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ARTICLES

From Carbon Emissions, Data Privacy, to Self-driving: How Transnational Corporations Shape Global Technical Standards and Governance

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I. Introduction

Global issues, including climate change, cyber-attacks, pandemics, and financial crises, traverse state boundaries, necessitating international cooperation to address them. However, International Organizations (IOs) often struggle to keep pace with these problems.[1] On the other hand, transnational corporations (TNCs) are important potential players in dealing with these urgent issues because of their power and expertise.[2] They control sectors within Global Value Chains (GVCs) by providing economic incentives, contracting,[3] and distributing resources,[4] forming *de facto* mandatory in the global sphere.[5] In addition, TNCs can influence the decisions made by state governments via negotiation, lobbying, and experience sharing.[6]

For instance, the United States (US) and the European Union (EU) began automated vehicle programs to collaborate with corporations to collect information and design the regulation of the Automated Driving System (ADS).[7] TNCs closely interact with IOs at the international level and are viewed

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1. James G. March & Johan P. Olsen, *The Institutional Dynamics of International Political Orders*, 52 INT'L ORG. 943, 965 (1998).

2. David L. Levy & Aseem Prakash, *Bargains Old and New: Multinational Corporations in Global Governance*, 5 BUS. & POL. 131, 145 (2003).

3. PETER HERTENSTEIN, MULTINATIONALS, GLOBAL VALUE CHAINS AND GOVERNANCE: THE MECHANICS OF POWER IN INTER-FIRM RELATIONS 5 (2020).

4. *See id.* at 8.

5. Michael M. Du, *The Regulation of Private Standards in the World Trade Organization*, 73 (3) FOOD & DRUG L.J. 432, 433 (2018).

6. Philipp Pattberg, *The Influence of Global Business Regulation: Beyond Good Corporate Conduct*, 111 BUS. SOC. REV. 241, 246 (2006).

7. *See* James C. Owens, *Highly Automated Vehicles: Federal Perspectives on the Deployment of Safety Technology*, NAT'L HIGHWAY TRAFFIC SAFETY ADMIN. (Nov. 20, 2019),

as the governors of international orders.[8] Automotive TNCs, for example, work with IOs like the United Nations Economic Commission for Europe (UNECE), which sets international standards for the automotive industry.[9] Their expertise grants them access to public rulemaking, enhancing their influence over social order. However, their involvement in public rulemaking has been criticized for lacking proper regulation and potentially undermining legitimacy.[10]

The influence of TNCs on society has drawn scholars' attention for years and is still a heated subject. Some scholars focus on understanding the interactions and power within GVCs, revealing the incentives and structures TNCs apply to control suppliers.[11] Others begin with "orders" and emphasize that private actors, like TNCs, will interfere with traditional nation-states' legal order and thus play critical roles in transnational legal ordering (TLO).[12] Another school focuses on public and private interactions, constructing a "transnational business governance interaction (TBGI) analytical framework" to classify different types of interactions.[13]

While these approaches could enrich our understanding of the interactions between TNCs and other actors, several questions remain unanswered. Although public and private interactions have existed for a long time, little research has been done to analyze the dynamic of their interactions, which could illuminate why private power expands and how to prevent adverse outcomes. Most existing studies focus on the interaction dynamic between TNCs and domestic governments or emerging global institutions rather than traditional IOs.[14] Despite criticisms of the effectiveness of IOs, their ongoing interactions with TNCs offer ample evidence to investigate these dynamics. Furthermore,

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https://www.nhtsa.gov/congressional-testimonies/highly-automated-vehicles-federal-perspectives-deployment-safety[https://perma.cc/65A9-B2CW]; *About L3Pilot*, L3 PILOT DRIVING AUTOMATION, https://l3pilot.eu/about.html [https://perma.cc/F2UP-7UV5] (last visited Aug. 6, 2024); *Safe and Connected Automation in Road Transport*, EUR. COMM'N, https://trimis.ec.europa.eu/project/safe-and-connected-automation-road-transport [https://perma.cc/EX6M-SLUV] (last visited Aug. 6, 2024).

8. *See* Raymond Saner & Lichia Yiu, *Business — Government — NGO Relations: Their Impact on Global Economic Governance, in* GLOBAL GOVERNANCE AND DIPLOMACY 85, 93-94 (Andrew F. Cooper et al. eds, 2008).

9. *See* the analysis in the section II.

10. Muhammad Budiana, *The Influence of Multinational Corporations on Global Political Decisions*, 1 J. STUDENT COLLABORATION RES. 106, 107 (2024).

11. Private governance and power theory fall within this category. *Cf.* Michael P. Vandenbergh, *The New Wal-Mart Effect: The Role of Private Contracting in Global Governance*, 54 UCLA L. REV. 913, 913 (2007); Mark P. Dallas, Stefano Ponte & Timothy J. Sturgeon, *Power in Global Value Chains*, 26(4) REV. OF INT'L POL. ECON. 666, 667-668 (2019).

12. Terence C. Halliday & Gregory Shaffer, *Transnational Legal Orders in* TRANSNATIONAL LEGAL ORDERS 3, 23 (Terence C. Halliday & Gregory Shaffer ed., 2015).

13. The six elements are "agenda-setting, norm formation, implementation, monitoring and information-gathering, enforcement, and evaluation and review." Burkard Eberlein et al., *Transnational Business Governance Interactions: Conceptualization and Framework for Analysis*, 8 REG. & GOVERNANCE 1, 6 (2014).

14. *See* REBECCA SCHMIDT, REGULATORY INTEGRATION ACROSS BORDERS: PUBLIC – PRIVATE COOPERATION IN TRANSNATIONAL REGULATION 15 (2018).

the increasing interactions underscore the irreplaceable role of IOs globally, warranting further research.

In the technological era, TNCs have increased opportunities to engage with public actors on a global scale. Their technological knowledge often acts as a golden ticket for them to enter the rulemaking process, but how does this become a determining factor contributing to the expansion of private power? Or is expanding private power an illusion since our reliance on TNCs in public rulemaking has long persisted? In addition, could the involvement of TNCs, which are without a democratic foundation, undermine the legitimacy of the process and the outcome? If so, how could we hold these actors accountable and mitigate the risk resulting from the interaction?

Global Administrative Law (GAL) provides sufficient ground to answer these questions. Introduced by Benedict Kingsbury et al., GAL conceptualizes global society as a "global administrative space,"[15] and establishes a legitimacy framework to examine the output and the procedure. According to GAL, international agents have already executed administration without state delegation,[16] extending beyond the Westphalian international system.[17] GAL recognizes private actors as global agents who could perform public authority.[18] Based on these assumptions, GAL identifies five types of global administrations: formal international organizations, international treaties and arrangements, governmental networks, hybrid administration, and private bodies.[19] However, these structures may produce legitimacy and accountability problems, requiring further research.[20] GAL applies traditional administrative law tools, including due process, transparency requirement, etc.,[21] to analyze these administrative processes, which are divided first into three layers: institutional design, norms and decisions, and procedure rules.[22] The concept of legitimacy in GAL originated in legal positivism, combined with Lon Fuller's "inner morality of law."[23] This concept has been transformed into basic principles, such as participation, transparency, and accountability, which global

15. Nico Krisch & Benedict Kingsbury, *Introduction: Global Governance and Global Administrative Law in the International Legal Order*, 17 EUR. J. INT'L L. 1, 1 (2006).

16. Christoph Möllers, *Constitutional Foundations of Global Administration, in* RESEARCH HANDBOOK ON GLOBAL ADMINISTRATIVE LAW 107, 109 (Sabino Cassese ed., 2016).

17. Ming-Sung Kuo, *Inter-Public Legality or Post-Public Legitimacy? Global Governance and the Curious Case of Global Administrative Law as a New Paradigm of Law*, 10 INT'L J. CONST. L. 1050, 1052 (2012).

18. Benedict Kingsbury et al., *The Emergence of Global Administrative Law*, 68 LAW. & CONTEMP. PROBS. 15, 19-20 (2005).

19. Ming-Sung Kuo, *Law–Space Nexus, Global Governance, and Global Administrative Law, in* THE OXFORD HANDBOOK OF GLOBAL POLICY AND TRANSNATIONAL ADMINISTRATION 328, 331 (Diane Stone & Kim Moloney eds., 2019).

20. Krisch & Kingsbury, *supra* note 15, at 1.

21. Kuo, *supra* note 17, at 1052.

22. Benedict Kingsbury, *The Concept of 'Law' in Global Administrative Law*, 20 EUR. J. INT'L L. 23, 34-36 (2009).

23. Kuo, *supra* note 17, at 1061.

actors are expected to follow when performing administrative functions.[24]

This article uses automotive TNCs, such as BMW, Daimler, and Volkswagen, as a case study to explore the dynamic of their interactions with international organizations. The automotive industry has existed for over a century and has become one of the world's largest manufacturing sectors.[25] Their car production has profoundly influenced various aspects of society—from personal safety to environmental protection. Cars are dominant tools in worldwide transportation and their structures and designs directly impact life safety. The integration of automated driving technologies, which involves artificial intelligence (AI), data collection, and cybersecurity, raises concerns about personal privacy and digital security.

Furthermore, the design of AI systems is still a controversial issue, implicating safety, fairness, and ethics. These concerns become transnational when automotive TNCs produce and sell faulty design cars worldwide. From a societal perspective, car production has long been labeled as a leading contributor to carbon emissions and is required to reduce emission by design.[26] In addition, governance over automated driving systems—a relatively advanced AI application—may set precedents for governing other AI applications. Owing to their far-reaching influence on society and strong power over supply chains, the author believes that automotive TNCs serve as an appropriate representation of TNC power. They also provide abundant evidence for researching the interactive dynamics between TNCs and IOs. Given the extensive experience of automotive TNCs in participating in public standard-setting processes, their interactions specifically are examined with the World Forum for Harmonization of Vehicle Regulations (WP.29), a permanent regulatory forum under UNECE that is in charge of establishing technical frameworks for motor vehicles and their equipment.[27] As part of the UN system based on traditional international law, WP.29 serves as a valuable context for understanding how conventional international agents respond to the growing influence of private power.

Data used here have been sourced from "GlobalAutoRegs.com," a database that collects and classifies meeting documents launched by WP.29.[28] This research supposes that the volume of documents submitted by TNCs to WP.29 positively correlates with the closeness of their relationship. In addition to quantitative analysis, the author applied GAL legitimacy principles to evaluate

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24. Krisch & Kingsbury, *supra* note 15, at 4-5.

25. Jason F. Bell & Lorenza Monaco, *Power and Supply Chain Development in the South African and Thai Automotive Industries: What Lessons Can be Learnt?*, 33 J. INT'L DEVELOP. 457, 461 (2021).

26. Samuel Klebaner, *Isolated Car Manufacturers? The Political Positions of the Automotive Industry on the Real Driving Emissions Regulation*, 18 INT'L J. AUTO. TECH. & MGMT. 119, 120 (2018).

27. *WP.29 – Introduction,* U.N. ECON. COMM'N FOR EUR., https://unece.org/wp29-introduction [https://perma.cc/AWA4-CPZE] (last visited Aug. 6, 2024).

28. *About Us*, GLOBALAUTOREGS, https://globalautoregs.com/about [https://perma.cc/7ECR-JD8E] (last visited Aug. 6, 2024).

the quality of standard-setting procedures involving TNC participation. Finally, it offers suggestions for mitigating legitimate risks associated with TNC involvement.

II. How Transnational Corporations Steer International Standard-Setting

The rise in international trade has made it essential for countries to harmonize regulations, leading the international community to establish institutions to establish common standards.[29] Drawing on its expertise in coordinating different legal instruments in Europe, UNECE has taken this responsibility and the lead in circulating relevant regulatory activities at the international level.[30] It established the Inland Transport Committee to deal with the cross-border issues arising from transportation. WP.29, a global forum under the Committee, harmonizes standards and procedures associated with vehicle type approval among countries.[31] Establishing such standards and procedures requires understanding background knowledge of technology, thus creating room for TNCs to engage in this process.

i. Automotive TNCs in UN Global Technical Regulations

According to three UN agreements adopted in 1958, 1997, and 1998,[32] WP.29 is responsible for maintaining UN Regulations, UN Global Technical Regulations (UN GTRs), and UN Rules.[33] UN Regulations are under the 1958 agreements, focusing on vehicle safety and environmental issues.[34] The regulatory instruments built by the UN Regulations are: performance-oriented test requirements, type approval, the conformity of production, and the mutual recognition of the type approvals among Contracting Parties.[35] UN GTRs under

29. Joseph A. Clougherty & Michał Grajek, *International standards and international trade: Empirical evidence from ISO 9000 diffusion*, 36 INT'L J. INDUS. ORG 70, 70 (2014).

30. *Mission*, U.N. ECON. COMM'N FOR EUR., https://unece.org/mission [https://perma.cc/3DSF-V7EQ] (last visited Feb. 11, 2025); *United Nations Economic Commission For Europe (UNECE)*, U.N. INDUS. ORG., https://hub.unido.org/multilateral-agencies/unece [https://perma.cc/X5DD-GQTN] (last visited Feb. 11, 2025).

31. *WP.29 – Introduction, supra* note 27.

32. Agreement concerning the Adoption of Harmonized Technical UN Regulations for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these UN Regulations [hereinafter 1958 Agreement], Mar. 20, 1958, 335 U.N.T.S. 211; Agreement Concerning the Adoption of Uniform Conditions for Periodical Technical Inspections of Wheeled Vehicles and the Reciprocal Recognition of Such Inspections, Nov. 13, 1997; Agreement Concerning the Establishing of Global Technical Regulations for Wheeled Vehicles, Equipment and Parts which can be fitted and/or be used on Wheeled Vehicles, June 25, 1998, 2119 U.N.T.S. 129.

33. *WP.29 – Introduction*, *supra* note 27.

34. 1958 Agreement art. 1 ¶ 1, Mar. 20, 1958, 335 U.N.T.S. 211.

35. *WP.29 – Introduction*, *supra* note 27.

the 1998 Agreement, in contrast, provide a system with harmonized performance-related requirements as well as test procedures without type approvals and their mutual recognition process.[36]

The UN Rules establish standards for periodic technical vehicle inspections and create a certificate mechanism for contracting parties to recognize reciprocally.[37] These three regulatory instruments cover numerous technical topics. Therefore, WP.29 created six permanent Working Parties (GRs) to handle these issues: Noise and Tyres (GRBP), Lighting and Light-Signaling (GRE), Pollution and Energy (GRPE), Passive Safety (GRSP), General Safety Provisions (GRSG), and Automated and Connected Vehicles (GRVA).[38] These Working Parties assist WP.29 in preparing regulatory proposals and conducting research on their respective topics.[39] In addition to these permanent bodies, WP.29 can set up Informal Working Groups (IWGs) to tackle specific technical issues. Depending on the missions, these IWGs may belong to GRs or directly work with WP.29.[40]

WP.29 frequently needs to amend or develop regulations to maintain the three legal instruments. When such a need arises, GRs do primary research and provide progress reports to WP.29. Upon receiving these reports, WP.29 instructs the GR to conduct detailed research.[41] Once the GR completes tasks assigned by WP.29, it provides regulatory recommendations to WP.29.[42] In practice, initial regulatory proposals usually come from IWGs and are delivered to GRs as informal documents.[43] If the GR agrees to consider proposals, these documents are rewritten into a formal format.[44] After thorough review and deliberation by the GRs, the documents are submitted to WP.29 for discussion and approval.[45]

WP.29 sessions adopt a consensus approach to decision-making, except for immediate decisions which require a simple majority vote when consensus cannot be reached.[46] The GRs also adopt a consensus approach during the decision-making process.[47] If they cannot reach a consensus, they can consult

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36. *Id.*

37. *Id.*

38. *Id.*

39. *See Working Party on Noise and Tyres – Introduction*, U.N. ECON. COMM'N FOR EUR., https://unece.org/transportvehicle-regulations/working-party-noise-and-tyres-introduction [https://perma.cc/7TGP-5BX7] (last visited Aug. 6, 2024).

40. *WP.29 – Introduction*, *supra* note 27.

41. *WP.29 – Meetings,* U.N. ECON. COMM'N FOR EUR., https://unece.org/transport/vehicle-regulations/wp29-meetings#accordion_4_6 [https://perma.cc/35X2-6FDG] (last visited Aug. 6, 2024).

42. U.N. ECON. COMM'N FOR EUR., WORLD FORUM FOR HARMONIZATION OF VEHICLE REGULATIONS (WP.29): HOW IT WORKS - HOW TO JOIN IT, at 15, ECE/TRANS/289/Rev.1, U.N. Sales NO. E.22.II.E.8 (4th ed, 2022).

43. *WP.29 – Introduction*, *supra* note 27.

44. *Id.*

45. *Id.*

46. *Id.*

47. *WP.29 – Meetings*, *supra* note 41.

WP.29.[48] As for IWGs, WP.29 does not explicitly mention their decision-making approach.[49] However, later research noted that they also use a consensus approach according to their meeting records.[50]

As an organ of the UN, a state-based international organization, WP.29 only considers state members as official participants with the right to make decisions.[51] Non-state actors can only "participate in a consultative capacity" in WP.29.[52] Thus, they can express their opinions in forums but not participate in decision-making. Furthermore, WP.29 only allows those actors accredited by the Economic and Social Council of the United Nations (ECOSOC) to participate in forums.[53] In principle, only non-governmental organizations, non-profit organizations, or voluntary organizations are qualified to receive ECOSOC accreditation.[54] Additionally, these organizations must adopt a democratic constitution and have transparent decision-making to be assigned consultative status by ECOSOC.[55] Only a few accredited non-state actors (ranging from six to fifteen, depending on the issue) participate in WP.29 sessions, and even fewer are involved in its GRs and IWGs.[56] The International Organization for Standardization (ISO), the Society of Automotive Engineers (SAE), and the International Organization of Motor Vehicle Manufacturers (OICA), for example, often participate in WP.29.[57]

While TNCs are neither state representatives nor accredited actors, they can still find ways to participate in WP.29. Based on the *Terms of Reference and Rules of Procedure of the World Forum for Harmonization of Vehicle Regulations (WP.29)*, two approaches exist for actors without consultative status to engage.[58] One is through proactive engagement, where TNCs can apply directly to the WP.29 secretariat.[59] The other is through a reactive approach, where TNCs can participate if they receive an invitation from the chairperson of the meetings.[60]

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48. *WP.29 – Introduction*, *supra* note 27.

49. *See WP.29 – Meetings*, *supra* note 41.

50. *See* section II(ii) in this article.

51. U.N. ECON. COMM'N FOR EUR., WORLD FORUM FOR HARMONIZATION OF VEHICLE REGULATIONS (WP.29): TERMS OF REFERENCE AND RULES OF PROCEDURE 2, ECE/TRANS/WP.29/690/Rev.2, rule 1 (d) (e), at 3 (1999).

52. U.N. ECON. COMM'N FOR EUR., WORLD FORUM: HOW IT WORKS, *supra* note 42, at 1.

53. U.N. ECON. COMM'N FOR EUR., WORLD FORUM: TERMS OF REFERENCE, *supra* note 51, at 5.

54. *Introduction to ECOSOC Consultative Status*, U.N. ECO. & SOC. COUNCIL [ECOSOC], https://ecosoc.un.org/en/ngo/consultative-status [https://perma.cc/HBJ3-3Q7A] (last visited Aug. 6, 2024).

55. *Id*.

56. U.N. ECON. COMM'N FOR EUR., WORLD FORUM: HOW IT WORKS, *supra* note 42, at 1.

57. ECOSOC, List of Non-Governmental Organizations in Consultative Status with the Economic and Social Council as of 31 December 2022, E/2022/INF/5 (Apr. 4, 2023).

58. U.N. ECON. COMM'N FOR EUR., WORLD FORUM: TERMS OF REFERENCE, *supra* note 51, at 5.

59. *Id.*

60. *Id.*

WP.29 adheres to traditional international law, from organization construction to participatory mechanisms, emphasizing centralized, hierarchical, and state-based institutions. The philosophy behind such an institution is to ensure states with democratic foundations make final decisions and be held accountable.[61] The decision made by democratic representatives is believed to contribute to the legitimacy of IOs. In this model, WP.29 offers non-state actors' roles in providing technical references and opinions but excludes them from decision-making. Moreover, ECOSOC accreditation ensures that non-state actors in forums represent the public interest rather than their personal agendas.[62]

However, the practical operations of IOs have evolved beyond these state-based institutions. Their administrative structures have expanded and intertwined with different global actors, challenging the democratic delegation theories to fully explain the legitimacy of IOs and their outputs.[63] While WP.29 restricts TNCs from participating in WP.29 sessions and GRs, they can be activated in IWGs, where initial regulatory proposals hatch.[64] Evidence presented in the following section demonstrates that TNCs not only participate in WP.29, but also have the potential to influence regulatory proposals within the organization.

ii. An Empirical Assessment on Automotive TNCs in WP.29

This section discusses the actual interaction between TNCs and WP.29 during the standard-setting process by examining the situation of their participation rather than through OICA, an international industry association. While OICA is generally viewed as representing the industry's voice, the meaning of its participation differs from that of TNCs.[65] Therefore, such situations are excluded from the discussion.

A. Historical Trajectories of the TNCs' Participation

The article analyzes the materials submitted by TNCs to WP.29 and found

61. Grace Skogstad, *Global Public Policy and the Constitution of Political Authority in* OXFORD HANDBOOK OF GLOBAL POLICY AND TRANSNATIONAL ADMINISTRATION 23, 26-28 (Diane Stone & Kim Moloney eds., 2019).

62. *See* Economic and Social Council Res 1996/31, Consultative relationship between the United Nations and non-governmental organizations, ¶ 8 (Jul. 25, 1996).

63. Möllers, *supra* note 16, at 107.

64. *See* Section II(ii)(B) in this article.

65. In fact, OICA is required to follow certain prerequisite set by the UN to achieve ECOSOC accreditation, such as the alignment of institutional goal with the UN and establishing democratic constitution and transparent decision-making process in the institution. These requirements transform the nature of OICA from representing only private interest and thus differ from the participation of TNCs.

the following facts (*see* Figure 1).[66] The TNCs submitted the first document in 2007, which was written by BMW to IWG (Informal Working Group on Tyre Pressure Monitoring, hereinafter TPM).[67] A slight increase in submissions occurred in 2011 because BMW, Daimler, GM, and Volvo all submitted documents.[68] A spike occurred in 2015, followed by a steep decline in 2016.[69] In 2015, BMW was a significant contributor, submitting half of the materials to WP.29, followed by Volkswagen, who submitted almost a quarter of the

66. This research focuses on automotive TNCs listed below: BMW, Daimler, GM, Ford, Volkswagen, Volvo, Honda, Hyundai, Mercedes-Benz, Toyota. These TNCs not only cover nearly all submission in WP.29 but also possess significant market share dominance in the automotive industry.

67. BMW, *TBW, a TPMS Alternative, CO2 Reduction by Correct and Constant Tyre Pressure as a First Step, Proposal for Justification*, 1st Informal Working Grp. on Tyre Pressure Monitoring [TPM] session, TPM-01-03 (Dec. 3, 2007).

68. *e.g.*, BMW, *Hydrogen Storage System Qualification Requirements and Testing*, 11th Informal Working Grp. of Hydrogen and Fuel Cell Vehicle Safety [SGS] session, SGS-11-05 (Feb. 11, 2011); DAIMLER, *Proposal for Structuring the RESS Safety Requirements: Revision 2*, 2nd Informal Working Grp. of Rechargeable Energy Storage Sys. [REESS] session, REESS-02-02/Rev.2 (Jan. 7, 2011); VOLVO GROUP et al., *Swedish stakeholders' Concerns with RESS Safety Requirements Proposal*, 4th Informal Working Grp. of Rechargeable Energy Storage Sys. [REESS] session, REESS-04-13 (Jun. 23, 2011).

69. The statistic was based on the documents listed in: *Submissions–BMW Group*, GLOBAL AUTO REGS, https://globalautoregs.com/participants/278-bmw?show=latest_documents [https://perma.cc/BGQ7-29T2] (last visited Aug. 6, 2024); *Submissions–BMW Research & Innovation Center*, GLOBAL AUTO REGS, https://globalautoregs.com/participants/132-bmw-fiz?show=latest_documents [https://perma.cc/HN2L-DLEE] (last visited Aug. 6, 2024); *Submissions–Daimler AG*, GLOBAL AUTO REGS, https://globalautoregs.com/participants/100-daimler?show=latest_documents [https://perma.cc/RM3C-DFT9] (last visited Aug. 6, 2024); *Submissions–General Motors Corporation*, GLOBAL AUTO REGS, https://globalautoregs.com/participants/84-gm?show=latest_documents [https://perma.cc/C723-7ZG] (last visited Aug. 6, 2024); *Submissions–Ford Motor Company*, GLOBAL AUTO REGS, https://globalautoregs.com/participants/233-ford?show=latest_documents [https://perma.cc/A4HL-9YYM] (last visited Aug. 6, 2024); *Submissions–Volkswagen AG*, GLOBAL AUTO REGS, https://globalautoregs.com/participants/234-vw?show=latest_documents [https://perma.cc/SE89-428Y] (last visited Aug. 6, 2024); *Submissions–Volvo Cars*, GLOBAL AUTO REGS, https://globalautoregs.com/participants/437-volvo-cars?show=latest_documents [https://perma.cc/CGU9-KVXR] (last visited Aug. 6, 2024); *Submissions–Volvo Group*, GLOBAL AUTO REGS, https://globalautoregs.com/participants/188-volvo-group?show=latest_documents [https://perma.cc/2LRW-P48] (last visited Aug. 6, 2024); *Submissions–Honda Motor Co., Ltd.*, GLOBAL AUTO REGS, https://globalautoregs.com/participants/256-honda?show=latest_documents [https://perma.cc/V9BR-W3EX] (last visited Aug. 6, 2024); *Submissions–Hyundai Motor Company*, GLOBAL AUTO REGS, https://globalautoregs.com/participants/276-hyundai?show=latest_documents [https://perma.cc/CTG5-BH5U] (last visited Aug. 6, 2024); *Submissions–Mercedes-Benz*, GLOBAL AUTO REGS, https://globalautoregs.com/participants/290-mercedes-benz?show=latest_documents [https://perma.cc/9U42-CWHF] (last visited Aug. 6, 2024); *Submissions–Toyota Motor Corporation*, GLOBAL AUTO REGS, https://globalautoregs.com/participants/388-toyota?show=latest_documents [https://perma.cc/Q4L8-STHU] (last visited Aug. 6, 2024). The total number of documents in 2015 was 41, but it declined to 9 in 2016.

documents.[70] After 2016, submissions steadily increased, reaching a peak in 2018 and 2019 before slightly declining in 2020.[71] During this period, BMW and Ford submitted the most documents in 2018, though their submission volume was only marginally higher than those of other corporations.[72] In 2019, GM was the leading corporation to submit documents to WP.29, but these contributions accounted for less than one-third of the total submissions.[73]

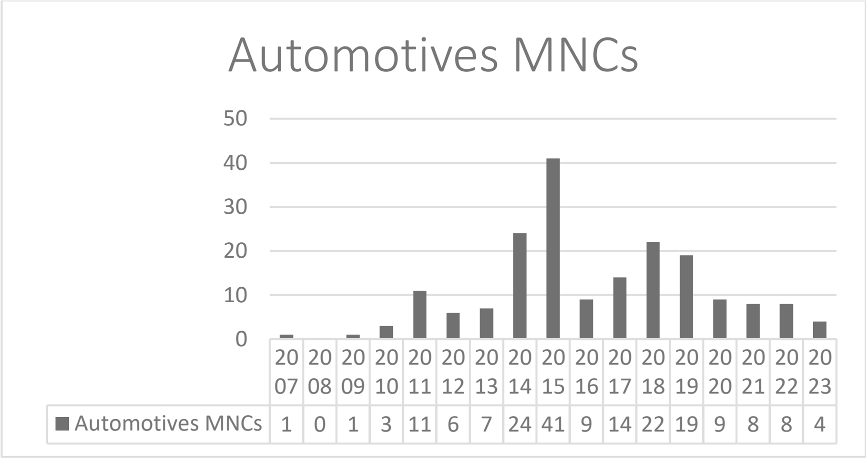

Figure 1: The number of documents submitted by TNCs.

B. Forms and Natures of Interaction Between TNCs and WP.29

The trend of TNC participation demonstrated that TNCs successfully penetrated state-based IOs. Additionally, certain corporations, such as BMW, Daimler, and Volvo were invited to WP.29 almost annually, demonstrating an intensive interaction between TNCs and WP.29.[74] A closer examination of these documents uncovered the unique features of their interactions, which contributed to realizing the roles and powers of TNCs in WP.29.[75]

70. Based on the calculation described in footnote 69. In 2015, BMW (including the BMW Research & Innovation Center) submitted 20 documents, while Volkswagen submitted 10 documents.

71. Based on the calculation described in footnote 69. The total number of documents in 2018 was 22 and 19 in 2019, but it declined to 9 in 2020.61

72. Based on the calculation described in footnote 69. BMW (including the BMW Research & Innovation Center) and Ford both submitted 6 documents in 2018.

73. Based on the calculation described in footnote 69. GM submitted 6 documents in 2019.

74. *See supra* note 69 (listing documents by GLOBAL AUTO REGS).

75. *See* the analysis in the Section II(iii) in this article.

1. TNCs Participated in Diverse Controversy Topics but Remained in Informal Meetings

When examining the documents submitted during peak periods, distinct topics emerge, generating abundant discussion. For example, Daimler and Volvo separately submitted proposals to the IWG for Rechargeable Energy Storage Systems, proposing safe methods to utilize electric energy in 2011.[76] Concurrently, BMW participated in the IWG of Hydrogen and Fuel Cell Vehicle Safety to provide testing methods on hydrogen storage systems.[77] These IWGs handled the technical issues around reducing CO2 emissions, viewed as a "prior mission by the global automotive industry."[78] OICA made such a claim to respond to the pressure from worldwide governments, though it also asserted that regulating the automotive industry was not adequate to achieve the goal.[79]

The second peak occurred from 2014 to 2015, during which WLTP addressed vehicle emissions. This period saw significant interaction among TNCs, likely due to the controversy between TNCs and state governments over emissions reduction policies. In 2014, the EU constructed a framework on climate and energy, stating that greenhouse gas emissions should be reduced by at least 40% by 2030.[80] Similarly, the UN adopted Sustainable Development Goals (SDGs) to urge worldwide governments to protect the environment.[81] The comment from BMW to the EU, arguing that the EU policy was merely a political statement without scientific support, accentuated the ongoing disagreement between TNCs and state governments.[82]

From 2017 to 2019, the final peak saw TNCs engaging in IWGs focused on vehicle emissions and software updates. According to the OICA 2018 Statement, many countries have adopted environmental policies.[83] These put pressure on the automobile industry, but such pressure became an extreme

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76. *See* BMW, *Hydrogen Storage System*, *supra* note 68.

77. *Id.*

78. Press Release, Int'l Org. of Motor Vehicle Manufacturers [OICA], Patrick Blain Elected President Of The International Organization Of Motor Vehicle Manufacturers (OICA), at 1 (Feb 23, 2011), https://oica.net/wp-content/uploads/pb-press-release.pdf [https://perma.cc/C7K2-KM9Z].

79. *Id.*

80. *EU Leaders Agree 2030 Climate and Energy Goals*, EUR. COMM'N (Oct. 24, 2014), https://climate.ec.europa.eu/news-your-voice/news/eu-leaders-agree-2030-climate-and-energy-goals-2014-10-24_en [https://perma.cc/7G6N-K6AV].

81. *What are the Sustainable Development Goals?*, U.N. DEV. PROGRAMME, https://www.undp.org/european-union/sustainable-development-goals [https://perma.cc/GY3R-5XZM] (last visited Aug. 6, 2024).

82. BMW, *WLTP: BMW Comment on Drive Trace Correction*, 8th WLTP session, WLTP-08-46 (Dec. 9, 2014).

83. OICA, Statement Delivered by OICA President Matthias Wissmann at the OICA Press Conference in Geneva on March 7, 2018, at 1-2 (Mar. 7, 2018), https://www.oica.net/wp-content/uploads/Press-Release-OICA-Conference-Geneva-March-2018.pdf [https://perma.cc/QX58-R6XG].

challenge to the industry when developing the technology.[84] Therefore, the automobile industry appealed to governments for a balancing policy on environmental protection and economic development.[85] A statement in 2019 further mentioned that the automobile industry was facing challenges regarding data privacy, cybersecurity, and new mobility technologies.[86] These comments reflected the industry's perspective on government policies and its responses to them. From those cases, we infer that TNCs become more actively engaged in IOs when a controversy arises between the industry and governments.

An analysis of individual company participation shows that companies were invited to different IWGs and were responsible for distinct tasks within those groups. For instance, BMW participated in the IWG of Worldwide Harmonized Light Vehicles Emissions Test Procedure (hereinafter WLTP) from 2014 to 2018, producing forty documents to assist with the standard-setting process.[87] In addition, during 2014 and 2015, nearly all of BMW's submissions were related to WLTP.[88] After 2018, BMW shifted its focus to the IWG of the Particle Measurement Programme (PMP).[89] Likewise, Volkswagen was involved in WLTP from 2014 to 2018 and began engaging in PMP as early as 2015, but its document amounts were lower than BMW's.[90] Ford also participated in WLTP but diversified its efforts into PMP, the Informal Working Group on Vehicle Interior Air Quality (VIAQ), and the Informal Working Group on Automated Vehicle Signaling Requirements (AVSR) after 2018.[91]

In contrast, GM contributed to the IWG of Software Update Processes and Management Systems (hereinafter TFCS) and became the main participant in

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84. *Id.*

85. *Id.* at 4.

86. OICA, *Mr FU Bingfeng Elected President of the "World Organization for the Automotive Industry" OICA* (Nov. 28, 2019), https://www.oica.net/wp-content/uploads/OICA-press-release-GA-November-2019.pdf [https://perma.cc/6CZQ-GZNX].

87. *WP.29 – Contracting Parties and Contributors*, GLOBAL AUTO REGS, https:///participants/278-bmw [https://perma.cc/QKJ6-JAFS] (last visited Aug. 6, 2024).

88. BMW GROUP, *Submissions2014*, GLOBALAUTOREGS, https://globalautoregs.com/participants/278-bmw?show=documents&year=2014 [https://perma.cc/VF4T-XSYQ] (last visited Aug. 6, 2024); BMW GROUP, *Submissions2015*, GLOBALAUTOREGS, https://globalautoregs.com/participants/278-bmw?show=documents&year=2015 [https://perma.cc/HRR5-XPU4] (last visited Aug. 6, 2024).

89. *Id.*

90. *About VW*, GLOBALAUTOREGS, https://globalautoregs.com/participants/234-vw [https://perma.cc/NY4N-FTTQ] (last visited Aug. 6, 2024).

91. *Submissions–Ford Motor Company–2018*, GLOBALAUTOREGS, https://globalautoregs.com/participants/233-ford?show=documents&year=2018 [https://perma.cc/8385-PTL9] (last visited Aug. 6, 2024); *Submissions–Ford Motor Company–2019*, GLOBALAUTOREGS, https://globalautoregs.com/participants/233-ford?show=documents&year=2019 [https://perma.cc/4C9N-EYW9] (last visited Aug. 6, 2024); *Submissions–Ford Motor Company–2021*, GLOBALAUTOREGS, https://globalautoregs.com/participants/233-ford?show=documents&year=2021 [https://perma.cc/V8SB-2DQE] (last visited Aug. 6, 2024).

WLTP in 2019.[92] Other corporations, such as Daimler, Hyundai, and Toyota, played roles in other IWGs.[93] Meeting documents demonstrated that TNCs rarely joined the same IWGs, instead contributing to different technical aspects and standard-setting processes..[94] Additionally, TNCs were allowed to present ideas, make statements, and comment on proposals in these groups.[95]

Despite their deep involvement in multiple IWGs, TNCs rarely participated directly in formal meetings, such as the GRs and WP.29 sessions.[96] In exceptional cases, documents prepared by TNCs were submitted to the GR, but TNCs were still not invited to these formal meetings.[97] BMW is one of the few companies with such an experience. In 2014, BMW collaborated with ISO to prepare slides recommending ISO testing standards to the GRBP.[98] According to the meeting record of the GRBP session, BMW was not on the participant

92. WLTP had four meetings in 2019. According to the meeting documents listed in: *Meeting Documents – Worldwide Harmonized Light Vehicles Emissions Test Procedure | Session 25 | 7 Jan 2019*, GLOBALAUTOREGS, https://globalautoregs.com/meetings/1243?show=documents [https://perma.cc/5PC9-9HB7] (last visited Aug. 6, 2024); *Worldwide Harmonized Light Vehicles Emissions Test Procedure | Session 26 | 15-18 Apr 2019*, GLOBALAUTOREGS, https://globalautoregs.com/meetings/1299?show=documents [https://perma.cc/DA6K-T55Y] (last visited Aug. 6, 2024); *Worldwide Harmonized Light Vehicles Emissions Test Procedure | Session 27 | 20-21 May 2019*, GLOBALAUTOREGS, https://globalautoregs.com/meetings/1359?show=documents [https://perma.cc/5STJ-F8GA] (last visited Aug. 6, 2024); *Worldwide Harmonized Light Vehicles Emissions Test Procedure | Session 28 | 23-27 Sep 2019*, GLOBALAUTOREGS, https://globalautoregs.com/meetings/1373?show=documents [https://perma.cc/GS8R-6GF3] (last visited Aug. 6, 2024).

93. *Submissions–Toyota Motor Corporation*, GLOBALAUTOREGS, https://globalautoregs.com/participants/388-toyota?show=latest_documents [https://perma.cc/AX8T-35YY] (last visited Aug. 6, 2024); *Submissions–Hyundai Motor Company*, GLOBALAUTOREGS, https://globalautoregs.com/participants/276-hyundai?show=latest_documents [https://perma.cc/458R-PTRM] (last visited Aug. 6, 2024); *Submission–Daimler AG*, GLOBALAUTOREGS.COM, https://globalautoregs.com/participants/100-daimler?show=latest_documents [https://perma.cc/3QA2-4YKV] (last visited Aug. 6, 2024)

94. *e.g.,* In the meeting of Informal Group on Rechargeable Energy Storage Systems, you could find Daimler's proposal but no other companies. *Meeting Documents–Informal Group on Rechargeable Energy Storage Systems | Session 6 | 10-12 Jan 2012*, GLOBALAUTOREGS, https://globalautoregs.com/meetings/273?show=documents [https://perma.cc/N9WE-2QHZ] (last visited Aug. 6, 2024). In the Global Technical Regulation for Quiet Road Transport Vehicles Informal Group, you could find only Ford, Daimler, and Mercedes-Benz. *Meeting Documents–Global Technical Regulation for Quiet Road Transport Vehicles Informal Group | Session 3 | 16-18 Apr 2013*, GLOBALAUTOREGS, https://globalautoregs.com/meetings/429?show=documents [https://perma.cc/K8AR-WQ6S] (last visited Aug. 6, 2024).

95. *e.g.,* Toyota, Presentation: Electric Vehicles: Heavy Duty Vehicle Requirements for HFCV Discussion, 2nd GTR13 session, Doc. GTR13-02-12 (Feb. 05, 2018); Daimler, Proposal: Daimler Proposal for RESS Vibration Test, 4th REESS session, Doc. REESS-04-04 (June 30, 2011).

96. According to the document lists for each company *supra* note 69, BMW submitted documents to GRs. *See* International Organization for Standardization, ISO 362-3: Indoor-testing of pass-by noise, 60th GRB session, Doc. GRB-60-09 (Aug. 29, 2014).

97. *Id.*

98. *Id.*

list, and ISO presented the slides.[99]

2. The Function of TNCs in WP.29: Initiate the Regulatory-developing process and Set the Tone

TNCs prepare three types of documents for WP.29: technical presentations, regulatory proposals, and proposal comments.[100] The majority were technical presentations containing experiment reports, testing methods elaborations, and technological investigations.[101] Volkswagen's validation report on the testing method for WLTP fell into this group.[102] The second-largest group was regulatory proposals, which aimed to integrate new techniques or testing approaches into existing regulations.[103] Consequently, the scope of amendments tended to be small and specific. These regulatory proposals frequently targeted GTR. For example, in 2014, BMW proposed a draft GTR provision for WLTP to add a new road-load testing method.[104] Building on the technique proposed by BMW in 2017, Ford issued new proposals to WLTP to revise the requirements based on its experimental data.[105] In cases where the proposal addressed issues partially outside the scope of existing regulations, it may cover a broader range of modifications. For example, GM and Tesla jointly submitted

99. U.N. Econ. Comm'n for Eur., Report of the Working Party on Noise, U.N. Doc. ECE/TRANS/WP.29/GRB/58 (Feb. 14, 2014).

100. *e.g.*, technical presentation: Volkswagen, WLTP Electric Vehicles: Calculation of All-Electric Range City Mode (AERcity)-UBE determination, 10th WLTP-SG-EV session, Doc. WLTP-SG-EV-10-06 (Sept. 25, 2015); Volkswagen, Proposal: WLTP Electric Vehicles: Combined Approach Interpolation Family Criteria, WLTP-SG-EV Session 8, Doc. WLTP-SG-EV-08-04 (Apr. 13, 2015); Volkswagen, Comment: UN R10: Comments on eCall (AECS) Draft Provisions, 40th Electromagnetic Compatibility [EMC] session, Doc. EMC-40-04/Rev.1 (Oct. 13, 2023).

101. *e.g.*, Volvo Group et al., Experiment Reports: Report on the Heavy-Duty Hybrid Validation Test Program 2, 14th Informal Group on Heavy-Duty Hybrids [HDH] session, Doc. HDH-14-04 (May 31, 2013); Honda, Testing Methods Elaborations: Validation of Pedestrian Lower Limb Injury Assessment Using Subsystem Impactors, 4th Informal Group on GTR 9-Phase 2 [GTR9] session, Doc. GTR9-04-20 (Sept. 12, 2012); Volvo Group, Technological Investigations: Presentation on the European Modular System for Improving Transport Logistics and the DUO2 Research Project for Duo2 for Long (32 m) and Heavy (up to 80 tons) Truck Combinations, 1st Modular Vehicle Combinations [MVC] session, Doc. MVC-01-05 (Jul. 2, 2014).

102. Volkswagen & UTAC, Progress Report on the Validation Program for the WLTP Wind Tunnel Method, 10th Informal Working Group of Particle Measurement Programme [WLTP] session, Doc. WLTP-10-15e (Apr. 7, 2015).

103. *e.g.*, BMW, Improvement of Family Definitions: WLTP New Issues Task Force, 20th WLTP session, Doc. WLTP-20-15/App.4/Rev.1 (Sept. 20, 2017).

104. BMW, WLTP Wind Tunnel Method: Draft GTR Provisions, 8th WLTP session, Doc. WLTP-08-25e (Nov. 12, 2014).

105. Ford Motor Co., Proposed Coastdown Wind Speed Requirement Updates for WLTP, 20th WLTP session, Doc. WLTP-20-15e/App.10 (Oct. 2, 2017), https://wiki.unece.org/pages/worddav/preview.action?fileName=WLTP-20-15e_appendix-10_Windspeed+Updates.pdf&pageId=51972941 [https://perma.cc/23PW-LX8N].

to TFCS, suggesting new rules on software updates, with amendments ranging from changes in definitions to evaluation methods.[106] The least common type is comment on proposals, where TNCs provide opinions on proposals prepared by other participants. TNCs provided suggestions on technological problems with their subjective views in such documents.[107] For instance, BMW was asked to comment on an EU proposal related to harmonizing specific rules between the EU and GTR.[108] BMW responded that the proposal had not been extensively discussed technically and was not yet mature.[109]

Proposals prepared by the TNCs generally have been adopted by IWGs and have been the foundation for developing regulations. Although the proposals may be questioned, they can still be adopted in subsequent meetings once TNCs address the concerns. For instance, BMW proposed a draft for WLTP to add a new road-load testing method in 2014,[110] but Japan's representative challenged this draft during the meeting.[111] Therefore, BMW revised the proposal, and WLTP adopted the change in 2015.[112] Ford's 2017 proposal (mentioned previously) became an agenda for WLTP to plan future works on regulatory development.[113] The proposal from GM and Tesla, on the other hand, became a foundation to address the issue, leading multiple actors, like state representatives and OICA, to take further action to expand the draft.[114]

Based on the materials submitted by TNCs, it is evident that they were usually required to review regulations and provide amendments to IWGs. These regulatory recommendations often prompted IWGs to begin the regulatory-developing process. For example, the draft for the software update proposed by GM served as a primary resource for TFCS, enabling the construction of a discussion framework and assigning tasks to different participants to proceed with the regulatory development process.[115] Moreover, certain TNCs voluntarily assessed and reported on regulations that needed to be revised to ensure alignment with technology development.[116] For instance, Ford reported to WLTP that some amendments they had submitted two years earlier needed revision because the old version was ambiguous and could result in unnecessary

106. Gen. Motors Corp. [GM] et al., Software Updates: Proposal to Amend the Draft Regulation, 16th Informal Working Group of Software Update Processes and Management Systems [TFCS] session, Doc. TFCS-16-05 (Sept. 18, 2019).

107. *See* BMW, *WLTP: BMW Comment, supra* note 82.

108. *Id.*

109. *Id.*

110. BMW, Road load family validation program and proposal (Open issue item 1b-2), Doc. WLTP-08-19 (Nov. 14, 2014).

111. WLTP, Minutes of the 10th WLTP IWG Meeting, 10th WLTP session, Doc. WLTP-10-42e, at 3 (Mar. 17, 2015).

112. WLTP, Wind Tunnel Method – Validation Test Program, Progress Report, 12th WLTP session, Doc. WLTP-10-15e (Mar. 17, 2015).

113. Ford Motor Co., WLTP-20-15e/App.10, *supra* note 105, at 5.

114. GM et al., *supra* note 106, at 4.

115. *Id.*

116. *See* Ford Motor Co., WLTP-20-15e/App.10, *supra* note 105.

test for the companies.[117] This report caused WLTP to initiate a new process for modifying regulations.[118] It seems that TNCs do not merely act as consultants, waiting to answer IWGs' questions; they actively influence regulatory-developing processes in IWGs by reporting questions and submitting proposals to initiate proceedings.

3. BMW Dominates the Interaction Between TNCs and WP.29

Although BMW was not the first corporation to submit documents to WP.29, it played a significant role in WP.29 by contributing a significant amount of the total documents submitted. In particular, the peaks observed in 2015 and 2018 were primarily a result of BMW's involvement. Beyond quantity differences, the evolution of its document content also sets BMW apart from other TNCs. Notably, BMW submitted the highest number of regulatory proposals to WP.29.[119] Initially, BMW submitted various documents to the IWGs; however, it later prioritized proposal development, playing a crucial role in facilitating regulatory amendments.[120] This shift resulted in BMW having a unique position in WP.29. Additionally, BMW was among the few corporations that engaged directly with a formal group within WP.29, namely GRBP.[121]

It can be inferred that BMW's interaction with GRBP was related to two factors: (1) the president of BMW concurrently serving as the chair of OICA; and (2) BMW's collaboration with ISO to recommend ISO testing standards to GRBP. Moreover, BMW led the testing project, which contributed to this standard proposal to GRBP.[122] This case illustrates that TNCs' increased activities within the global network enabled them to gain more opportunities to influence international standard-setting.

4. The Emerging Role of Non-traditional TNCs in WP.29

The evidence shows that WP.29 invited the automotive industry to address technical issues and allowed emerging technology players to enter the regulatory development process. For instance, from 2014 to 2016, Qualcomm

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117. *Id.*

118. UNECE WLTP Int'l Working Grp., 20th WLTP IWG Meeting Minutes, Doc.WLTP-20-27/Rev. 1, at 4 (Oct. 10, 2017), https://wiki.unece.org/download/attachments/51972941/WLTP-20-27e_rev1_Minutes.pdf?api=v2 [https://perma.cc/NM4L-9LYV].

119. During 2017-2018, most of the documents submitted by BMW contained proposals for revised provisions. *Submissions–BMW Group–2017*, GLOBALAUTOREGS, https://globalautoregs.com/participants/278-bmw?show=documents&year=2017 [https://perma.cc/7LS7-5XGX] (last visited Aug. 6, 2024); *Submissions–BMW Group–2018*, GLOBALAUTOREGS, https://globalautoregs.com/participants/278-bmw?show=documents&year=2018 [https://perma.cc/95QY-6C62] (last visited Aug. 6, 2024)

120. *Id.*

121. *See* ISO & BMW, GRB-60-09, *supra* note 96.

122. *Id.*

submitted eleven documents on communication and positioning systems.[123] Between 2018 and 2019, Tesla submitted fourteen documents, including comments on Electric Vehicle (EV) and draft regulations for software updates and cybersecurity.[124] Intel also submitted two documents related to Automated Vehicle (AV) safety in 2019 and 2020.[125]

Moreover, the roles of these non-traditional TNCs are evolving, with some reaching a level of involvement comparable to that of established automotive TNCs within IWGs. In 2015, Qualcomm contributed technical expertise and regulatory guidance to AECS, though it was not requested to submit proposals at the time.[126] This situation changed with Tesla's involvement. In 2018, the IWG of the Electric Vehicle Safety Group (hereinafter EVS) invited Tesla to comment on testing methods relevant to EVs. These testing methods were proposed by formal participants in WP.29, including the testing proposals from Japan, [127] Korea,[128] OICA,[129] and China.[130] Initially, Tesla's role was similar to that of Qualcomm, acting as a consultant to assist IWGs in realizing new technology and identifying problems with regulations.

However, Tesla's role evolved significantly the following year. The company provided detailed feedback on cybersecurity regulations and suggested amendments to TFCS,[131] impacting the discussion within the meeting.[132] In addition, Tesla cooperated with GM to propose a draft regulation

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123. *Qualcomm Inc.*, GLOBALAUTOREGS, https://globalautoregs.com/participants/347-qualcomm [https://perma.cc/2VYJ-NGQ4] (last visited Jun. 13, 2022).

124. *Tesla Inc.*, GLOBALAUTOREGS, https://globalautoregs.com/participants/409-tesla [https://perma.cc/G43Z-Y5LK] (last visited Jun. 13, 2022).

125. *Intel Corporation*, GLOBALAUTOREGS, https://globalautoregs.com/participants/507-intel [https://perma.cc/D23J-ZZKS] (last visited Jun. 13, 2022).

126. Ian Blair, UNECE Informal Working Grp. on Accident Emergency Call Systems [AECS], GNSS Requirement Aspects for the Draft AECS Regulation, Doc. AECS-10-06 (Sept. 23, 2015), https://wiki.unece.org/download/attachments/27459667/AECS-10-06%20%28Qualcomm%29%20GNSS%20Comments.pdf?api=v2 [https://perma.cc/BGM5-25ZV].

127. UNECE 15th Informal Working Grp. of Electric Vehicle Safety [EVS] Session, EVS: Tesla Comments on Japan Research into Thermal Propagation Testing (EVS-15-32/611), Doc. EVS-15-68/611-4 (Mar. 20, 2018), https://wiki.unece.org/download/attachments/54428762/EVS1568-611-4%20%5BTesla%5D%20Tesla%20comments%20on%20EVS-1532-611.pptx?api=v2 [https://perma.cc/G9GY-BED5].

128. Tesla, Tesla Comments on the Korea Statistical Analysis of Water Immersion Tests, 15th EVS session, Doc. EVS-15-69/101-2 (Mar. 20, 2018).

129. Tesla, Tesla Comments on the OICA Thermal Propagation Topics, 15th EVS session, Doc. EVS-15-72/613-3 (Mar. 20, 2018).

130. Tesla, Tesla Comments on the China thermal propagation research update, 15th EVS session, Doc. EVS-15-73/616-3 (Mar. 20, 2018).

131. UNECE 15th TFCS Session, Recommendations for the Cybersecurity Regulation Interpretation Document, Doc. TFCS-15-08 (Jul. 29, 2019), https://wiki.unece.org/download/attachments/81888976/TFCS-15-08%20%28Tesla%29%20Interpretation%20document%20for%20Regulation%20on%20Cyber%20Security.docx?api=v2 [https://perma.cc/SYU9-JGXC].

132. UNECE Task Force on Cyber Security 15th TFCS Session, Minutes of the Test of the Test Phase Coordination Meeting 2 of the UN Task Force on Cyber Security and OTA Issues,

on software updates, initiating the regulatory-development process within TFCS.[133] Tesla also prepared a technical report on automated vehicles, which was presented at GRVA with the European Association for Electromobility.[134] While Tesla did not participate in the meeting, its technical report showcasing its expertise in automated driving systems, successfully persuaded GRVA to revise regulations in accordance with technological development.[135]

iii. The Growing Power of TNCs in WP.29: Rationales and Risks

According to the *Terms of Reference and Rules of Procedure of the World Forum for Harmonization of Vehicle Regulations (WP.29)*, the participation of TNCs is considered an "exceptional" condition, indicating that TNCs are not considered regular participants in WP.29.[136] However, empirical evidence demonstrates that TNCs not only continuously engage in IWGs but also make substantial contributions to the regulatory development processes.[137] The role of TNCs in WP.29 has shifted from one of knowledge providers to one with multifunctional actors capable of initiating regulatory development processes and shaping the content of regulations. Despite a seemingly cautious approach toward TNCs' participation, the increasing influence of TNCs within WP.29 suggests a growing acceptance and reliance on their contributions, particularly regarding technical regulations.[138]

A. Rationales

WP.29 emphasizes the technical standards under UN Regulations, UN GTRs, and UN Rules are "optional, and do not carry any legal implication" until member states encode them into state law.[139] As such, WP.29 distinguishes these technical standards from formal laws and emphasizes their "soft" laws nature.[140]

Doc. TFCS-15-02/Rev.1, at 7 (Aug. 16, 2019), https://wiki.unece.org/download/attachments/81888976/TFCS-15-02%20%28Chair%29%20Minutes%20of%20the%20second%20coordination%20meeting%20rev1.docx?api=v2 [https://perma.cc/D9UR-HA4F].

133. GM et al, *supra* note 106.

134. Tesla & Eur. Ass'n for Electromobility, UN R79 requirements and real-world driving behavior, 4th Automated and Connected Vehicles [GRVA] session, Doc. GRVA-04-53 (Sept. 26, 2019).

135. UNECE, Rep. of the Working Party on Automated/Autonomous and Connected Vehicles on Its Fourth Session, Doc. ECE/TRANS/WP.29/GRVA/4, at 7 (Nov. 14, 2019), https://unece.org/DAM/trans/doc/2019/wp29grva/ECE-TRANS-WP29-GRVA-04e.docx [https://perma.cc/M56C-GVLT].

136. *See* U.N. ECON. COMM'N FOR EUR., WORLD FORUM: TERMS OF REFERENCE, *supra* note 51, at 5.

137. *See* the analysis in the section II(ii) in this article.

138. *See* U.N. ECON. COMM'N FOR EUR., WORLD FORUM: TERMS OF REFERENCE, *supra* note 51, at 5. A detailed explanation about the cautious approach WP.29 adopted to treat TNCs could be seen in the section II(i) of this article.

139. U.N. ECON. COMM'N FOR EUR., WORLD FORUM: HOW IT WORKS, *supra* note 42, at 14.

140. *See id.*

In this context, it could inferred that the development of technical standards within WP.29 may not always adopt rigorous procedures.[141] This flexibility allows WP.29 to use TNCs' drafts as a basis for open discussion despite the risk that TNCs may blend their self-interest into the texts.[142]

Another reason WP.29 accepts TNCs' drafts is that these standards meet the requirements of the content framework. The framework lists five "must-consider" factors while formulating standards, which are objectives of the process, including: the best available technology; potential benefits caused by technology and regulations; monetary and social costs arising from rules; and interaction with other regulations administered by WP.29.[143] Achieving these factors necessitates extensive technological knowledge and industry experience, which state governments struggle to grasp and implement without TNCs' assistance.[144]

TNCs are at the forefront of technology, providing the most up-to-date information on the best available technology.[145] Moreover, TNCs excel in cost-benefit analysis at the global level, dealing with cross-border governance as part of their daily operations, which involves resource allocation, cost calculations, and risk assessments along their supply chains.[146] The expertise on technological knowledge and supply chain governance enables TNCs to produce convincing recommendations for public actors, effectively helping WP.29 develop standards aligned with the "must-consider" factors.[147] On the other hand, the participation of TNCs can enhance the legitimacy of the standards-setting process by involving the most affected stakeholders. From providing technical knowledge to enhancing legitimacy, it is conceivable that TNCs will be invited into WP.29. However, the expansion of their influence within WP.29 can pose risks to international standard-setting processes.

B. Risks

It could be seen that TNCs' regulatory proposals often form the foundation

141. *See* Gary E. Marchant & Braden Allenby, *New Tools for Governing Emerging Technologies*, 73 BULL. OF THE ATOMIC SCIENTISTS 108, 112 (2017).

142. *See* WLTP, Minutes of the 22nd WLTP Session, 22nd WLTP session, Doc. WLTP-22-14/Rev.3, at 10 (June 5, 2018).

143. U.N. ECON. COMM'N FOR EUR., WORLD FORUM: HOW IT WORKS*, supra* note 42, at 14-15.

144. *e.g.* Tesla & Eur. Ass'n for Electromobility, GRVA-04-53, *supra* note 134; Volkswagen & UTAC, WLTP-10-15e, *supra* note 102. The technical presentation documents provided by TNCs to WP.29 (Annex I) illustrate WP.29's reliance on actors with specialized knowledge and expertise to support the standard-setting process.

145. *See* Magnus Blomström & Ari Kokko, *Multinational Corporations and Spillovers*, 12 J. ECON. SURV. 247, 249-50 (1998).

146. Roberta Pellegrino et al., *Supply Chain Finance: A supply chain-oriented perspective to mitigatecommodity risk and pricing volatility*, 25 J. PURCHASING & SUPPLY MGMT. 118-19 (2018).

147. *See e.g.* BMW, *WLTP Wind Tunnel Method, supra* note 104.

of formal regulations, enabling TNCs to implicitly shape the discussions within WP.29.[148] If the opportunities for submitting proposals were equally distributed among various corporations, concerns about regulations disproportionately benefiting specific companies might be mitigated.[149] In reality, prominent corporations, such as BMW, are more likely to acquire these opportunities, resulting in a monopoly on representation.[150] With its famous branding and extensive global networking, BMW possesses more channels to engage with public actors, thus increasing its visibility to IOs.[151] Although BMW may indeed have the capacity to research "the best available technology" for WP.29, BMW's proposed standards may intentionally or unintentionally reflect its own preference.[152]

Conflicts arose from the drafts submitted by BMW, thus indicating evidence of favoritism.[153] For example, Japan is known for its automotive expertise and dissented from proposals issued by BMW.[154] Japan objected to specific provisions drafted by BMW and even directly claimed their non-support for BMW's revisions, leading to heightened tensions between Japan and BMW. [155] In a later meeting, BMW urged WLTP to accelerate the standard-setting process, but the Japan association remained dissatisfied with the proposal and delayed the process.[156] The heightened tensions persisted into a 2018 meeting led by Japan and TNO (an independent not-for-profit research organization). BMW asserted that the requirements outlined in the draft were grounded in existing technical knowledge and free from political considerations.[157] Accordingly, BMW urged WLTP to expedite the draft's approval.[158] Japan responded by agreeing with the proposal's concept but insisting on a thorough review of the revised sections.[159] The EU concurred with Japan, saying they

148. Abdul Mu'eez A. S. et al., *Agenda Setting and Power in Policy Making: A Case Study of Tobacco Policy in Developing Countries*, 5 INT'L J. PUB. HEALTH & CLINICAL SCI. 1, 3 (2018).

149. *See* Diana Panke, *The Institutional Design of the United Nations General Assembly: An Effective Equalizer?*, 31 INT'L REL. 1, 6-7 (2017).

150. *See* the section (II)(ii)(B)(3) of this article.

151. *See* Doudou Sidibe, *Business Diplomacy: Asymmetry and Symmetry of Power in Negotiations Between Multi-nationals and Governments in the Case of Areva and Niger*, 3 INT'L J. DIPLOMACY & ECON. 219, 224-26 (2017).

152. U.N. ECON. COMM'N FOR EUR., WORLD FORUM: HOW IT WORKS, *supra* note 42, at 14.

153. *See* WLTP, Minutes of the 18th WLTP IWG Meeting, 18th WLTP session, Doc. WLTP-18-25e13 (May 10, 2017), https://wiki.unece.org/download/attachments/262471956/A-LCA-SG4-18-04%20Meeting%20Minutes.pdf?api=v2 [https://perma.cc/8XSR-3HNJ].

154. *Id*.

155. *Id*.

156. According to the record of WLTP 20 Session, it concluded that if Japan association agreed with the proposal, this proposal will be passed to GRs. WLTP, Minutes of the 20th WLTP Informal Group Sessions, 20th WLTP session, Doc. WLTP-20-27/Rev.1, at 4 (Oct. 10, 2017) (concluding the proposal would be passed if the Japan association agreed with the proposal.

157. BMW, GTR 15: Proposal for a Mid Vehicle Concept for Pure ICE Vehicles, 22nd WLTP session, Doc. WLTP-22-11/App.12 (Apr. 16, 2018).

158. *Id*.

159. WLTP, WLTP-22-14/Rev.3, *supra* note 142.

needed to consult their experts before approving the proposal.[160]

Despite agreeing with the proposal's concept, Japan expressed that the Japanese industry was not satisfied with the testing method formulated in BMW's proposal.[161] The objection from Japan revealed a conflict of interest between BMW, and at least presented that the proposal from TNCs may not always accommodate the interests of all parties.[162] Therefore, the closer examination by stakeholders is necessary to uphold the legitimacy of WP.29.[163]

BMW's influence on standard-setting extended beyond simply proposing drafts; its practices can also determine the feasibility of standards. For instance, in WLTP, BMW showed that its practical data could not meet the standard requirements, leading to the revised standard.[164] These results demonstrate the complex relationship between BMW and WP.29 and its expanding influence on processes. While BMW played a significant role in the regulatory development process, WP.29's over-reliance on the company raises concerns that BMW may leverage the standard-setting process to its advantage, potentially leading to an uneven playing field. [165] This reliance highlights the risk that international organizations may fail to recognize unequal participation in regulatory decision-making and the adverse consequences that such disparities may produce.[166]

Furthermore, most TNCs hold the most advanced technology and seek to embed this technology into international standards, disadvantaging non-developed countries.[167] In response to the proposal presented by BMW, India repeatedly requested detail information.[168] The request of detailed information demonstrates that India may be unfamiliar with the testing technique presented by BMW. If such proposal becomes formal standard, India may need to spend resources to help their industries to meet the requirements, including bargaining with TNCs, which are holding these critical techniques. It is inevitable that India needs to do some resources exchange for these critical techniques. In this case, India successfully defended its interests in the early stages by requiring BMW to disclose additional information about the testing methods in the meeting it chaired. However, it is uncommon for developing countries to chair the meeting

160. *Id*.

161. *Id*.

162. *See id*.

163. Robert A. Phillips, *Stakeholder Legitimacy*, 13 BUS. ETHICS Q. 25, 26 (2005).

164. BMW, WLTP Road Load Improvements: Identified Ambiguities and Proposals to Resolve, 18th WLTP session, Doc. WLTP-18-22 (Apr. 18, 2017).; WLTP, WLTP-22-14/Rev.3*, supra* note 142, at 11.

165. H. Jeffrey Leonard, *Review: Multinational Corporations and Politics in Developing Countries*, 32 WORLD POL. 454, 464 (1980).

166. *See* Hortense Jongen & Jan Aart Scholte, *Inequality and Legitimacy in Global Governance: An Empirical Study,* 28 EUR. J. INT'L REL. 667, 688 (2022).

167. Joseph E. Stiglitz, *Regulating Multinational Corporations: Towards Principles of Cross-Border Legal Frameworks in a Globalized World—Balancing Rights with Responsibilities*, 23 AM. U. INT'L L. REV. 451, 477 (2007).

168. WLTP, Agenda of the 8th WLTP IWG Meeting, 8th WLTP session, Doc. WLTP-08-02-rev3e, at 6 (Nov. 20, 2014); WLTP, WLTP-10-42e, *supra* note 111, at 10.

in WP.29, raising concerns about their ability to fully participate in the early stages of standard-setting processes.[169] If TNCs continue to expand their influence over various standard-setting mechanisms, developing countries may face greater challenges in safeguarding their interests.[170] The adoption of biased standards could create an uneven playing field, disadvantaging other corporations and further undermining the legitimacy of WP.29 and its decisions.

Due to their expertise in technology, It is conceivable that WP.29 and even other public actors will continue to rely on TNCs to establish standards.[171] This reliance indirectly grants TNCs more power to influence international organizations and their decision, resulting in a legitimacy problem.

III. Beyond WP.29: Automotive TNCs' Roles in International Organizations and Their Implications for Legitimacy and Accountability

Normatively, WP.29 follows traditional international law, which considers private actors' secondary participants with limited rights to contribute to standard-setting.[172] However, in practice, WP.29 leaves room for TNCs to join the process and contribute to the complex interaction between TNCs and public actors. Such complex interaction demonstrates that the relationship between TNCs and IOs is moving from a public-dominated institution to a quasi-hybrid structure, creating a power shift between the two organizations.[173] While the involvement of TNCs increases the regulatory capability of IOs, their self-interested actions could undermine the legitimacy and accountability of IOs. TNCs may discreetly influence global standards, exclude competitors, and insert their preferences into the process without transparency. Furthermore, their professional appearance makes public authorities unaware of their preference. Their professional expertise often conceals these intentions from public authorities, contradicting the foundational purpose of Ios—to find fair,

169. WP.29, WP.29: Working Parties, Informal Working Groups and Chairs on 15 February 2023, 189th WP.29 session, Doc. WP.29-189-01/Rev.1 (Mar. 7, 2023), https://unece.org/sites/default/files/2023-03/WP.29-189-01r1e.pdf [https://perma.cc/3GSL-EYNM].

170. Jan Wouters, *Corporations and the Making of Public Standards in International Law, in* THE EVOLUTION OF TRANSNATIONAL RULE-MAKERS THROUGH CRISES 66, 74 (Panagiotis Delimatsis, Stephanie Bijlmakers & M. Konrad Borowicz, eds., 2023).

171. *e.g.*, United Nations, Roadmap for Digital Cooperation, U.N. Doc. A/74/821 (June 2020), https://www.un.org/en/content/digital-cooperation-roadmap/assets/pdf/Roadmap_for_Digital_Cooperation_EN.pdf [https://perma.cc/D5HJ-UM9W]. The major tech companies, including Microsoft and Facebook, are engaged in discussions about the UN Global Digital Compact, which aims to create a regulatory framework addressing digital issues.

172. *See* David Kinleya1 & Junko Tadaki, *From Talk to Walk: The Emergence of Human Rights Responsibilities for Corporations at International Law*, 44 VA. J. INT'L L. 931, 944-45 (2004).

173. This article argues that the standards and knowledge discussed in IWGs are led by TNCs. *See generally* Leslie A. Pal, *Standard Setting and International Peer Review: The OECD as a Transnational Policy, in* OXFORD HANDBOOK OF GLOBAL POLICY AND TRANSNATIONAL ADMINISTRATION 491, 495 (Diane Stone & Kim Moloney eds., 2019).

consensus-driven solutions to global problems. This not only damages the credibility of IOs but also weakens the legitimacy of their outputs. To address these challenges, it is essential to systematically evaluate the impact of TNC involvement on the legitimacy and accountability of IOs, both of which are critical to maintaining their credibility.

Legitimacy and accountability are primary concerns in GAL when discussing exercise global administration.[174] GAL divided these activities into three categories and offered corresponding principles to ensure these elements remain global. These categories are: (1) institutional design and legal constitution of the bodies; (2) norms, and decisions made by entities; and (3) procedural norms for decision-making.[175] The discussion of procedural norms focuses on the interaction between parties, which is closely related to the issue of this article. Therefore, the following section adopts the procedural principles listed in GAL as a framework to analyze the interaction between TNCs and IOs.

i. Challenges

According to GAL, the core of legitimacy is "publicness," meaning that law and legal rules should come from the whole society or must deal with public concern.[176] The principles of publicness cover both substantive and procedural administrative law, including "the limitation of power, the requirement of justification and proportionality, the procedural mechanism for deliberate decision-making, and the protection of human rights."[177] These principles illustrate that while public participation is vital for legitimizing decisions, specific mechanisms must be in place to ensure the legitimacy of the process. These mechanisms enhance legitimacy by ensuring that the procedure incorporates accountability, informational transparency, and openness.[178] As regulatory structures evolve, GAL has distilled these procedural requirements into the following principles: reasoned decision, participation, transparency, and reviewing process.[179]

Requiring rule-makers to make reasoned decisions is crucial to secure legitimacy and accountability.[180] To justify their decision, rule-makers should prove that they have carefully considered the relevant information, which relies on professional knowledge to access and evaluate. When issues involve complex technology, regulators can hardly access and evaluate information themselves and require actors possessing the knowledge to supplement their vacant capacity. TNCs are actors who possess in-depth knowledge of the issue

174. Krisch & Kingsbury, *supra* note 15.

175. Kingsbury et al., *supra* note 18, at 34.

176. Kuo, *supra* note 19, at 1061-62.

177. *Id.* at 1063.

178. Skogstad, *supra* note 62178, at 25.

179. Kingsbury et al., *supra* note 18, at 37-39; *accord* Kingsbury, *supra* note 22, at 25.

180. Cynthia Couette, *Epistemic Competition in Global Governance: The Case of Pharmaceutical Patents*, 15 GLOB. POL'Y J. 516, 519 (2024).

area, making them valuable information providers to public actors during the standard-setting process.[181] Furthermore, they offer valuable expertise in turning abstract concepts into practical rules.[182] The capability of TNCs may provide legitimate grounds for them to participate in public standard-setting processes.

In the case of WP.29, the content framework clearly states that the standard-setting processes should consider the best available technology, benefit, and monetary and social costs. These factors demonstrate the importance of abundant knowledge and experience, indicating that WP.29 believes knowledge could legitimize its decisions. The documents submitted by TNCs, ranging from technical presentations to regulatory proposals, underscore their suitability in providing relevant information. The scarcity of adequate internal knowledge also highlights WP.29's reliance on TNCs.

Reliance on the knowledge of TNCs presents significant risks as they are gradually empowered to influence standard-setting. As discussed in section II, the influence of BMW on WP.29 serves as an example. BMW not only affected agenda-setting by making proposals but also used experimental data to determine the feasibility of these standards.[183] This reliance on outsourced knowledge has contributed to BMW's dominance in the processes.[184] However, this behavior poses a danger: public actors may oversimplify knowledge, treating it as a single, unified result without recognizing that different sources produce different types of knowledge.

Moreover, the knowledge used here often centers on technology, developed to fulfill private interests. The conflict between BMW and the Japanese automotive industry underscores this issue. While knowledge requirements are necessary for functional operation, they are not the sole factor that legitimizes decisions. Public actors must be aware of the diverse sources and implications of the knowledge they rely on.[185]

Participation enhances legitimacy because it displays the features of democracy.[186] The fundamental purpose of participation is to promote deliberative democracy by allowing every stakeholder to participate and voice

181. Rozaimah Zainudin, Nurul Shahnaz Mahdzan & Norzulkarnien Nor Mohamad, *Internationalisation and Financial Performance: In the Case of Global Automotive Firms*, 31 REV. INT'L BUS. & STRATEGY 80, 84 (2021).

182. Michael M. Du, *The Regulation of Private Standards in the World Trade Organization*, 73 (3) FOOD & DRUG L. J. 432, 433 (2018); Richard M. Locke, Ben A. Rissing & Timea Pal, *Complements or Substitutes? Private Codes, State Regulation and the Enforcement of Labour Standards in Global Supply Chains*, 51 BRIT. J. INDUS. REL. 519, 531 (2013).

183. BMW, WLTP Road Load Improvements: Identified Ambiguities and Proposals to Resolve, 18th WLTP session, Doc. WLTP-18-22, at 11 (Apr. 18, 2017).

184. *See* Fabrizio Cafaggi, *Transnational Private Regulation: Regulating Private Regulators, in* RESEARCH HANDBOOK ON GLOBAL ADMINISTRATIVE LAW 212, 235 (Sabino Cassese ed., 2016).

185. *See* Möllers, *supra* note 16, at 109.

186. Jan Aart Scholte, *Towards Greater Legitimacy in Global Governance*, 18 REV. INT'L POL. ECON. 110, 115 (2011).

their opinion in the regulatory process.[187] In addition, participation helps public actors construct an informed decision-making structure, legitimating their decisions.[188] Participation further enhances accountability when using the tools of transparency (such as information recording and disclosing).[189] Although the participatory mechanism of WP.29 seems to limit the involvement of stakeholders (typically NGOs) and prevent private interests from unduly influencing decisions, it still leaves room for TNCs to participate in the standard-setting through IWGs.

However, the ambiguous WP.29 mechanism poses a risk to institutional legitimacy. Without proper restrictions, parties with more resources, such as BMW, can monopolize the decision-making mechanism. Such a monopoly reduces the diversity of representatives in the meetings, counteracting the purpose of inclusive participation. The unbalanced participation of TNCs further aggravates the problem of inequality between the global north and the global south.[190] René Fernando Urueña Hernandez highlighted that global regulatory bodies are more accessible to countries with more power and resources.[191] For countries lacking expertise or those incapable of connecting to the world, the sophisticated process embedded in the global regulatory bodies is too complicated to approach.[192] This problem is framed as "tunnel vision," emphasizing that knowledge (or perception) from the global north, especially from Western countries, is more easily input into the global standard-setting and thereby receives a surface legitimacy to rule the world.[193]

"Tunnel vision" exacerbates issues within global regulatory bodies developed to resolve specific issues.[194] For instance, GLOBAL GAP claims its standard-setting process is open to all stakeholders.[195] Still, it remains controlled by Western countries due to a lack of a proper procedural framework considering the region's representativeness.[196] Similarly, countries without abundant expertise struggle to have meaningful discussions in Codex.[197] In the

187. Stepan Wood et al., *Transnational Business Governance Interactions, Regulatory Quality and Marginalized Actors: An Introduction* (Transnat'l Bus. Governance Interactions, Working Paper, Paper No. 38, 2019), https://commons.allard.ubc.ca/cgi/viewcontent.cgi?article=1496&context=fac_pubs [https://perma.cc/9864-6FVW].

188. Möllers, *supra* note 16, at 121.

189. *Id.* at 120-21.

190. Sundhya Pahuja, *Corporations, Universalism, and the Domestication of Race in International Law, in* EMPIRE, RACE AND GLOBAL JUSTICE 74, 75-76 (Duncan Bell ed., 2019).

191. René Fernando Urueña Hernandez, *Global Administrative Law and the Global South, in* RESEARCH HANDBOOK ON GLOBAL ADMINISTRATIVE LAW 392, 394 (Sabino Cassese ed., 2016).

192. *Id.*

193. *Id.* at 396.

194. *See id.* at 397.

195. Richard B. Stewart, *Global Standards for National Societies, in* HANDBOOK OF GLOBAL POLICY AND TRANSNATIONAL ADMINISTRATION 175, 208 (Diane Stone & Kim Moloney eds., 2019).

196. *Id.*

197. Marco Macchia, *The Rule of Law and Transparency in the Global Space, in* RESEARCH HANDBOOK ON GLOBAL ADMINISTRATIVE LAW 261, 270 (Sabino Cassese ed., 2016).

case of WP.29, the participation of TNCs also builds a Western "tunnel" for WP.29 in its standard-setting process. The TNCs active in WP.29 are primarily from the U.S. and EU (shown in Table 1), with few from Asia. Notably, all these TNCs are from the global north, but none are the countries that produced the most significant number of cars.[198] Furthermore, the documents related to the core of the standard-setting process, such as test procedures or regulatory proposals, continued to be dominated by the U.S. and EU TNCs.[199] However, knowledge from the global north does not always provide the best solution globally; otherwise, India would not raise doubts about the proposal submitted by BMW and require it to give more details.[200]

TNCs	BMW	Ford	Volks-wagen	Daimler	GM	Volvo	Hyundai	Toyota	Honda
Originated Region	EU	US	EU	EU	US	EU	Korea	Japan	Japan
Document amounts	65	24	22	19	18	18	13	4	1

Table 1: The number of documents submitted from different automotive TNCs.

Transparency serves as an essential tool to maintain accountability in public administration.[201] Various measures can be implemented to achieve transparency, with publicity being the most vital. Publicity refers to the open availability of any law or legal decision to the public,[202] which not only legitimates publicized laws and decisions but also encourages public review of the acts of governors.[203] The notice-and-comment procedure in public informal rulemaking aligns with the notion of publicity.[204] Besides making laws and decisions public, opening up the decision-making process is crucial to fostering informed public discussion.[205]

While WP.29 stipulates that parties should "ensure openness and transparency during the sessions," it does not specify concrete actions to achieve

198. The country which produced the greatest number of cars in 2023 was China, and India was the fourth greatest producing country. *Motor Vehicle Production Volume Worldwide in 2023, by Country*, STATISTA (Mar. 28, 2024), https://www.statista.com/statistics/584968/leading-car-manufacturing-countries-worldwide/ [https://perma.cc/Q2Q6-UBDE].

199. *e.g.*, BMW, Distribution of Payload: Definition and Proposal for Adoption (version 4), 20th WLTP session, Doc. WLTP-20-15/App.5/Rev.2 (Oct. 2, 2017); Ford, AV External Communications, 2nd AVSR session, Doc. AVSR-02-13 (Dec. 14, 2018).

200. WLTP, WLTP-20-27/Rev.1, *supra* note 153, at 3.

201. *See* Krisch & Kingsbury, *supra* note 15, at 1.

202. Kingsbury, *supra* note 22, at 48.

203. *Id.* at 49.

204. Krisch & Kingsbury, *supra* note 15, at 1.

205. Möllers, *supra* note 16, at 120.

this goal.[206] In practice, WP.29 has implemented transparency measures, such as publicizing documents and opening the decision-making process.[207] However, there is room for improvement to ensure legitimacy. Developing technical standards, in which TNCs participate, is often considered less significant than the formal law-making process, but it profoundly impacts the global industry. This influence benefits those who control the process and thereby attract TNCs. To avoid monopoly and ensure fair access, WP.29 needs to pursue meaningful transparency rather than formal transparency. While WP.29 discloses all meeting documents on its website, the inconsistent format and disorganized information make it challenging for stakeholders to identify crucial details and hold the process accountable.

Reviewing process is essential to prevent decision-makers from taking arbitrary and capricious actions, which not only contradict institutional legitimacy but also violate democratic values. The reviewing process typically involves judicial bodies or independent institutions examining the output of administrative bodies.[208] With independent review, administrative bodies can be accountable for their actions and adjust improper measures. This mechanism has been considered a necessary pillar in domestic governance and exists in most countries.[209] In contrast, only a few reviewing mechanisms are embedded in the global administrative space to govern specific issues, and they struggle to maintain their function.[210] In other words, not every institution in the global administrative space has a reviewing mechanism. WP.29 falls within this category.

Despite the lack of independent bodies to review the process, mechanisms are available to modify decisions. In the standard-setting process within WP.29, review occurs when proposals are delivered through a hierarchical institution.[211] From IWGs to assembly, proposals have several chances to be revised once problems are identified. This approach is an *ex-ante* review due to its role in adjusting actions. In terms of *ex-post* review, it is executed by TNCs.[212] TNCs can report outdated standards and propose revised versions to IWGs.[213] Thus, they serve as regulatory patrols and initiate the process of updating standards. This action helps WP.29 modify its decisions to keep pace with technological developments, performing one function of the reviewing process. However, TNCs excel in detecting and resolving problems from technology evolution but

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206. *See* World Forum for Harmonization of Vehicle Regulations (WP.29), Terms of Reference and Rules of Procedure 2, ECE/TRANS/WP.29/690/Rev.2, rule 1 (1) (i), at 4 (1999).

207. *Open UNECE*, U.N. ECON. COMM'N FOR EUR., https://unece.org/open-unece-1 [https://perma.cc/A9AN-7478] (last visited Aug. 6, 2024).

208. Krisch & Kingsbury, *supra* note 15, at 40.

209. *Id.*15 at 4-5.

210. *See id.* at 40.

211. U.N. ECON. COMM'N FOR EUR., WORLD FORUM: HOW IT WORKS, *supra* note 42, at 15.

212. *e.g.*, Ford, WLTP: Onboard Anemometry Methodology Proposals, 11th WLTP session, Doc. WLTP-11-14 (Jun. 3, 2015).

213. *Id.*

are less sensitive to the social issues caused by the standards. Indeed, state parties are there to address social issues, yet it takes a long time for them to detect and address problems, decreasing the overall effectiveness of standard revision.

ii. Accountability Problems

Accountability measures are essential for supervising entities with public power to ensure their actions meet public expectations. Traditionally, only state or government-based bodies enjoy public power; therefore, they must follow accountability rules.[214] However, they are not the only actors who exercise public function and have the power to influence others. The interaction between TNCs and WP.29 demonstrates that TNCs, initially positioned as consultants to provide opinions, have extended their role beyond merely offering advice.[215] They now actively formulate standards and review outdated provisions, significantly increasing their influence on society.[216] These quasi-public actions enrich TNCs' power to influence society.

TNCs also have significant control over agenda-setting. In WP.29, the proposals TNCs submitted often became the default version in the standard-setting processes.[217] Namely, the entities whose proposals are selected substantially control the process by framing the agenda, defining problems, and proposing solutions.[218] In this way, they help them consolidate their interests and exclude others from the standard-setting processes.[219] The conflict arising from BMW between Japan and India concretizes the agenda-setting power possessed by TNCs when they participate in IOs.[220]

In addition, the agenda-setting and material power of TNCs are mutually reinforcing when TNCs participate in public standard-setting. Their material power enables them to influence the behavior of others due to the resources they hold.[221] TNCs carry economically solid resources and networks, rendering them *de facto* governors in GVCs.[222] Although research suggests that TNCs' governance power over GVCs is contract-based, Peter Hertenstein argued that TNCs construct orchestration systems to mold behaviors within GVCs, which are driven by profit, reputation, resource, and knowledge dissemination.[223] By

214. Krisch & Kingsbury, *supra* note 15, at 7.
215. *e.g.*, Volkswagen & UTAC, *supra* note 102.
215. BMW, WLTP-08-25e, *supra* note 104
216. *e.g.* GM et al., TFCS-16-05, *supra* note 106.
217. BMW, WLTP-08-19*, supra* note 110.
218. Manuel Cruz Ortiz de Landázuri, *Power in Global Governance: Power without Rulers?*, 18 NEW GLOB. STUD. 19, 30 (2024).
219. Janne Mende, *Business Authority in Global Governance: Companies Beyond Public and Private Roles*, 19 J. INT'L POL. THEORY 200, 211 (2023).
220. *Id.*
221. *Id.*
222. *See* Bell & Monaco, *supra* note 25, at 459.
223. HERTENSTEIN, *supra* note 3, at 111.

providing knowledge and resources, TNCs enhance the capacities of their suppliers but require them to participate in periodic reviews, directly shaping the behavior of the suppliers.[224] This vigorous compliance enforcement empowers TNCs with strong bargaining power over public actors and reinforces their agenda-setting power in public standard setting. In the meantime, exercising agenda-setting power in IOs strengthens TNCs' compliance by earning more trust from suppliers. In the WP.29 case, BMW's dominance in standard-setting processes arose because of its material power.

Beyond public actors and suppliers, TNCs could affect society by exercising ideational power so that a TNC can deliver and strengthen concepts via its products, services, and other activities toward society. Its conduct could shape individual thinking and change the social construction.[225] The higher the esteem TNCs gain, the more quickly they can operate ideational power. As for reputation, it is often acquired through agenda-setting and material power.[226] Although TNCs possess the power to influence society at multiple levels, they are still excluded from the scope of international institutions' accountability. In WP.29, TNCs are acquiesced to develop public standards with sufficient oversight, creating an accountability gap in the public standard-setting process.[227]

iii. Ever-Expanding Private Power in Global Governance

The participation of TNCs was a double-edged sword, enriching decisional reasonableness but risking process accountability. If the risk cannot be addressed, participation of TNCs could still damage the legitimacy of the decisions made by IOs. Additionally, technology development forces public actors to rely on actors who carry relevant knowledge, contributing to expanding private power in global space.

A. Private Power Expansion in the Age of Technology

In the WP.29 case, the intensive interaction between TNCs and IOs happened when significant social issues occurred. However, TNCs may hold inverse positions compared with public actors (private interest v. public interest). Yet their technical knowledge is crucial for tackling these issues, forcing WP.29 to rely on TNCs, who create and control technology and depend on their ability to draft standards despite their private-oriented nature. The speed of technological development will enlarge the knowledge gap between TNCs and public actors, thereby increasing the reliance on TNCs on standard-setting processes. Such reliance will, in turn, enrich the power of TNCs.

224. *Id.* at 123.
225. Mende, *supra* note 21919, at 211.
226. *Id.*
227. *See* Stewart, *supra* note 195, at 208.

The participation of Tesla in WP.29 perfectly demonstrates how knowledge empowers TNCs in the standard-setting processes. With advanced technology in electricity and automated vehicles, Tesla quickly earned trust, transitioning from a consultant role to a standard drafter.[228] Besides, Tesla submitted its reports to formal groups in WP.29, where most traditional automotive TNCs had yet touched.[229] These experiences improved Tesla's reputation for public cooperation and social responsibility, leading to more opportunities to participate in regulatory activities.[230] In fact, relying on TNCs for standard-setting has not been limited to specific issues, but extends across various areas requiring "reasoned decisions."[231]

Without hierarchical enforcement, laws and regulations produced at the international level are considered "soft" if states do not commit to adopting them.[232] However, it does not mean IOs have lost their function in governing issues. Their roles have shifted from being Utopian regulators to knowledge aggregators in the age of technology. IOs collect and distill knowledge and then transform it into regulation. Concurrently, states outsource regulatory solutions due to the high cost of addressing complex issues.[233] This supply and demand relationship endows IOs' authority to govern global problems.[234] To maintain this authority, IOs must assemble more knowledge, leading to increased interaction with epistemic communities.[235]

"Epistemic communities" encompass experts from diverse backgrounds, including academia, industry, and government.[236] In this context, TNCs have multiple identities—stakeholders and experts—when participating in standard-setting processes. However, their role as an interest group is also overlooked when they perform as experts, delivering relevant knowledge in forums. Furthermore, the idea of engineering information conveyed by TNCs is deemed to be knowledge when IOs deal with the issue of emerging technology.[237] Neglecting the potential private interests in this information can be problematic. Unfortunately, the conflated identities of TNCs may become normalized due to

228. *See* Tesla, Tesla Comments on the China thermal propagation research update, 15th EVS session, Doc. EVS-15-73/616-3 (Mar. 20, 2018); GM et al., TFCS-16-05, *supra* note 106.

229. Tesla & Eur. Ass'n for Electromobility, GRVA-04-53, *supra* note 134.

230. *See* Mende, *supra* note 219, at 212.

231. *See* Kirsten Mogensen, *Legitimacy Issues in Corporate Public Diplomacy*, in HANDBOOK OF BUSINESS LEGITIMACY 1277, 1282-83 (Jacob Dahl Rendtorff ed., 2020).

232. *See* Krisch & Kingsbury, *supra* note 15, at 3-4.

233. *See generally* Rianne Mahon & Stephen McBride, *Standardizing and Disseminating Knowledge: The Role of the OECD in Global Governance*, 1 EUR. POL. SCI. REV. 83, 88 (2009).

234. *See* Clarke A. Miller, *Democratization, International Knowledge Institutions, and Global Governance*, 20 GOVERNANCE 325, 327 (2007).

235. Mahon & McBride, *supra* note 233, at 86.

236. *See* Ole Jacob Sending, *Knowledge Networks, Scientific Communities, and Evidence-Informed Policy, in* THE OXFORD HANDBOOK OF GLOBAL POLICY AND TRANSNATIONAL ADMINISTRATION 383, 385 (Diane Stone & Kim Moloney eds., 2019).

237. *See* Benedict Kingsbury, *Infrastructure and InfraReg: on rousing the international law 'Wizards of Is'*, 8 CAMBRIDGE INT'L L.J. 171, 172 (2019).

technological advancements, contributing to more extensive and intensive interactions between TNCs and IOs.

Moreover, TNCs could be diffusers, disseminating their preferred interaction mode to other issue areas. Due to their transnational nature, TNCs could directly interact with public actors at different levels and countries. Once they experience preferred interaction with public actors, they may proactively propagate these modes to other public actors, spreading them across different regions and issue areas.[238] The necessity of knowledge to legitimize decision-making creates an opportunity for TNCs to participate in the standard-setting process in IOs. The reliance on IOs enriches the power of TNCs. The power of TNCs scales up due to the demand for knowledge on addressing the issue from emerging technologies and the diffusion of interaction mode. However, the conflated identities of TNCs in standard-setting and the misunderstanding about the information they provide create a risk to global society.

B. Risk of Over Expansion

The expansion of private power at the global level arises from our belief in the absoluteness and neutrality of knowledge. Still, such belief will make us overlook the bias inherent in the knowledge-producing process. The rationality behind relying on expert opinion stems from the assumption that experts will reach a consensus on knowledge and approach the absolute truth.[239] However, the neutrality of expertise is under dispute. Controversy arises over who possesses genuine knowledge and who qualifies as an expert.[240] These questions imply that different sources, beliefs, and cognition will affect the viewpoints behind knowledge.[241]

The subjectivity embedded in knowledge when addressing the issue of emerging technologies is exacerbated. Although technological knowledge presents an objective symbol, its development process is often driven by profit motives to maximize private interests. Therefore, once regulators permit knowledge from specific companies, they may indirectly facilitate the profit-earning progress of companies. This consequence decreases the credibility of decisions made by regulators.[242] Furthermore, once TNCs exploit this pattern to pursue profit and scale up their power, it will pose severe risks at the global level.

To maximize their interests, TNCs may attach their regular practice in the standard drafts with the intention of future compliance costs and optimizing their interests.[243] In addition, standard-setting processes are the symbol of

238. Pattberg, *supra* note 6, at 250.
239. Couette, *supra* note 180, at 516.
240. *Id.* at 520.
241. *Id.* at 519.
242. *See id.* at 519.
243. Zainudin et al., *supra* note 181, at 82.

legitimacy and thus could strengthen the power of those who control the processes.[244] This power enables TNCs to manage their supply chains comprehensively, earn consumer trust, and dominate markets. Additionally, by controlling standard-setting processes, TNCs can facilitate their global expansion by unifying worldwide regulations and mitigating transnational compliance barriers. With the control of the public standard-setting process, TNCs can construct favorable playing fields for themselves, excluding competitors from gaining profit or limiting the global market share of rivals.

Although legal principles mitigate power asymmetry in public decision-making, [245] identifying where and how power asymmetry occurs remains a significant challenge, especially with technological advancements. Aside from our belief in the objectivity of knowledge, the interwind of technology and society causes the formulation of technical specifications to involve value judgments,[246] thereby increasing the difficulty of distinguishing whether TNCs' standards embed their preferences. Furthermore, verifying these issues is challenged by the opaque process through which TNCs produce drafts, as their true intentions can be easily concealed by afterward explanations. [247] With solid authority but limited capability to address private interests, IOs will face a crisis of being degenerated as instruments for TNCs to pursue their benefit.

When TNCs weaponize IOs, it not only disrupts the level playing field in the global market but reinforces neo-colonialism at the global level. When IOs adopt standard proposals submitted by TNCs without fully considering their potential influence on vulnerable countries, they inadvertently support TNCs in unequally distributing global resources.[248] TNCs use standards to distribute resources within their supply chains to enlarge profit.[249] Consequently, cost reduction, profit generation, and benefits exchanges are often embedded in their standards and codes of conduct.[250] Companies in third-world countries are more likely to be unequally treated, and their resources are usually sacrificed. Hence, if IOs directly adopt standards proposed by TNCs, they may assist TNCs in exacerbating economic and capacity disparities between companies in advantaged and disadvantaged countries. Unequal resource distribution within global supply chains is a leading cause of reinforcing and exacerbating economic disparities between Western and third-world countries.

Automotive TNC, which originated in Western countries and favors

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244. *See* Magnus Boström & Kristina Tamm Hallström, *Global Multi-Stakeholder Standard Setters: How Fragile are They?*, 9 J. GLOB. ETHICS 93, 100 (2013).

245. Fiona Kinniburgh et al., *When Private Governance Impedes Multilateralism: The Case of International Pesticide Governance*, 17 REGUL. & GOVERNANCE 425, 433 (2023).

246. Pattberg, *supra* note 6, at 258.

247. *See* Wood et al., *supra* note 187, at 6.

248. The IGLP Law & Global Production Working Group, *The Role of Law in Global Value Chains: A Research Manifesto*, 4 LOND. REV. INT'L L. 57, 60 (2016).

249. PAUL VERBRUGGEN, ENFORCING TRANSNATIONAL PRIVATE REGULATION: A COMPARATIVE ANALYSIS OF ADVERTISING AND FOOD SAFETY 12-13 (2014).

250. *Id.*

deploying production lines in third-world countries,[251] demonstrates the appearance of neo-colonialism. Although automotive TNCs are dedicated to investing in local industries in third-world countries, they still control essential knowledge that secures their positions within supply chains.[252] Without critical knowledge, industries in third-world countries can only depend on TNCs for survival,[253] thereby maintaining the hierarchy within automotive supply chains,[254] demonstrating the material power of TNCs to control industries in other countries. Furthermore, their comprehensive control over local industries in third-world countries enriches their agenda-setting power over public authorities. When TNCs control local industries, they control the national economy of these countries, strengthening their agenda-setting power to shape their policies and regulations.[255] Moreover, the solid economic incentives behind TNCs could intensify their ideational power and allure local industries to bypass state regulation, thereby threatening state authority.[256]

The power of TNCs can substantially control local industry, affect national policies, and even threaten governments' authority in third-world countries. This phenomenon has been criticized as "neo-colonialism," which means rebuilding the colonial empire by exploiting and exacerbating the disparities in the global economy.[257] Ideally, neo-colonialism can be restrained by adopting legal principles built within IOs, including participation requirements, to safeguard the production of these standards.[258] However, the truth is that participation mechanisms in IOs have tunnel vision and the complexity of technical knowledge conceals the private interest within the standards, continuously placing third-world countries at risk.[259]

IV. REBALANCING GLOBAL TECH STANDARD-SETTING WITH TNCS PRIVATE GOVERNANCE

The participation of TNCs in WP.29 illustrates the rise of private power and the importance of IOs in governing technological issues. The functions of IOs have evolved beyond maintaining "world peace" to include significant

251. Paul Nieuwenhuis, *Car Manufacturing*, *in* THE GLOBAL AUTOMOTIVE INDUSTRY 41, 44 (Thomas Kurfessed., 1 ed. 2015).

252. Inge Ivarsson & Claes Göran Alvstam, *Technology Transfer From TNCs to Local Suppliers in Developing Countries: A Study of AB Volvo's Truck And Bus Plants in Brazil, China, India, and Mexico*, 33 WORLD DEV. 1325, 1326 (2005).

253. Sundhya Pahuja & Anna Saunders, *Rival Worlds and the Place of the Corporation in International Law*, *in* THE BATTLE FOR INTERNATIONAL LAW SOUTH-NORTH PERSPECTIVES ON THE DECOLONIZATION ERA 141, 161 (Jochen von Bernstorff & Philipp Dann eds., 2019).

254. HERTENSTEIN, *supra* note 3, at 13.

255. Bell & Monaco, *supra* note 25, at 467-68.

256. Locke et al., *supra* note 182, at 532.

257. Pahuja & Saunders, *supra* note 253, at 145.

258. *See* Urueña Hernandez, *supra* note 191, at 39.

259. *Id.* at 397.

responsibilities in technological governance.[260] Thus, problem-solving and standard setting have become essential for IOs.[261] To convince their state members, IOs require abundant knowledge to prove their decisions are reasoned and well-founded.[262] As a result, knowledge becomes an imperative source for IOs to establish their authority.[263]

Meanwhile, social expectations on IOs have moved from unifying worldwide regulations to ensuring global plurality and cultural diversity in regulatory development.[264] Legal principles mandate that IOs build participatory institutions to gather diverse opinions and create inclusive and representative decision-making processes.[265] However, these institutions often suffer from tunnel vision.[266] The involvement of TNCs in these participatory processes can exacerbate the problem of tunnel vision.[267]

In traditional international law, TNCs have been viewed as informal participants, yet their influence on global society extends far beyond that of public authorities.[268] They can provide knowledge to produce "reasoned decisions" in the public standard-setting process, supporting the authority of IOs. [269] They also hold the power to enforce standards on the global supply chains, accomplishing truly transnational governance.[270] However, such influential actors are excluded from international institutions, enjoying power without legal restriction.[271] Their power will likely grow as they continue participating in regulatory development processes.[272]

The participation of TNCs in the standard-setting processes underscores the inadequacy of current legal principles within IOs regarding legitimacy during

260. *See generally* CHARLES S. MAIER, THE PROJECT-STATE AND ITS RIVALS: A NEW HISTORY OF THE TWENTIETH AND TWENTY-FIRST CENTURIES 88-104 (2023).

261. *See* Jan Klabbers, *Theorizing International Organizations, in* THE OXFORD HANDBOOK OF THE THEORY OF INTERNATIONAL LAW 618, 624 (Anne Orford & Florian Hoffmann eds., 2016).

262. Benedict Kingsbury, *The Concept of 'Law' in Global Administrative Law*, 20 EUR. J. INT'L L. 23, 47 (2009).

263. Thomas Conzelmann, *The Politics of Peer Reviewing: Comparing the OECD and the EU*, in THE POLITICS OF INFORMATION 49, 49 (Tannelie Blom & Sophie Vanhoonacker eds., 2014).

264. Gayl D. Ness & Steven R. Brechin, *Bridging the Gap: International Organizations as Organizations*, 42 INT'L ORG. 245, 246-48 (1988).

265. Krisch & Kingsbury, *supra* note 15, at 4-5.

266. *See* Urueña Hernandez, *supra* note 191, at 397.

267. *See* SCHMIDT, *supra* note 14, at 206-07.

268. Evaristus Oshionebo, *The U.N. Global Compact and Accountability of Transnational Corporations: Separating Myth from Realities*, 19 FLA. J. INT'L L. 1, 31-32 (2007).

269. *See* Britt Blackwelder et al., *The Volkswagen Scandal (Case Study)*, UNIVERSITY OF RICHMOND: ROBINS SCHOOL OF BUSINESS 2016, https://scholarship.richmond.edu/robins-case-network/17/ [https://perma.cc/4AJ8-VVB3].

270. Du, *supra* note 182, at 443.

271. *See* Oreste Pollicino & Giovanni De Gregorio, *Constitutional Law in the Algorithmic Society*, *in* CONSTITUTIONAL CHALLENGES IN THE ALGORITHMIC SOCIETY 3, 22 (Hans-W. Micklitz et al. eds., 2022).

272. SCHMIDT, *supra* note 14, at 62.

decision-making.[273] In an age dominated by technological advancements, preventing TNCs from entering the public standard-setting process is impossible.[274] However, viewing them as secondary participants and ignoring their influence and risk to global society is also unfeasible.[275] Therefore, the pressing issue will be how to construct (or repair) mechanisms within IOs to ensure legitimacy when interacting with TNCs and properly hold TNCs accountable when they influence public decision-making processes.[276]

i. Internalize Legitimacy Factors in the Practice of TNCs

With the power to shape the social order, TNCs are no longer seen as simply private actors.[277] Their power stems from the interaction between different actors. Moreover, TNCs can provide public goods, such as research funding, war prevention, and charity building.[278] These activities demonstrate that TNCs have transcended their purely private character—affecting only limited individuals and acting solely in their interest—and have assumed a specific societal authority.[279] It is apparent that greater authority requires more significant duty and responsibility, but TNCs often evade such obligations.[280] However, it is also an oversimplification to equate TNCs with public actors, as this approach disregards their profit-oriented nature and unique relationship with democratic and legal systems.[281] Therefore, a balanced approach is needed—one that aligns TNC operations with principles of legitimacy while acknowledging their profit-driven motives and flexibility. Besides, this approach could more comprehensively address the problems caused by the participation of TNCs in public standard-setting processes.[282]

Preventing TNCs from participating in standard-setting processes would be impractical and unwise, given their capacity to provide crucial knowledge that enhances the legitimacy of decision-making in IOs. Therefore, this research advocates for an approach that internalizes legitimacy factors within TNC practices. Such a solution would balance various considerations and foster practical cooperation between TNCs and IOs.

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273. Jochen von Bernstorff, *Procedures of Decision-Making and the Role of Law in International Organizations*, 9 GERMAN L.J. 1939, 1947 (2008).

274. *See id*. at 185.

275. *See* Kinleya1 & Tadaki, *supra* note 172, at 944-45.

276. Andreas Georg Scherer et al., *Global Rules and Private Actors: Toward a New Role of the Transnational Corporation in Global Governance*, 16 BUS. ETHICS Q. 505, 519 (2006).

277. Mende, *supra* note 219, at 201.

278. *Id.* at 213.

279. *Id*. at 204.

280. Pollicino & De Gregorio, *supra* note 271, at 15-16.

281. Mende, *supra* note 219, at 204.

282. *See* Subhabrata Bobby Banerjee, *A Critical Perspective on Corporate Social Responsibility: Towards a Global Governance Framework*, 10 CRIT. PERSP. ON INT'L BUS. 84, 92 (2014).

A. Corporate Social Responsibility

Allowing TNCs to participate in the standard-setting process in the early stages has its benefits. IOs could gain knowledge from TNCs, and their involvement also increases the willingness of TNCs to comply with the standard.[283] However, the complexity of knowledge may conceal the preferences of the TNCs from public awareness, whether such preference contains intention or not.[284] To address this issue, TNCs must build self-awareness by discovering their self-preference and avoid guiding the public standard-setting process toward a direction that benefits them and harms society.[285] The internalization approach aims to form a primary method for TNCs to interact with different actors across different issue areas, aligning with legitimacy factors and mitigating risk.[286] This approach corresponds with the concept of Corporate Social Responsibility (CSR).[287]

CSR emerged in response to the criticism that TNCs have increasingly exerted environmental and social externalities,[288] and its core concept was to require corporations to take responsibility for their impact.[289] The notion of "responsibility" in CSR extends beyond accountability and focuses on self-reflection and realization of their duty.[290] Through the CSR institution, corporations internalize requirements and harmonize them with their self-interested goals, forming new organizational cultures.[291] The aim is to shape internal corporate governance and instill motivation for social responsibility. In this context, CSR law functions as a consciousness-building principle rather than a strict compliance mechanism, encouraging corporations to integrate social responsibility into their core operations.[292]

CSR is chiefly debated within the domestic context, where its design relies on a central authority to push the mechanism.[293] However, the domestic-based

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283. Pattberg, *supra* note 6, at 250.

284. *See* Valentin Jeutner, *The Quantum Imperative: Addressing the Legal Dimension of Quantum Computers,* 1 MORALS & MACHINES 52, 55 (2021).

285. *See* Peter Pruzan, *From Control to Values-Based Management and Accountability*, 17 J. BUS. ETHICS 1379, 1383 (1998).

286. *See* Mende, *supra* note 219, at 212.

287. *See* Sifan Xu1& DaJung Woo, *Key Players in Corporate Social Responsibility (CSR) Institutionalization: An Analysis of Multinational Companies' Interorganizational Positioning via CSR Reports*, 37 MGMT. COMMUNICATION Q 3, 4 (2023).

288. Roland Bénabou & Jean Tirole, *Individual and Corporate Social Responsibility*, 77 ECONOMICA 1, 2 (2010).

289. Gary Gereffi & Joonkoo Lee, *Why the World Suddenly Cares About Global Supply Chains*, 48 J. SUPPLY CHAIN MGMT. 24, 25 (2012).

290. Christine Parker, *Meta-Regulation: Legal Accountability for Corporate Social Responsibility, in* HUM. RTS. AND CORPORATIONS 31, 42 (David Kinley ed., 2009).

291. *Id.* at 43.

292. *Id.* at 31-33.

293. Anselm Schneider & Andreas Georg Scherer, *State Governance Beyond the 'Shadow of Hierarchy': A social mechanisms perspective on governmental CSR policies*, 40 ORG. STUD. 1147, 1152 (2019).

mechanism cannot perfectly address global issues caused by TNCs, including north-south inequality and climate change.[294] In addition, global society lacks central power and law enforcement institutions due to the respect for national sovereignty and cultural diversity.[295] Therefore, an alternative mechanism is needed to apply CSR globally while ensuring flexibility to suit different contexts. In this regard, "meta-regulation" emerges as a promising solution. Meta-regulation aims to create a governance structure based on informal and negotiated processes, improving value internalization without compromising flexibility.[296] This approach supports self-regulation among participants by providing non-law measures, such as guidelines, networks, or dialogue.[297] Its informal and conscious-building features make it well-suited for applying CSR principles to TNCs globally, accommodating diverse contexts. The UN Global Compact (UNGC) stands out for its relatively comprehensive institutional structure that internalizes legitimacy factors in TNC practices.

B. UNGC as an Opportunity to Internalize Legitimacy Factors

UNGC is a platform created by the UN Secretariat where the UN directly collaborates with TNCs, excluding the intervention of state members.[298] UNGC governs TNCs through common principles and allows them to create compliance measures that fit their situations.[299] While its ten principles and progress reporting are widely recognized, the governance structure of UNGC is comprised of five actions to help corporations integrate the principles into their management models.[300] These actions are principled business, strengthening society, leadership commitment, reporting progress, and local action.[301] "Principled business" means that UNGC provides ten principles for corporations to follow, which cover human rights, labor, environment, and anti-corruption.[302] "Strengthening society" indicates that corporations should consider the societies surrounding them and take action to support and

294. *See id.* at 1149.

295. *C.f.* Danielle S. Petito, *Sovereignty and Globalization: Fallacies, Truth, and Perception,* 17 N.Y.L. SCH. J. HUM. RTS. 1139, 1142-44 (2001).

296. *Id.* at 37.

297. Christine Parker, *Self-Regulation and the Not-for-Profit Sector* 3 (Melbourne L. Sch. Legal Stud. Rsch. Paper No. 372, 2007), http://dx.doi.org/10.2139/ssrn.1337278 [https://perma.cc/P4AS-UUAY].

298. David Coleman, *The United Nations and Transnational Corporations: From an Internation to a "Beyond-state" Model of Engagement*, 17 GLOB. SOC'Y 339, 339 (2010).

299. Nathan Andrews, *The UN Global Compact: An Overview of the Promise and Pitfalls, in* THE PALGRAVE HANDBOOK OF CORP. SOC. RESP. 865, 867 (David Crowther & Shahla Seifi eds., Springer 2021).

300. *See* DELOITTE & UN GLOBAL COMPACT, UN GLOBAL COMPACT MANAGEMENT MODEL 9 (2010), https://unglobalcompact.org/library/231 [https://perma.cc/43VD-D6GY].

301. UN GLOBAL COMPACT, GUIDE TO CORPORATE SUSTAINABILITY 6 (2014), https://d306pr3pise04h.cloudfront.net/docs/publications%2FUN_Global_Compact_Guide_to_Corporate_Sustainability.pdf [https://perma.cc/U55D-JK5N].

302. *Id.* at 8.

collaborate with them.[303] "Leadership commitment" requires corporation leaders to demonstrate a willingness to respect responsibility in their organizations, triggering all sectors to comply proactively with UNGC guidance.[304] "Reporting progress" is a monitoring process in UNGC that demands corporations submit a Communication of Progress (CoP) report on their efforts and achievements in implementing the ten principles.[305] "Local action" is forming regional networks to assist corporations in adapting and applying the principles in accordance with local contexts and needs.[306]

While ideally, an "eleventh principle" could be added to UNGC to connect legitimacy factors, negotiating such a new principle would require considerable effort and time. In addition, a new principle requires a new set of compliance measures, further delaying corporations' internalization of these factors. The existing UNGC actions have already provided potential niches to emphasize legitimacy factors. The "strengthening society" action focuses on the interaction between corporations and stakeholders, shifting corporate values from purely self-interested pursuits to creating common goods.[307] To achieve this goal, the UNGC set up projects targeting specific dimensions, including peace, poverty, education, and the rule of law.[308] Among these projects, the rule of law has a particularly strong connection to legitimacy factors.

Business for the Rule of Law initiative is at the heart of the UNGC's rule of law project, developed in collaboration with the UN Secretary-General's Rule of Law Unit.[309] This initiative provided a framework for corporations to respect and support the rule of law. The framework defines the rule of law as a principle that requires entities to have "'supremacy of law, equality before the law, accountability to the law, fairness in the application of the law, separation of powers, participation in decision-making, legal certainty, avoidance of arbitrariness and procedural and legal transparency.'"[310] These elements reflect core values, such as accountability, fairness, participation, and transparency. Based on this definition, the framework divides two levels of corporate actions: "respect" and "support" rule of law. Respecting the rule of law is a passive requirement, obligating corporations to comply with legal standards and avoid causing harm to society.[311] This must-do action needs to be upheld both domestically and internationally, ensuring that corporations do not impair the execution of justice or accountability.

303. *Id.*
304. *Id.* at 9.
305. *Id*. at 40.
306. *Id*. at 9.
307. *Id*. at 32.
308. *Id*. at 33.
309. *Id*.
310. UN GLOBAL COMPACT, BUSINESS FOR THE RULE OF LAW FRAMEWORK 7 (2015), https://d306pr3pise04h.cloudfront.net/docs/issues_doc%2Frule_of_law%2FB4ROL_Framework.pdf [https://perma.cc/HB6N-A2MZ].
311. *Id*. at 8.

On the other hand, support for the rule of law involves actions by corporations to help build legal frameworks or accountability institutions.[312] The framework considers support as an "optimal" action, encouraging corporations to provide a positive effect on legal systems. Support action is divided into core business, strategic social investment and philanthropy, and advocacy and public policy engagement.[313] Corporations develop products or services that enhance the rule of law in their core business.[314] "Strategic Social Investment and Philanthropy" focuses on corporate interactions with governments, international organizations, academic institutions, and NGOs, providing financial or physical aid, such as funds, expertise, volunteering, training, or mentoring.[315] "Advocacy and public policy engagement" highlight that corporations can enrich the substance of the rule of law by organizing collective actions to address challenges in complying with legal standards and assisting public actors to improve legal frameworks.[316] They can also advocate for responsible and transparent participation in public affairs, supporting the development of inclusive, responsive, participatory, and accountable institutions in decision-making processes.[317]

Support for the rule of law aims to ensure key legitimacy factors that might be compromised by TNCs in public standard-setting processes. While it provides examples of how businesses can respect the rule of law, it offers little detail on how to do so actively, rendering "support for the rule of law" more of a catchphrase.[318] The concept mentioned in support of the rule of law is too abstract for corporations to implement effectively. Therefore, providing specific, practical, and measurable guidance will help corporations understand and internalize these legitimacy factors in their actions. Rather than establishing new principles, these legitimacy factors should be integrated into the guidance for existing concepts within the framework.

Due to several key features, UNGC offers a promising training ground for TNCs to become more aware of legitimacy factors. First, it establishes a comprehensive foundation for meta-regulation aimed at value internalization.[319] By forming accountable institutions for TNCs and establishing direct channels for IOs to influence the global market, [320] the UNGC overcomes the limitations

312. *Id.* at 10.

313. *Id.* at 10-12.

314. *Id*. at 10.

315. *Id*. at 11.

316. *Id*. at 12

317. *Id*.

318. *See generally id*.

319. *See* Iuliia V. Bulgakova & Sergei D. Nabok, *The United Nations Global Compact as a Global Governance Mechanism of Corporate Social Responsibility and Sustainable Development*, *in* PROCEEDINGS OF THE INT'L SCI. & PRACTICAL CONF. ON SUSTAINABLE DEV. OF REG'L INFRASTRUCTURE (ISSDRI 2021) 59, 64 (2021), https://doi.org/10.5220/0010586100590064 [https://perma.cc/D7YH-J5RL].

320. Andrews, *supra* note 299, at 873.

of state-based governance at the international level.[321] Even though UNGC is based on a soft law approach, its commitment mechanisms, network structures, and reporting institutions form a sufficient framework to moralize corporations. The Global Compact Board Program aims to embed sustainability and responsibility consciousness in corporate leadership and on boards, thereby leveraging internal business power structures.[322] The UNGC, therefore, has fully considered who the audience is and advanced its influence by utilizing the power structure within the business. The well-known CoP mechanism embodies a grading system that classifies CoP into GC Advanced and GC Active according to the degree of disclosure,[323] enhancing transparency.

Second, UNGC is a recognized and stable platform with 25,493 participants worldwide,[324] including early adopters (since 2000) from the automotive industry.[325] Its widespread adoption suggests that its design and communication resonate well with businesses.[326] The UNGC does not seek to eliminate private interests but to integrate social values and find a balance within corporations. By using familiar business language and governance concepts, the UNGC increases the willingness of companies to participate.[327] Effective communication and thoughtful institutional design are crucial for global governance without binding forces to impose regulation.[328]

Third, UNGC was founded on a legitimate basis and continues to increase legitimacy in global governance. Originating from international law through the UN Secretariat and its principles, the UNGC is rooted in adequate legitimate ground.[329] Its communication-based and transnational nature allows it to pool the voices of non-governmental actors, increasing global dialogue reflecting universal value and inclusive participation, which enriches its legitimate value.[330] Additionally, UNGC is dedicated to moralizing global private actors and enhancing legitimacy in global governance.[331] Without a central authority

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321. *Id.* at 866.

322. UN GLOBAL COMPACT, GUIDE TO CORPORATE SUSTAINABILITY, *supra* note 301, at 36.

323. *Id*. at 40.

324. UN GLOBAL COMPACT, https://unglobalcompact.org/ [https://perma.cc/Z78P-S5H2] (last visited Aug. 6, 2024).

325. *Id*.

326. Guido Orzes et al., *United Nations Global Compact: Literature review and theory-based research agenda*, 177 J. CLEANER PROD. 633, 634 (2017).

327. Kenneth W. Abbott & Duncan Snidal, *The Governance Triangle: Regulatory Standards Institutions and the Shadow of the State, in* THE SPECTRUM OF INT'L INSTITUTIONS 52, 56-57 (Kenneth W. Abbott & Duncan J. Snidal eds., 1st ed. 2021).

328. SAROSH KURUVILLA, PRIVATE REGULATION OF LABOR STANDARDS IN GLOBAL SUPPLY CHAINS: PROBLEMS, PROGRESS, AND PROSPECTS 236 (2021).

329. *See* Tomáš Kristek, *The UN Global Compact: A New Perspective – the Dynamic Cyclical Spiral Evolutionary Model*, 67, 70 (22d Int'l Joint Conf. Central & E. Eur. in the Changing Bus. Env't: Proceedings, 2022), https://ceeconference.vse.cz/proceedings-2022/page_67-77/ [https://perma.cc/CY76-635L].

330. Andrews, *supra* note 299, at 872.

331. Scholte, *supra* note 186, at 116.

to secure legitimacy, global governance relies on the inner morality of laws,[332] necessitating a heightened moral consciousness among actors formulating global rules. Institutions that could reify morality into principles and cultivate global actors will enhance overall legitimacy at the global level, and the UNGC happens to be such an institution.

Fourth, UNGC can create an accountability network with other global initiatives. By leveraging business reputations to hold TNCs accountable,[333] the UNGC's impact is amplified through its influence on corporate reputations.[334] While UNGC is a soft institution, its potential to link with other initiatives provides a chance to bolster pressure on TNCs. UNGC collaborates with other initiatives or frameworks, including the Global Reporting Initiative (GRI), Carbon Disclosure Project (CDP), and ISO 26000, to complement content, extending its influence through a broader network.[335] Besides, the shared values established across these frameworks form broader accountability networks, encouraging TNCs to internalize and respond to these values. This repetitive reach of values helps TNCs internalize them effectively.

Lastly, UNGC is an open platform and can contribute to balancing the voice in the public standard-setting process.[336] By not setting thresholds for corporate participation, the UNGC attracts many Small and Medium Enterprises (SMEs), with nearly half of its participants being SMEs.[337] This inclusivity makes the UNGC a valuable source of diverse participants for global governance. A vital issue presented in the participation of TNCs in the public standard-setting process is that IOs often invite well-known corporations yet undermine the balance of different voices.[338] The opinions of SMEs are particularly susceptible to being diluted when transitioning from domestic to international levels.[339] The UNGC's participant list provides a reference for IOs to invite diverse actors, ensuring a balanced representation of voices.[340]

While UNGC has significant potential to shape the behavior of TNCs, its soft-law nature still raises some doubts. It is frequently criticized for being ineffective, and although it indicates that long-term implementation of the

332. Kingsbury, *supra* note 22, at 38; Scholte, *supra* note 186, at 116.

333. *See* Mende, *supra* note 219, at 213.

334. Orzes et al., *supra* note 326, at 651.

335. UN GLOBAL COMPACT, *supra* note 323, at 40.

336. Andreas Rasche & Dirk Ulrich Gilbert, *Institutionalizing Global Governance: The Role of the United Nations Global Compact*, 21 BUS. ETHICS: EUR. REV. 100, 108 (2012).

337. *Id*. at 107.

338. *See* Peter J. Spiro, *Constraining Global Corporate Power: A Short Introduction*, 46 VAND. J. TRANSNAT'L L. 1101, 1103 (2013).

339. *See* José Manuel Alvarez Zárate, *Legitimacy Concerns of the Proposed Multilateral Investment Court: Is Democracy Possible?*, 59 B.C. L. REV. 2765, 2775 (2018); John Gillespie, *Localizing Global Rules: Public Participation in Lawmaking in Vietnam*, 33 LAW & SOC. INQUIRY 673, 696 (2008).

340. *C.f.* Dirk Ulrich Gilbert, *The United Nations Global Compact as a Network of Networks, in* THE UNITED NATIONS GLOBAL COMPACT 340, 341 (Andreas Rasche and Georg Kell eds., 2012).

UNGC leads to higher acceptance of social responsibility in business,[341] others argue that its weak enforcement renders the UNGC a "bluewashing" machine.[342] The UNGC relies on CoP to monitor corporations driven by stakeholder pressure and business reputation, but it lacks rigorous audit procedures to review compliance.[343] This "toothless" institution allows corporations to enjoy a reputation for claiming their participation in UNGC without changing harmful behavior.[344] Although UNGC delists corporations that do not submit periodic reports, the low threshold for delisting makes this action rare.[345] In addition, the UNGC does not tailor standards or codes of conduct for each principle, merely recommending that corporations follow the instructions from related organizations, which leads to uneven compliance between principles.[346]

A second major criticism surrounds participating entities. Researchers believe that US-based TNCs are less willing to join UNGC due to fears that participation could provide compelling evidence of lawsuit non-compliance.[347] However, it is worth mentioning that these TNCs are still involved in the initiative despite their absence of commitment to UNGC,[348] reflecting the influential position of UNGC and these corporations being unable to ignore its formation and growth. The extended problem will be representation in UNGC. Research indicates that it is insufficient when discussing particular issues on behalf of stakeholders, such as labor organizations.[349] Additionally, gender inequality within the UNGC has been highlighted.[350] Even though UNGC is relatively open to all actors, scholars have warned of the necessity of being aware of power inequality between TNCs and other actors.[351]

While it contains several risks, UNGC can serve as a base for developing a comprehensive mechanism for internalizing legitimacy factors into the practice of TNCs. Given its scale, structure, and influence, UNGC deserves to be strengthened and improved to guide TNCs in performing better in their interactions with society.

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341. Andrews, *supra* note 299, at 872.

342. Rasche & Gilbert, *supra* note 336, at 106.

343. Orzes et al., *supra* note 326, at 640.

344. Rasche & Gilbert, *supra* note 336, at 106.

345. Until now, only 29 businesses are delisted from UNGC. *Delisted Participants*, UN GLOBAL COMPACT, https://unglobalcompact.org/participation/report/cop/expelled/ [https://perma.cc/S794-8QLQ] (last visited Aug. 6, 2024).

346. *C.f.* Ruth Jebe, *Sustainability Reporting and New Governance: South Africa Marks the Path to Improved Corporate Disclosure*, 23 CARDOZO J. INT'L & COMP. L. 233, 256 (2015).

347. Rasche & Gilbert, *supra* note 336, at 108.

348. Bulgakova & Nabok, *supra* note 319, at 63.

349. Rasche & Gilbert, *supra* note 336, at 107.

350. Orzes et al., *supra* note 326, at 640.

351. Bulgakova & Nabok, *supra* note 319, at 63.

ii. Policy Recommendations to Strengthen Transparency, Legitimacy, and Accountability

Reshaping the behavior of TNCs is a crucial step toward positive public-private interaction, but modification within IOs is necessary to mitigate the risk of the interaction.

A. Raising Awareness of the Nature of Standards and the Roles of TNCs

Although international standards must await state enactment to gain binding force, this does not justify a lax approach to the standard-setting process.[352] Standards established by IOs are highly likely to be adopted by states, transitioning from soft law to formal law.[353] Once these standards are codified, rectifying flaws resulting from a lenient process becomes challenging.[354] Therefore, these standards should be approached with the same rigor as binding rules from the outset, necessitating thorough procedures in their development. IOs should also be aware of knowledge-making processes involving complex techniques or knowledge.[355] In the WP.29 case, the absence of safeguards to ensure knowledge neutrality leaves room for TNCs to manipulate the standard-setting. As civilization rapidly advances, rules and standards will inevitably become more intricate and closely tied to complex knowledge. IOs must establish safeguards at the knowledge-making stage, especially when knowledge has become one source of legitimacy to IOs.

Additionally, IOs should redefine the roles of TNCs in the processes. IOs with state-based institutions will find inconsistencies between their normative ideology and actual practice when interacting with TNCs. For instance, according to WP.29 rules, TNC participation is deemed "exceptional," allowing the units to provide opinions without decision-making rights.[356] However, TNCs frequently influence the standard-setting process from its early stages.[357] This inconsistency amplifies TNC power without accountability. Updating accountability mechanisms is crucial, with IOs needing to stop viewing TNCs as mere sub-participants and instead defining appropriate roles. The emergence of the pacing problem implies that public-private interactions will inevitably change from top-down to collaboration because of the need for expertise and resources. Public actors, thus, should not maintain an overly optimistic attitude toward private actor participation. Instead, as these public actors explore more diverse modes of cooperation, they should be more conscious of the associated risks. Determining specific collaboration modes and TNC roles is complex and

352. *See* Kuo, *supra* note 17, at 1058.

353. *See* Krisch & Kingsbury, *supra* note 15, at 3-4.

354. *See* Kingsbury, *supra* note 22, at 38-39.

355. Miller, *supra* note 234, at 350.

356. *See* U.N. ECON. COMM'N FOR EUR., WORLD FORUM: TERMS OF REFERENCE, *supra* note 51, at 5.

357. *See* the section II(ii)(B) in the article.

requires further research.

B. Improving Transparency Through Meaningful Disclosure

Transparency is crucial for IOs to become aware of risks and enhance accountability regarding the actions of TNCs. However, the approach to pursuing transparency can vary based on the purpose and target audience. Although WP.29 has emphasized the importance of transparency and commitment to fulfill this goal, it lacks a comprehensive and meaningful plan. Like most IOs, the measure WP.29 attempts to achieve transparency by publicizing laws and opening information related to decision-making.[358] While such a measure increases public accessibility, superficial disclosure fails to foster public debate and meaningful accountability.

In the WP.29 case, documents related to the standard-setting process are available online but lack a unified format. Documents from formal meetings (GRs and WP.29 forums) generally have consistent formats and contain more details, such as participant lists, discussion results, and decision reasons.[359] These details are valuable for the public to understand the decision-making process, review its legitimacy, and assess the reasonableness of decisions, the representativeness of participants, and the equality within the meetings. In contrast, documents from IWGs vary in format and often provide only rough descriptions of discussion processes, making meaningful public review difficult.[360]

The discussion processes within IWGs, considered knowledge-making processes or pre-decision-making processes, attract less attention from WP.29 but involve significant public-private interactions, creating a hole for TNCs to inject their private interest and shape the standard-setting processes from the early stages. Although GRs review decisions made in IWGs, they may not always identify the potential risks.[361] Uncovering private intentions becomes more challenging when decisions are cloaked in technical or knowledge-based justifications. Thus, disclosing relevant information, including proposers, participants, and reasons, not only increases the possibility for the public to

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358. U.N. ECON. COMM'N FOR EUR., *Open UNECE, supra* note 207.

359. *See e.g.* Working Party on Automated/Autonomous and Connected Vehicles [GRVA], UNECE, *Report of the Working Party on Automated/Autonomous and Connected Vehicles on Its Fourteenth Session*, ECE/TRANS/WP.29/GRVA/14 (Dec. 9, 2022).

360. *See e.g.* UNECE Task Force on Cyber Security 23rd TFCS Session, Minutes from the 23rd Cyber Security/Software Updates Task Force Session, Doc. TFCS-23-06 (Oct. 19, 2022).

361. *See e.g.* Working Party on Automated/Autonomous and Connected Vehicles [GRVA], UNECE, Report of the Working Party on Automated/Autonomous and Connected Vehicles on its Sixth Session, ECE/TRANS/WP.29/GRVA/6, at 3-4 (May 1, 2020); Working Party on Automated/Autonomous and Connected Vehicles [GRVA], UNECE, Report of the Working Party on Automated/Autonomous and Connected Vehicles on its Fifth Session, ECE/TRANS/WP.29/GRVA/5, at 6-8 (Apr. 18, 2020). Although GRVA discussed the proposal submitted by TFCS, which was originally prepared by GM and Tesla, this information was not officially documented in the meeting records.

capture harmful intentions[362] but also lures more stakeholders to join the discussion, balancing the outcome.[363]

IOs should host meetings and serve as information hubs, giving the public access to rulemaking processes.[364] They can contribute positively to accountability and democracy by establishing meaningful disclosure mechanisms. Publicizing all documents in the meetings could merely count as bottom-line transparency. A fundamental aspect of this mechanism should be publishing all relevant documents in a unified format. A standardized format not only aids public information searches but also ensures that essential messages, such as proposers, participants, and reasons, are captured. These messages enhance public review by reconstructing decision-making processes and identifying consequences.

Furthermore, analyzing these messages can reveal inherent patterns and unintentional biases in the decision-making process. For instance, WP.29 could identify its reliance on certain corporations and take steps to mitigate bias by analyzing detailed messages. This could foster efficient self-censorship in decision-making processes, reducing the risk associated with expanding private power. Therefore, this article suggests that IOs should move from bottom-line transparency to meaningful disclosure and promote public discussion and accountability.

C. Enhancing Accountability by Supporting Value Internalization for TNCs

Reviewing processes from third parties is a primary measure to secure legitimacy and hold agents accountable. However, such a measure is difficult to build in a space that lacks a centralized power structure,[365] necessitating the development of different accountability mechanisms. In addition, there is still no stable public-private collaboration model to effectively hold private actors accountable when they pose risks to public affairs. To break through this dilemma, IOs could link with UNGC, strengthening its pressure-based accountability on the action of TNCs. If it is difficult for IOs to hold TNCs accountable when they participate in the standard-setting process, they could at least select the quality of participants. IOs could set up rules prioritizing TNCs committed to UNGC, encouraging more corporations to commit and broadening its coverage. The more corporations commit to the initiative, the more robust a network will be formed, thereby gathering more sources and power to push corporations to be responsible for their action. Namely, IOs and UNGC could mutually benefit from such collaboration.

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362. Urueña Hernandez, *supra* note 191, at 399.

363. *See* Rachel Chambers & Anil Yilmaz Vastardis, *Human Rights Disclosure and Due Diligence Laws: The Role of Regulatory Oversight in Ensuring Corporate Accountability*, 21 CHI. J. INT'L L. 323, 326 (2021).

364. *See* Mahon & McBride, *supra* note 233, at 86-87.

365. Möllers, *supra* note 16, at 113.

Furthermore, meaningful disclosure can strengthen the pressure-based accountability behind UNGC. The pressure from stakeholders, including investors, bankers, and consumers, will push corporations to adopt UNGC. However, information disclosure is required to verify whether their actions align with these principles and relevant values. Meaningful disclosure offers evidence for the public to validate corporate actions. NGOs and activists who positively contribute to CSR adoption, specifically in business,[366] can use this evidence to supervise corporations and trigger punishments, such as disinvestment and boycotts, when corporate behavior contradicts their UNGC commitments. Additionally, information disclosure may attract media, further strengthening pressure-based accountability by increasing reputational costs for corporations that act against their commitments.[367]

V. CONCLUSION

With the rapid development of technology, IOs will continuously rely on actors who can provide expertise and opinions to resolve governance issues on technology jointly. This reliance gives TNCs significant opportunities to participate in public standard-setting processes, enhancing their influence on societal norms. However, IOs designed based on state-centric logic may undermine the risk posed by the increased TNC involvement. This analysis uses WP.29, the organs of the UN system, as a case to reveal its interaction with TNCs and the resultant challenges. It also applies the GAL framework to analyze the legitimacy problems within the interaction between WP.29 and TNCs, demonstrating that existing mechanisms within WP.29 fail to hold TNCs accountable despite their significant impact on standard-setting.

On the other hand, the thirst for knowledge in global governance will lead to a more significant expansion of private power in different issue areas. Without proper safeguards, it will pose risks to society. While a blanket ban on private participation will be the most straightforward measure, it will damage legitimacy by impeding reasoned decision-making and participatory values. Building third-party reviewing processes at the global level is also challenging. One method for handling this dilemma is, as noted above, valuing internalization in the practice of TNCs, which can form an essential safeguard to maintain legitimate value in the operation of global governance.[368] UNGC is an eligible foundation for developing value internalization at the global level. UNGC sits between soft and hard law and goes beyond state governments to directly communicate with corporations,[369] providing opportunities to create efficient governance. Additionally, IOs must understand TNC roles better, implement meaningful disclosure practices, and support UNGC and its

366. Orzes et al., *supra* note 326, at 363.
367. *See id.*
368. *See* Kingsbury, *supra* note 22, at 25.
369. Kristek, *supra* note 329, at 68.

accountability framework.

However, several limitations still exist, as do areas for further research. Firstly, the case study in this article focuses on interactions between TNCs and traditional, state-centric organizations, which may not reflect the dynamics in government-based or network-based organizations. Further research is needed to explore TNC roles in different organizational contexts. Even though some scholars have asserted that IOs are dysfunctional at this age, they still influence states. Additionally, the continuous participation of TNCs in organizations reflects their crucial roles in global governance. Technology keeps blurring state boundaries, increasing the need for optimal global governance. Continued research into IO operations may offer insights for improving governance practices.

Secondly, while this article critiques procedural legitimacy, the comprehensive GAL framework also encompasses substantive analysis. Examining the quality of outcomes could provide a deeper understanding of current practices and inform better governance strategies. Thirdly, the roles of TNCs need to be redefined, but this is a complex issue requiring further exploration. The traditional public-private binary inadequately captures TNC roles, complicating the development of effective accountability mechanisms. Therefore, more research is needed to define these roles more precisely and establish appropriate accountability structures. Lastly, although the UNGC is a potential platform to enhance legitimacy, questions about its further improvement remain.