of subjects which did not experience the event (and which are not censored) just before $y_{(i)}$
d_i = number of subjects which experienced the event at time $y_{(i)}$
p_i = surviving probability P (not experiencing the event through I_i | not having experienced the event at beginning I_i)
= $P(T > y_{(i)} \mid T > y_{(i-1)})$.

The modified K-M estimator adjusts, in addition, the empirical survivor function for the presence of left-truncation, by redefining the K-M estimate to be zero beyond the largest observation. Extended to left-truncated data the modified K-M estimator is

$$\widehat{S}(t) = \prod_{t_{(i)} \leq t} \widehat{p}_i = \prod_{t_{(i)} \leq t} \left(\frac{n_i - d_i}{n_i} \right) = \prod_{i=1}^{k} \left(\frac{n_i - d_i}{n_i} \right), \text{ where } t_k \leq t < t_{(k+1)}.$$

It is based on a modified risk set $\mathcal{R}(t_{(i)})$ and $t_{(i)}$ defined by

$$\mathcal{R}(t_{(i)}) = \{j \mid x_j \leq t_{(i)} \leq y_j\}, \text{ with j=1,}\ldots,n,\ \text{i=1,}\ldots,r,$$

[98] Ibid., p. 205.
[99] The major advantage of this non-parametric method is its fit, which can handle any distribution. However, it is much more difficult to report on non-parametric estimates, and results must be shown in a figures or tables. Philip Hougaard, *Analysis of Multivariate Survival Data* (New York: Springer-Verlag, 2000), p. 69.

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with $t_{(1)}, \ldots, t_{(r)}$ indicating the $r \leq n$ distinct ordered (uncensored) death times, so that $t_{(j)}$ is the jth ordered death time, where

n_i = number of subjects in the risk set $\mathcal{R}(t_{(i)})$
= number of subjects which are left-truncated before time $t_{(i)}$ and which did not experience the event (but which are not censored) just before time $t_{(i)}$

d_i = number of subjects which are left-truncated before time $t_{(i)}$ and which experienced the event at $t_{(i)}$

p_i = surviving probability P (not experiencing the event through time $t_{(i)}$ | left-truncated before time $t_{(i)}$ and not having experienced the event just before time $t_{(i)}$).

The K-M estimator yields a right continuous decreasing step function, which steps down at each $t_{(i)}$. The size of the steps depends not only on the number of events observed at each time $t_{(i)}$, but also on the pattern of the censored and truncated observations prior to time $t_{(i)}$.[100]

Another summary measure of the event experience is the mean or median time to the event. The mean time to the event (mean survival time) $E(T)$ is the total area under the survival curve $S(t)$. For a given time t the mean survival time $E(T)$ becomes shorter, the greater the risk, the smaller $S(t)$.[101] The mean survival time is given by

$$E(T) = \int_0^\infty S(t)dt.$$

Note that the modified K-M estimator is not defined beyond the largest time value. Therefore, the mean lifetime cannot be estimated, and comparison of the 'survival time' for the different constitutional categories becomes complicated by the differences in the largest time values between the constitutional groups. To make a comparison which adjusts for these differences, the estimated mean, restricted to the specified interval (the observation period) is constructed for each constitutional group. This estimation is based on the assumption that the survivor function is 0 after the largest time.[102] The estimated *restricted truncated* mean survival time is then taken to be

$$\widehat{mean} = \int_0^{y_{(n)}} \hat{S}(t)dt, \text{ where } y_{(n)} = max(y_i).$$

If the largest time value $y_{(n)}$ is uncensored, then a truncated interval is the same as the integral over [0, ∞) since over [$y_{(n)}$, ∞), $\hat{S}(t) = 0$. But if the maximum time value is censored, the function will have a non-zero value at that point and be undefined afterwards, the $\lim_{t\to\infty} S(t) \neq 0$. Thus, the integral over [0, ∞) is undefined, and $\widehat{mean} = \infty$. In order to avoid this, the integral is truncated. By taking the upper limit of integration to be the $y_{(n)}$, the K-M estimate is redefined to be zero beyond the largest time value.[103] As $\hat{S}(t)$ is a step function, $\widehat{mean}$ is computed as

[100] Hougaard, *Analysis of Multivariate*, p. 71; Klein and Moeschberger, *Survival Analysis*, pp. 99–100; Tableman and Kim, *Survival Analysis*, pp. 27–30, p. 34, p. 205; Therneau and Grambsch, *Modeling Survival Data*, pp. 13–17.
[101] Klein and Moeschberger, *Survival Analysis*, p. 118; Tableman and Kim, *Survival Analysis*, p. 7.
[102] Hougaard, *Analysis of Multivariate*, p. 71; Klein and Moeschberger, *Survival Analysis*, p. 119.
[103] Hougaard, *Analysis of Multivariate*, p. 1; Tableman and Kim, *Survival Analysis*, pp. 34–5.

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$$\widehat{mean} = \sum_{i=1}^{n'} (y_{(i)} - y_{(i-1)})\widehat{S}(y_{(i-1)}),$$

where n' = number of distinct observed y_i's, $n' \leq n$, $y_{(0)} = 0$, $\hat{S}\left(y_{(0)}\right) = 1$, and $\hat{S}\left(y_{(i-1)}\right)$ is the height of the function at $y_{(i-1)}$.

The estimated variance of the estimated restricted truncated mean survival time is

$$\widehat{var}(\widehat{mean}) = \sum_{i=1}^{n'} \left(\int_{y_{(i)}}^{y_{(n)}} \widehat{S}(t)dt \right)^2 \frac{d_i}{n_i(n_i - d_i)}.$$

It is reported in the findings section as the standard error, which is the square root of the Greenwood's formula for the estimated variance.[104] Greenwood's formula modified for truncated observations[105] is described by

$$\widehat{var}(\widehat{S}(t)) = \widehat{S}^2(t) \sum_{t_{(i)} \leq t} \frac{d_i}{n_i(n_i - d_i)} = \widehat{S}^2(t) \sum_{i=1}^{k} \frac{d_i}{n_i(n_i - d_i)}, \text{ where } t_{(k)} \leq t < t_{(k+1)}.$$

The K-M estimator is also used to provide estimates of quantiles of the time-to-event distribution. In this manner the median survival time can also be determined. This is a descriptive measure preferred even over the mean survival time, as time-to-event data are right skewed. The pth quantile t_p follows from $F(t_p) = p$ or $S(t) = 1 - p$ and is defined as $t_p \leq S^{-1}(1 - p)$. t_p is the smallest time at which the survivor function is less than or equal to $1 - p$. When $p = 0.5$, t_p is the median survival time. The estimated quantile is then

$$\widehat{t_p} = min\{t_i : \widehat{S}(t_i) \leq 1 - p\}.$$

Likewise, upper and lower confidence intervals for the median are defined in terms of the confidence intervals for the $S(t)$: the upper and lower confidence limit is the smallest time at which the upper or lower confidence limit for $S(t)$ is ≤ 0.5.[106] Confidence intervals are obtained by the Greenwood's standard error on an approximate $(1 - \alpha) \times 100\%$ confidence level[107] and are computed as

$$\widehat{S}(t) \pm z_{\frac{\alpha}{2}} \sqrt{var(\widehat{S}(t))}.$$

[104] Tableman and Kim, *Survival Analysis*, pp. 37–8.
[105] Ibid., p. 207.
[106] Hougaard, *Analysis of Multivariate*, p. 71; Klein and Moeschberger, *Survival Analysis*, p. 120; Tableman and Kim, *Survival Analysis*, p. 33, p. 36.
[107] Tableman and Kim, *Survival Analysis*, p. 207; Therneau and Grambsch, *Modeling Survival Data*, p. 16.

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