数字门槛

中国社交媒体应用实名制政策对海外用户的影响

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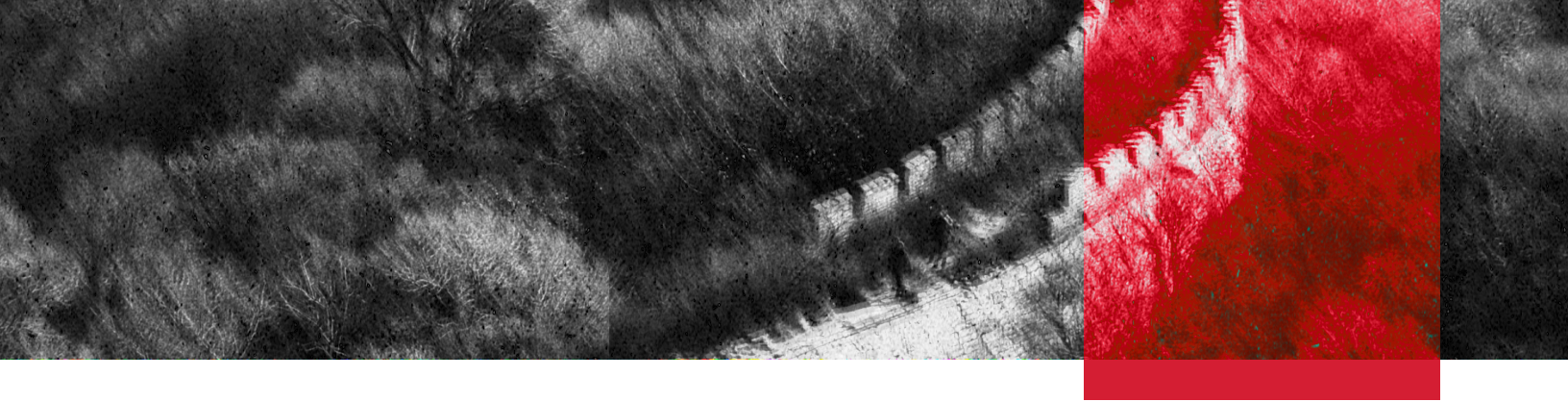
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1. 高参摘要与主要结论

中国共产党将中国互联网公司开发的社交媒体应用程序看作是更广泛的意识形态安全防火墙的关键组成部分，并称其所处的空间为互联网"灰色地带"。在与明确的政策目标相符的情况下，这些平台应当阻止潜在的有害外来思想和信息渗透进中华人民共和国境内的网络空间。

我们的研究显示，中国开发的应用程序大约有75%已经实施了相应的控制措施，即实名注册（Real-Name Registration, RNR）政策。这些政策的目的是要求所有网络活动必须能识别出背后的个人用户，从而在牺牲用户匿名性的前提下让政府得以严格控制网络活动。

值得注意的是，中国网络主权之所以能在全球范围内产生影响，是因为受其影响的社群对中国社交媒体平台和通讯工具的依赖。那些因发表政治敏感言论而被封号的用户往往被迫公开写下绝望的道歉信，以便争取重新获得使用中国控制的社交媒体的权限。[1]对于地理上被分割开的社群（其中一些成员在中国国内，一些在国外），中国的社交媒体平台几乎就是数字基础设施的代名词。[2]自2000年代末开始，Facebook和YouTube等国际平台在中国相继被封禁，中国的互联网平台已成为跨国通信的主要途径。

然而，上述封号现象初步表明，利用身份可识别性进行跨国影响或压制是其局限性的。如果所谓"敌对"用户带来的威胁超过了监视他们的益处，这些用户可能会完全被排除在监视系统之外。

中国社交媒体应用曾与美国巨头在下载量方面一较高下，在2016年初甚至一度超越了美国平台，而现在却逐渐失去了人气（见下方图1）。因此，本报告提出这样一个假设：中国互联网的安全化和这些应用的衰落是同一个问题的两个方面。这就引出了一个思考：中国为确保身份可识别性做出的努力是否也在有意或无意间对海外用户产生了限制？

图1：中国应用程序在全球范围内的兴衰

全球应用商店中美国与中国社交应用的月度排名

— 美国应用程序　　— 中国应用程序（包括抖音国际版TikTok）　　---- 中国应用程序（不包括抖音国际版TikTok）

Rank
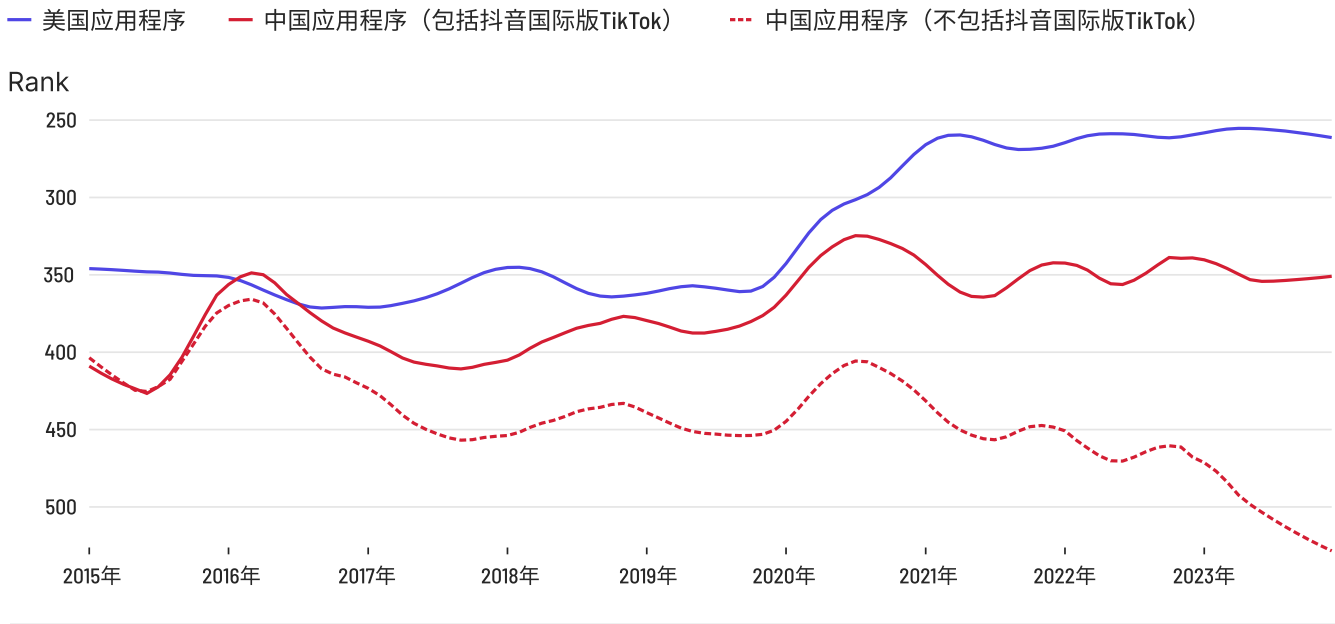
图表显示的是美国和中国社交应用在全球的排名，不包括它们在各自国内市场的表现。点状标记代表某个应用程序在相关国家应用商店中的排名。趋势线代表近年来下载量的变化。为了便于阅读，我们对纵轴的范围进行了限制。

来源：报告作者对Appmagic提供的数据进行的计算

在探讨这一核心问题的同时，我们还将探讨三个相关问题。首先，中国平台在全球范围内实施实名注册制度的程度到底有多广泛？其次，当海外用户由于电话号码问题或应用商店的障碍（有时两者兼有）无法遵守实名注册制度时，他们将面临哪些后果？第三，这些访问障碍会对海外在线社群产生什么样的影响——是否可以将这些障碍视为中共的一种针对性排除机制？

报告主要结论如下：

1. **针对海外用户的身份可识别要求十分常见**：我们的研究显示，中国开发的社交媒体应用大约有四分之三都对海外用户施行身份可识别要求，这是互联网"灰色地带"中一个庞大且可控的组成部分。

2. **实名注册要求导致访问障碍**：我们的研究表明，实名注册政策的实施在国内外用户以及广泛的海外华人群体中造成了重大访问障碍。我们对58个国家的中国社交媒体应用的访问障碍进行了定量评估，结果表明相关限制普遍存在。在测试中，约有35%的用户遇到了阻碍，无法完全访问相关平台。

3. **实名制应用的下载量出现下滑**：我们分析2015年至2023年的下载趋势后发现，实名制应用的全球下载量显著下滑。自2017年中国网络安全法实施后，相关应用的下载量减少了82%。经过对相关数据的分析，我们估计在该时期共有1410万次应用下载未能实现。

4. **访问障碍存在地区差异**：中国社交媒体平台施加的访问障碍在不同地理位置有所差异。例如，与泛欧洲地区、中东北非地区和南美洲相比，QQ和微博这样的平台在亚太地区的限制较少。这种执行模式的区域差异表明，至少在某些地区，中共宁可承担实名制对经济和政治收益的负面影响，也不愿冒险接受开放的互联网可能带来的"危险"的外部思想。

鉴于这些发现，我们认为，通过实名注册政策实施的中国影响力行动可能具有战略性的数字界限和限制。中国的跨国影响行动主要是为了保护国内话语空间，防止与中共不一致的外部意见和评论的影响，这一目标可能比利用社交媒体平台影响全球话语或动员海外社群更为重要。从根本上说，中国不仅在以对自己有利的方式重塑网络话语空间，还在其希望建立影响力的领域与被视为"有害的"、不一致的政治观念的领域之间划定了新的数字边界。

2. 背景：中国追求网络主权带来的国际影响
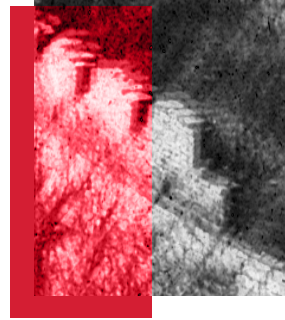
中共正越来越坚定地引领中国追求对国内网络空间实现无可争议的控制。这种对"网络主权"的追求包括克服西方互联网治理原则和标准设定的做法，实现技术独立，以及利用信息技术来支持政权而非削弱之。[3]然而，北京的指导思想是希望建立一个完全由党国控制的"家长式"互联网，确保网络空间的所有方面都与其线下政策保持一致，即实现"网上网下一体化"。[4]

自其成立之初，中国共产党就在不同程度上展现出控制信息的野心，试图掌控在中国可以交换哪些信息以及由谁来进行交换。[5]在了解到社交媒体在2009年至2014年间促成新疆地区的有组织抗议活动后，中共领导层更加坚信，监控网络信息的流动并审查可能破坏社会及政治（即政权）稳定的内容有着至关重要的作用。[6]

因此，习近平政府推行了一系列立法改革，新建立了如国家互联网信息办公室（CAC）这样的强权机构，[7]并为这些机构赋予了新的意义和使命。这些措施极大地扩展了中国复杂且无所不在的监控体系，不仅用于迫害少数民族和宗教团体，也用来压制言论自由和异见。[8]政治科学学者们认为，这种先进的监视系统实现了两种广泛且迄今为止相当成功的策略：一是在政治反对派形成任何实际抵抗力量之前将其扼杀（即预防性镇压），[9]二是容许甚至主动策划无实际威胁的抵抗行为（也称为"导向性数字异议"）。[10]

实现如此广泛的网络控制的关键在于强制实施普遍的身份可识别性，即要求必须进行身份认证才能上网。在中国，这一要求通过各种技术和监管手段来实施，统称为实名注册政策。

从更广泛的角度来看，身份可识别性与匿名性之间存在二元对立关系，二者只能选其一，但它们在互联网空间中都扮演着重要的角色。身份可识别性有助于培养数字公民意识，加强民主机构，并有效抗击仇恨言论、欺诈和网络犯罪等。[11]另一方面，维护匿名对于保护吹哨人和处于风险中的个体至关重要，它能赋予家暴幸存者和边缘化群体更多权利，并保护个人权利免遭严重的不公正待遇，对于生活在如中国这样压迫性政权下的个人和群体来说尤其如此。[12]本报告的作者认为，只有在必要且适当的情况下，例如在涉及仇恨言论或欺诈的情况下，才应限制匿名并通过身份验证措施来确定用户的真实身份。[13]

然而，中国政府在极力强调身份可识别性的同时削弱了匿名性，采取强硬的手段推行实名制，其相关标准远超应对仇恨言论和欺诈的范畴。实际上，对于中国的预防性镇压系统而言，身份可识别性是监控未来抗议活动计划、压制言论以及识别参与政府抗议人士的主要手段。[14]例如，[15]自2020年起，中国的所有网络用户都必须在社交媒体上公开其IP地址。[16]从2022年开始，拥有超过50万粉丝的社交媒体账户必须在网上公开真实姓名，[17]这一政策显著缩小了中国的网络社群。[18]

正如一些相关研究一样，本报告关注中共追求网络主权所带来的国际及跨国影响。这种影响是多方面的，为许多不同的行动者和社群带来了新的问题和挑战。中国数字经济的全球扩张不仅推动了国内工业的现代化，[19]也按照中国的利益重塑了国际规范和标准。[20]同时，中国的互联网平台在破坏民主机构，[21]进行认知战，[22]以及通过短视频平台和具有国际影响力的网络红人来"讲好中国故事"。[23]因此，实现网络主权不仅是经济问题，也是关乎话语权的国策问题。[24]

身份可识别性具有跨国维度。最近的研究揭示了身份识别措施如何帮助监控和审查针对中国的更广泛的讨论。[25]例如，加拿大一所高校附属的研究机构"公民实验室"（The Citizen Lab）发现，在中国境外注册的微信用户（估计有1亿人）受到与中国国内用户相同的内容监控。[26]反过来，这种方式收集的数据帮助中国在海外华人社群中开展有针对性的、个体化的信息行动。最近的研究显示，这类信息活动利用海外华人对中国社交媒体的依赖[27]来促进海外亲北京社群的团结，[28]并在海外华人社群与其所在国之间制造分裂，[29]特别是在美国的华人移民社群中表现尤为明显。[30]

令人不安的是，中国社交媒体上的用户身份认证还使得异见人士和流亡海外的少数族裔在现实世界中[31]面临恐吓和压迫。全球范围内，由中共领导的个人和机构通过被称为"统一战线"[32]的网络拉拢和强迫异见人士和流亡者就范，这些做法统称为跨国镇压，已经波及全球各地，受影响的群体包括宗教团体（如藏人和穆斯林）、香港的民主派政治家、人权律师、[33]学生活动家、网络红人等。[34]中国当局除了执行上述手段外，其安全部门在海外设立非法的警察站，[35]并在海外异见人士的电子设备上部署侵入性的间谍软件，[36]这三者协同作用。在中国平台上遵守实名注册要求的用户因此暴露在监控之下，特别是在微信上，[37]当局利用收集到的信息去恐吓和压制这些人及其在中国的家庭成员。[38]

3. 研究方法

我们采用了三种方法来研究、论证和分析本报告的每个章节，具体办法如下：

■ 中国保护网络意识形态安全的努力

在这一部分中，我们进行了政策研究，分析了1972年至2023年间中国政府机构发布的有关实名制（实名制[登记]）的党内文件、法律和规章。相关文件自2000年起，详细条目请参见附录2（报告中引用了附录2中的所有条目）。

■ 实名注册相关访问障碍和用户排除模式

在这一部分中，我们进行了三个相互关联的研究。2024年3月，我们进行了"应用程序漫游"（app walkthroughs）测试，以记录跨国实名注册相关访问障碍。在此过程中，我们选择了苹果或谷歌应用商店中标记为"社交"类别的所有应用程序，用户通过这些程序进行信息交换。通过这种方法，我们获得了中国月度下载量最高的62款应用程序的数据，这些数据来自苹果应用商店和谷歌Play商店。

随后，我们通过AppleCensorship.org网站收集了58个国家的审查数据，以测试这些国家的应用商店是否已经下架了某些应用程序。

最后，我们进行了一项匿名调查，以评估访问障碍对跨国受众的影响。我们调查了65名在使用中国网络平台时面临重大风险的用户，这些用户包括政治异见人士、少数民族、活动家以及其他易受中国政府监控和审查的个体。调查旨在了解他们对注册和账户维护政策的看法。

更多详情请见"附录1：研究方法"。

■ 实名注册政策在全球范围内对应用下载的影响

在这一部分，我们开展了两项相互关联的研究。为了探究中国限制性实名注册系统的国际影响，我们首先对下载模式进行了数据分析，数据来源是应用商店情报提供者Appmagic的数据集。这一数据集涵盖了2015年至2023年间在苹果应用商店和谷歌Play商店中60个国家（包括中国）的月度下载统计，覆盖了全球约93%的下载量。基于这些数据，我们进行了时间序列分析，以识别访问障碍对海外影响的具体情况。

随后，我们使用了世界银行、联合国（UN）和经济合作与发展组织（OECD）提供的人口和侨民数据，评估访问障碍对海外华人社群的影响。

更多详情请见"附录1：研究方法"。

4. 中国保护网络意识形态安全的努力

习近平在2014年对中国网络机构进行了重大改革，开启了"后集中化"时代。从那时起，中共大幅扩展了其审查机制，以加强对国内互联网空间的控制。[39]这些控制手段包括对应用商店的审查和整顿活动，目的是强化内容监管。[40]下文中，我们将详细介绍通过实名制实施网络身份可识别性的相关意识形态和立法发展，并解释当局是如何战略性地制定这些政策来监控国内言论并排除外国用户的。

4.1 中国互联网的"三个地带"：围绕"红色"互联网的意识形态安全防火墙

中共最重要的战略目标是确保国内的稳定，即"维稳"，而实名注册系统是实现这一目标的重要工具之一。[41]维稳是一项持续不断的运动，其目的在于压制内部的反对声音[42]和防止出现类似颜色革命或阿拉伯之春那样的内乱。[43]

2013年，习近平在全国宣传思想工作会议上讨论了全球互联网对中国政权稳定带来的挑战。[44]习近平将国内的意识形态凝聚力和全球舆论划分为三个地带：红色地带、黑色地带和灰色地带。根据习的描述，中国本身是最内层的"红色地带"，应由主流媒体和国家宣传机构加以控制。红色地带之外是充满敌对叙述和颠覆性思想的"黑色地带"，如"普世价值"。位于内部（红色）和外部（黑色）地带之间的是"灰色地带"这一"战场"。习近平指出，互联网是灰色地带中的"最大变量"，因为"敌对势力"将不断利用它来塑造和操纵那些可能动摇中国的"心头之患"。[45]

> 对红色地带，要巩固和拓展，不断扩大其社会影响。对黑色地带，要勇于进入，钻进铁扇公主肚子里斗，逐步推动其改变颜色。对灰色地带，要大规模开展工作，加快使其转化为红色地带，防止其向黑色地带蜕变。这些工作，要抓紧做起来，坚持下去，必然会取得成效。

习近平，2013年[46]

2013年至今，中国已经建立了习近平所说的"三区"互联网框架。因此，中国的国内网络空间（即内部红色地带）持续被转变为中共所称的"健康有序发展"或"风清气正的网络空间"。[47]实现这一目标需要清除中国互联网上批评政权的声音，以及自由或进步的政治概念，如"新闻自由""普世人权"和"宪政民主"。[48]可能"破坏国家统一""损害国家荣誉"或倡导"分裂思想"的内容也必须被积极清除。因此，中国网络监管权力机构网信办的首要任务就是"控制网络信息空间，防止出现有公共舆论属性和社会动员能力的有组织的反对"。[49]

随着中国国内控制和审查机构的加强，对监控和限制与全球其他网络世界的信息交流（即防止"信息渗透风险"）的需求也日益增强。网络民族主义者和更广泛的宣传机构越来越频繁地对"灰色地带"发出警告，他们警告称"西方故事"和"反华内容"[50]可能通过这一灰色地带渗透进中国，从而模糊公共知识分子[51]和党员[52]乃至军事领导层的视线。[53]

在这场仍在进行的战斗中，私营科技行业是中国的第一道防线。这个行业的责任是"对网民认知事物进行指导与导向"并确保"话语安全"。像社交媒体应用和互联网公司的运营者这些非传统意义上的安全机构和个人，以"网络意识形态安全"为出发点保护灰色地带。[54]因此，党内知识分子常将这些机构和个人称作"国家网络安全屏障"[55]或"意识形态安全防火墙"，用以阻止错误和有害内容在中国内部传播。[56]

因此，监控和控制灰色地带以及防止任何可能毒化中国内部红色地带的政治话语的能力，无疑与谁能访问中国的社交媒体并参与其中的问题密切相关。

4.2 立法背景：通过手机号注册实现中国互联网的全面可识别性

为了加强中国的意识形态安全防火墙，党国寻求用可靠且可持续的方式将线上行为与线下身份联系起来。因此，中国国内互联网公司必须将可识别性作为使用其服务的一项条件。实名制的合规要求通常包括提交用户手机号以及面部和身份证的扫描。2021年3月和2022年9月，当局先后发布了全面的规定，要求几乎所有与互联网接入相关的服务都必须收集身份信息（见附录2），包括DNS解析和信息服务。除了使用搜索引擎外，实名注册已经成为访问中国互联网的必要条件。[57]这是继2010年、2015年和2017年三个重要标准制定之后，十多年监管迭代的结果。

自2010年以来，实名注册已成为在中国办理手机号码的必要条件。根据全国人民代表大会的决定，中国的三大国有电信运营商在销售SIM卡时必须进行身份验证。[58]这一规定旨在将电话号码与身份证及实时地理位置数据关联起来。[59]然而，实际上，当这一决策刚刚出台时，知识分子和党员之间对实名注册制的做法还在讨论中，[60]最初的实施遭遇了阻碍。[61]从2010年至今，当局陆续推出了更多监管措施。[62]例如，自2019年起，用户在购买SIM卡时必须进行面部识别扫描。[63]更全面的立法概览请参见附录2。

其次，网信办在2015年推出了一项新的网络账户管理原则，名为"后台实名、前台自愿"。依照这一原则，所有互联网信息服务提供者必须对用户进行身份验证，但同时用户可以选择在网络平台上匿名。[64]

最后，2017年6月出台的《网络安全法》在中国互联网的大部分领域实现了身份可识别性。《网络安全法》第24条规定，所有网络运营者必须要求用户提供真实身份信息。[65]在2017年及2018年期间，党国还进一步加大了对互联网公司执行实名注册政策和保护国家安全利益的压力（见附录2）。这些政策明确要求确保政权稳定，加强自我审查，并践行意识形态防火墙。[66]

要求用户提交手机号码是互联网信息服务提供者遵守"后台实名"要求的一种办法，因为党国可以通过访问三大电信运营者的数据来完成身份验证。因此，2016年，工业和信息化部发言人表示，中国92%的SIM卡已成功与身份信息关联。[67]这种高比例的手机号码身份识别率使互联网服务提供者能够使用手机号码完成身份验证要求，而无需处理大量用户私人信息。[68]在中国以移动设备为主运行的互联网经济中，手机号码（+86）依然是用于账户注册的普遍且低技术含量的准身份标识符（见图2）。

然而，由于中国的实名注册系统依赖于服务提供者和电信运营者之间复杂的数据交接，网信办于2024年开启了一项国家认证服务，目的是简化并统一中国的身份识别系统。[69]通过这项服务，网信办向用户颁发国家互联网ID，并要求互联网服务提供者在认证用户身份时接受这些ID。[70]这项国家服务的核心是一个"可信身份"的集中数据库，公安部首次在2014年尝试使用这一数据库，以支持公私部门间与实名注册相关的技术通信（详见下方图3）。

图2：手机端实名制注册规定

在大多数中国应用上，创建账户都必须绑定手机号码。

来源：2024年2月在微信上进行的"应用程序漫游"

图3：集中数据库实现跨所有服务的身份识别

可信身份认证平台概念金字塔 (互联网+可信身份认证平台)

网络信任身份（CTID）平台允许中国应用程序和互联网服务提供者根据已注册的身份证件验证电话号码。截至2020年，这个三级平台每天进行大约1500万次认证。它包含一个中心数据库，该数据库包括各行政机构的身份证件和由国家电信运营者验证的电话号码（第一级）。这使得第三方认证服务提供者（第二级）能够在商业在线服务上验证用户，例如微信和支付宝[71]（第三级）。

CTID运营者称，该平台的客户从2020年的26个机构客户增长到2022年的50个行业和350个机构，[72]期间收集了的身份信息达到惊人的50亿份，包括身份证、护照以及来自香港、澳门和台湾居民的数据。[73]CTID还被开发用于支持生物识别技术，包括面部、指纹、声音和步态识别，其目标是最终替代传统的身份证和护照。[74]

第3级：业务凭证级

第2级：第三方作证级

第1级：法定信任基础级

来源：OIDAA, CTID平台：中国特色网络可信身份战略实践, 2020年6月19日, https://archive.is/4qrqb.

背景：

- 国家"网络信任体系"的概念最初由人力资源和社会保障部在2008年8月提出。当时该部门还建议，用户必须先验证身份才能获准访问互联网。

- 2014年，中国公安部被授权建立一个"中国特色的网络可信体系"，以数字化方式统一中国国内互联网上的所有身份认证过程。

- 以人社部的工作为基础，公安部在2017年正式开始开发CTID，此前该项目被称为"互联网+可信身份认证平台"或"国家网络身份认证公共服务平台"。[75]

- 2024年，公安部和网信办出台国家互联网ID系统，旨在集中化、国家化用户身份验证及个人数据的处理。

5. 实名注册相关访问障碍和用户排除模式

本章节通过定性和定量证据，揭示实名注册政策作为访问障碍在全球范围内是如何实施的。在整理这些证据时，我们选择了一组有代表性的应用，这些应用是中国最受欢迎的社交平台，也是习近平在2013年提出的互联网"灰色地带"的典型代表。如果这些应用程序能自由使用，将促进国内外用户之间广泛而有意义的信息交流。

相关文件从未明确规定应用程序提供者是否应要求非中华人民共和国用户遵守实名注册要求，这种模糊性也使得海外用户不可避免地受到中国不断扩展的实名制体系的影响。理论上（可能是有意为之），这导致大多数用户无法使用海外电话号码完成实名注册。因此，在中国的平台上，海外用户处于一个法律和政治的灰色地带，在这个地带中，中共已经实施身份可识别性，以便进行监控和跨国镇压。

根据我们的研究和结论，本文认为中国社交媒体平台上的身份识别要求是作为一种保护机制设计并投入实践的，这种机制可以战略性地用来限制思想的自由交流，并将中国互联网与全球在线社群隔离开。通过这种方式，当局让实名注册成为一个简单但有效的排他性机制，用以确保国内话语的安全。这也在中国社交媒体圈层内产生了新的访问障碍，特别是在那些与中国互联网交换（政治）思想至关重要的区域尤其如此，下文将对此进行详细讨论。

5.1 将海外用户挡在门外的四种障碍

2017年出台的《网络安全法》第24条规定，中国互联网服务提供者（包括社交媒体平台）在提供线上服务之前必须进行实名验证。这一要求迫使中国互联网公司加强实名注册验证和账户管理措施，对海外用户的注册构成了重大挑战。互联网公司可以通过要求中国用户提供手机号来实现实名验证，但对于那些手机号无法与中国电信运营商后台的身份证件相匹配的海外用户来说，互联网公司必须用另外的办法来验证这些用户的身份（更多详情见上图3）。

总体来说，这些规定显著增加了公司在支持境外用户方面的行政和技术负担。[76]因此，一些在线支付提供者（如支付宝）和移动游戏开发商（如腾讯）暂时停止接受新的外国账户注册。[77]相应地，大多数中国社交媒体平台开始要求海外用户提交身份证件扫描。[78]面对新的合规挑战，一些视频平台如快手选择从应用商店撤下自己的应用程序。[79]

上述商业决策显示，中国公司在面对政府压力时往往选择配合。中国政府要求企业将党的利益置于运营或商业利益之上。[80]研究表明，中共对科技公司的广泛影响深入到其产品内部，包括对搜索引擎[81]和输入法的审查。[82]甚至像美国科技巨头苹果这样的公司也屈服于压力，从其应用商店中移除了许多应用。[83]

虽然一些公司为了符合实名制要求暂时停止了新的外国账户注册，但也有公司尝试通过为不同地区开发独立应用或实施不同级别的访问限制来完成合规（见下方图4）。这种策略表明，中国公司在遵守中共政策的同时，若想寻求国际市场的增长，就必须谨慎地保持平衡。[84]

图4：中国应用程序开发者采取的策略

中国应用开发者采取了多种方法来保证其全球增长目标能够适应复杂的实名制监管环境。本报告发现了三种策略：

■ 针对不同地区开发不同的版本：

短视频应用"快手"针对不同地区开发了五种不同的版本。原版快手在中国及许多其他国家都可以使用，但在中东北非（MENA）地区和大多数南美国家不可用。[85] 快手"极速版"仅在中国可用。[86] 此外，还有一个仅在中东北非地区可用的版本（Kwai - download & share video），[87] 仅在拉丁美洲国家可用的版本（Kwai - ver vídeos bacanas），[88] 还有除巴西和哈萨克斯坦外在全球可用的提供小众内容的版本（噗叽）。[89]

■ 一款应用，两套系统：

某些应用分成两个实体，分别服务国内和国外用户。例如，微博国际版[90]和微博[91]之间允许有限的用户互动。而其他应用则不允许全球用户与国内用户之间存在任何互动，最终形成两个独立的在线领域，如钉钉和DingTalk[92]或TikTok和抖音。[93]

■ 在同一个身份下保持可用性：

像微信[94]这样的应用在国际各大应用商店中维持几乎相同的软件包，但同时可能进行一些本地化调整，例如调整登录要求、默认语言和个性化推荐。相比开发不同版本的应用程序，这种策略的灵活性稍低，但能保证更为统一的用户体验。[95]

经过"应用程序漫游"（从应用商店下载软件到在平台上与其他用户互动），我们发现存在四种不同类型的访问障碍，这些障碍可能排除用户或对用户强制进行身份识别：

第一类 应用商店审查：

为防止人们下载相关软件，一些应用被从应用商店中撤下。例如，短视频和电商平台快手2021年和2022年广受欢迎，但现在在许多中东和北非（MENA）地区的应用商店已无法下载（见下方图5）。中国以外的用户在他们的应用商店中找不到这个版本。

第二类 手机号码注册：

一些海外用户在应用的注册界面中无法选择其居住国的电话号码（或其SIM卡的前缀）。如果用户无法选择其居住国的电话号码前缀，也就无法接收验证消息。因此，要求用电话号码进行实名注册就变成了一个访问障碍，将外国用户挡在门外。例如，在"微博国际版"上，只有29个国家的居民可以注册（见下方图5）。

第三类 身份证件验证：

提交身份证件导致用户无法在互联网上保持匿名，如果互联网用户认为这种要求是不必要或不恰当的，就可能放弃注册相关网络平台。

第四类 跨账户验证：

如果新用户需要通过平台上的老用户来进行注册验证，那么在没有联系人或不愿意透露联系人的情况下，新用户可能就无法注册相关平台。

图5：电话号码注册障碍——地区限制阻碍用户使用中国公司开发的应用
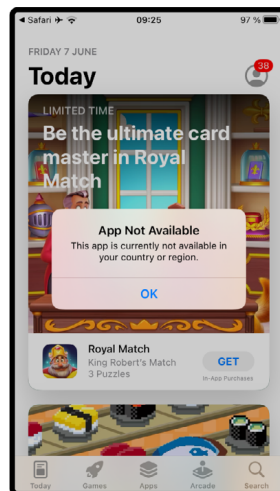
阿尔及利亚、埃及、沙特阿拉伯和其他一些国家的苹果应用商店均已将应用程序"快手"下架
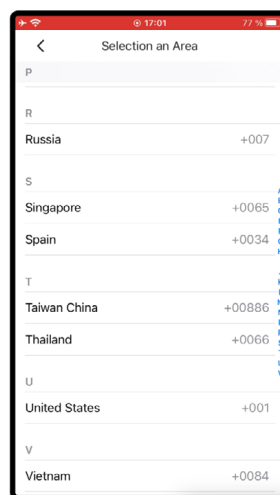
"微博国际版"提供的电话号码注册选项

来源：研究人员对快手和微博国际版进行"应用程序漫游"采集的数据（2024年3月）。

类设计上是排他性的，构成了围绕灰色地带的"硬性障碍"（见图5）。这里的限制意图十分明显，虽然有一些办法能绕过这些障碍，但这些办法既不可持续也不可靠。[96]另一方面，第三类和第四类障碍的目的是强制身份识别，它们本身并不直接排除某些用户，而是确保可以密切监视灰色地带中新用户的互动。这些障碍虽带来隐私风险，但并非不能克服，因此可以视作"软性障碍"，主要因为用户可能因不愿放弃隐私而选择不注册。制定这些障碍的初衷可能是允许那些愿意遵守实名注册政策的海外新用户进行注册。

我们针对处于风险中的社群进行了匿名调查，结果显示海外用户确实遇到了上述各种访问障碍（见下方图6）。近一半的受访者反馈遇到了与身份可识别性相关的第三类和第四类访问障碍（分别为49%和46%）。超过三分之一的受访者表示经历过旨在排除用户的第一类和第二类障碍（分别为38%和43%）。受访者还表示，与其他国外竞品相比，中国社交媒体应用的访问障碍更为普遍，45%的受访者表示注册由中国公司开发的应用更加困难，这是反馈最多的一项意见。相比之下，多数受访者认为在账户维护方面，中国和外国的应用程序要求相似（51%）。

图6：中国社交媒体应用相较于国际同类产品显得访问难度更高

问题：您是否在中国公司的社交媒体应用上遇到过以下障碍？

平台上的其他用户需要验证我的账户注册
49%

需要提供身份证或护照扫描，这对该类型的应用程序来说似乎不寻常
46%

我想下载的应用程序在我的应用商店中不可用
43%

我无法收到验证消息
38%

以上都不是
22%

其他
17%
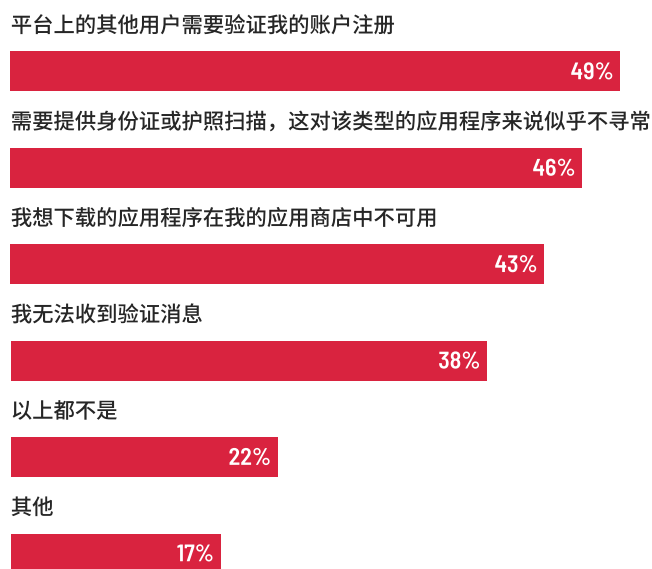
问题：注册与维持中国社交媒体账户的难易程度如何？

注册
45% 43% 11% 2%

维持
25% 51% 23% 2%

■ 更困难　■ 平均来说，大致相同
■ 更容易　■ 不适用
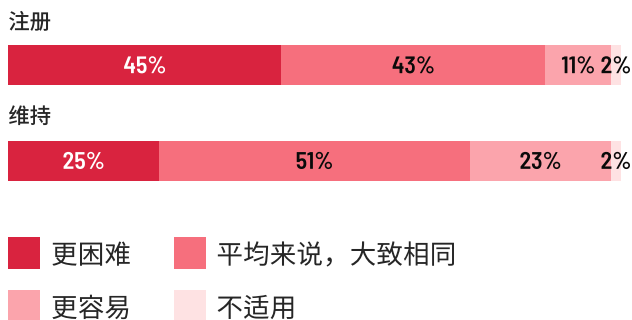
来源：针对65名处于风险中的社群成员的匿名调查（2024年3月进行）。

5.2 访问限制的国际模式

为了调查全球范围内实施的第一类和第二类"硬性障碍"（即应用商店下架相关程序和在注册页面中某些国家的电话号码不可用）的情况，我们选取了58个国家中下载量最高的62款中国社交媒体应用进行研究。[97]我们发现，这些应用中有75%要求使用电话号码进行实名注册（不允许使用电子邮件注册或无需注册），这表明大约四分之三的由中国开发的应用对海外用户实施了强制的身份识别要求，成为互联网灰色地带中一个庞大且可控的部分（见附录4）。换言之，中国网络监管机构设定的访问条件几乎是无法绕过的。

我们还进行了进一步的测试，以研究实名注册政策是否已成为阻碍信息交换的障碍。在此次测试中，我们从39款应用中剔除了6款，原因是这6款应用不允许用户进行信息交换。剩下的33款应用可能代表了灰色地带互联网中最重要的信息渠道。我们对这33款应用在58个国家的硬性访问障碍进行了检查，共得到1914个国家和应用的配对。在这1914个配对中，我们发现有664个配对至少存在第一类或第二类的访问障碍，占所有国家和应用配对的35%（更多详情见下方表1的完整访问障碍矩阵）。[98]

值得注意的是，我们发现的硬性访问障碍及其在相关应用程序和地区的实施表现出相当高的异质性——这表明中国的意识形态安全防火墙并非旨在完全阻止信息交换（或者至少在实践中未能成功做到这一点）。我们在全球范围内测试相关应用发现，用户面临的限制可以分为三类。第一组，共10个应用（我们称之为组一）在全球大部分地区因第一类和第二类障碍而无法使用。这些应用包括在中国广泛使用的钉钉、快手和豆瓣，它们在海外要么无法下载，要么用户无法使用其国家的电话号码进行注册（或两种障碍兼有）。第二组，共15个应用（我们称之为第组二），通常在全球范围内可以访问，但偶尔会面临上述两种硬性访问障碍。这一组也包括了一些在中国受到欢迎的应用，如QQ、微博和知乎。第三组，共8个应用，在我们测试的58个国家中均可自由使用，包括微信和小红书等。

从下面的矩阵图中还可以看出地理上的差异。在组二当中，某些应用只有在特定地区才无法使用。例如，包括QQ和其他社交媒体在内的组二在泛欧洲地区无法使用，而某些视频流和论坛应用（如快手和知乎）在中东北非地区和南美国家基本上无法访问。由于中共对国内的不稳定局势和美国推动颜色革命心怀担忧，这种差异尤为值得关注。[99]另一方面，在亚太地区、撒哈拉以南非洲和中亚国家，组一当中应用几乎没有访问限制。此外，令人意外的是，这些应用程序在美国几乎都不受限制。

表1：审查的扫雷游戏——中国限制应用上的信息交流

针对58个国家中允许信息交流的33款应用的访问障碍矩阵[100]

区域	国家	障碍总数	Baidu Tieba (百度贴吧)	DingDing - Make It Happen	DouYin (抖音)	QQ Browser	WeChat Reading	Himalaya FM (喜马拉雅FM)	Hertz (蒂兹)	Douban	Mango Live (芒果直播)	Wefun	Ola Party - Live, Chat & Party	Meipai	HeeSay - Blued LIVE & Dating	QQ	SUGO: Voice Live Chat Party	Kuai Shou	Nonolive - Live Streaming	Zhihu (知乎)	Zhihu Daily (知乎日报)	MOMO陌陌	Weibo (微博)	WeCom-Work Communication&Tools	Yingke Live (映客直播)	YoHo: Group Voice Chat Room	Calamansi - Pinoy Live Cast	HUAWEI FamCare	Haya: Best Audio Experience	JusTalk - Video Chat & Calls	JusTalk Kids - Safe Messenger	Little Red Book (小红书)	Nekogram*	Uplive-Live Stream, Go Live	WeChat (微信)
亚太地区	香港	12	2	2	2	2	2	0	0	0	0	0	3	0	0	0	0	2	2	2	2	0	2	2	0	0	0	0	0	0	0	0	0	0	0
	巴基斯坦	10	2	2	2	2	2	3	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	韩国	10	3	2	2	2	2	3	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	越南	10	2	2	2	2	2	1	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
	印度尼西亚	9	2	2	2	2	2	1	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	新西兰	9	2	2	2	2	2	1	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	澳大利亚	8	2	2	2	2	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	日本	9	2	2	2	2	2	3	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0
	菲律宾	8	2	2	2	2	2	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	泰国	8	2	2	2	2	2	3	3	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	马来西亚	7	2	2	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	台湾	7	2	2	2	2	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	新加坡	6	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
东欧和中亚	哈萨克斯坦	12	2	2	2	2	2	3	3	2	1	1	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
	白俄罗斯	11	2	2	2	2	2	1	1	2	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	俄罗斯	11	2	2	2	2	2	1	1	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
	土耳其	11	2	2	2	2	2	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	阿塞拜疆	10	2	2	2	2	2	3	1	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
欧盟 (EU27) 及附属国 + 扩展欧洲	捷克共和国	16	2	2	2	2	2	1	1	2	3	1	1	1	3	0	1	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
	芬兰	14	2	2	2	2	2	3	1	1	1	1	1	1	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	匈牙利	14	2	2	2	2	2	1	1	2	1	1	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	爱尔兰	14	2	2	2	2	2	1	1	2	1	1	1	1	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	葡萄牙	14	2	2	2	2	2	1	1	2	1	1	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	罗马尼亚	14	2	2	2	2	2	1	1	2	1	1	1	1	0	0	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	比利时	13	2	2	2	2	2	1	1	2	1	1	1	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	丹麦	13	2	2	2	2	2	1	3	2	1	1	1	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	希腊	13	2	2	2	2	2	3	1	2	1	1	1	1	0	0	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	荷兰	13	2	2	2	2	2	1	1	0	1	1	1	1	1	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
	波兰	13	2	2	2	2	2	1	1	2	1	1	1	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	法国	12	2	2	2	2	2	1	1	0	1	0	1	1	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	德国	12	2	2	2	2	2	3	1	0	1	0	1	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	意大利	12	2	2	2	2	2	1	1	0	1	0	1	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	西班牙	12	2	2	2	2	2	0	1	0	1	0	0	1	2	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	瑞典	12	2	2	2	2	2	3	3	0	1	0	1	1	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Group 1: Baidu Tieba (百度贴吧), DingDing - Make It Happen, DouYin (抖音), QQ Browser, WeChat Reading, Himalaya FM (喜马拉雅FM), Hertz (蒂兹), Douban, Mango Live (芒果直播), Wefun

Group 2: Ola Party - Live, Chat & Party, Meipai, HeeSay - Blued LIVE & Dating, QQ, SUGO: Voice Live Chat Party, Kuai Shou, Nonolive - Live Streaming, Zhihu (知乎), Zhihu Daily (知乎日报), MOMO陌陌, Weibo (微博), WeCom-Work Communication&Tools, Yingke Live (映客直播), YoHo: Group Voice Chat Room, Calamansi - Pinoy Live Cast

Group 3: HUAWEI FamCare, Haya: Best Audio Experience, JusTalk - Video Chat & Calls, JusTalk Kids - Safe Messenger, Little Red Book (小红书), Nekogram*, Uplive-Live Stream, Go Live, WeChat (微信)

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			Group 1										Group 2														Group 3							
区域	国家	障碍总数	Baidu Tieba (百度贴吧)	DingDing - Make It Happen	DouYin (抖音)	QQ Browser	WeChat Reading	Himalaya FM (喜马拉雅FM)	Hertz (赫兹)	Douban	Mango Live (芒果直播)	Wefun	Ola Party - Live, Chat & Party	Meipai	HeeSay - Blued LIVE & Dating	QQ	SUGO: Voice Live Chat Party	Kuai Shou	Nonolive - Live Streaming	Zhihu (知乎)	Zhihu Daily (知乎日报)	MOMO陌陌	Weibo (微博)	WeCom-Work Communication&Tools	Yingke Live (映客直播)	YoHo: Group Voice Chat Room	Calamansi - Pinoy Live Cast	HUAWEI FamCare	Haya: Best Audio Experience	JusTalk - Video Chat & Calls	JusTalk Kids - Safe Messenger	Little Red Book (小红书)	Nekogram*	Uplive-Live Stream, Go Live	WeChat (微信)
欧盟 (EU27) 及附属国 + 扩展欧洲	奥地利	11	2	2	2	2	2	1	1	0	1	0	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	挪威	11	2	2	2	2	2	1	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	瑞士	11	2	2	2	2	2	3	3	0	1	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	乌克兰	11	2	2	2	3	2	3	1	2	1	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	英国	11	2	2	2	2	2	3	3	0	1	0	0	1	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0
"拉丁美洲和加勒比地区	多米尼加共和国	17	2	2	2	2	2	1	1	2	1	1	0	0	0	0	0	3	3	2	2	0	2	2	2	0	0	0	0	0	0	0	0	0	0
	秘鲁	14	2	2	2	2	2	1	1	2	1	1	0	0	0	2	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
	智利	13	2	2	2	2	2	1	1	2	1	1	0	0	0	0	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
	阿根廷	12	2	2	2	2	0	3	1	2	1	1	0	0	0	0	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
	巴西	12	2	2	2	2	2	3	1	2	1	1	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0
	哥伦比亚	12	2	2	2	2	2	1	1	2	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	厄瓜多尔	11	2	2	2	2	2	3	1	2	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
中东和北非地区	阿拉伯联合酋长国	15	3	2	2	2	2	3	3	0	1	3	0	0	0	2	0	1	0	2	2	2	0	0	0	2	0	0	0	0	0	0	0	0	0
	阿尔及利亚	12	2	2	2	2	2	1	1	2	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	以色列	13	2	2	2	2	2	1	1	2	1	1	1	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	埃及	11	2	2	2	2	2	1	1	2	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	科威特	11	2	2	2	2	2	1	1	2	1	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	黎巴嫩	11	2	2	2	2	2	1	1	2	3	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	沙特阿拉伯	11	3	2	2	2	2	1	1	2	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
北美洲	墨西哥	12	2	2	2	2	2	3	1	2	1	3	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	加拿大	12	2	2	2	2	2	3	3	0	1	2	0	0	0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
	美国	8	2	2	2	0	2	1	0	0	0	2	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
撒哈拉以南非洲	尼日利亚	12	2	2	2	2	2	1	1	2	3	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	南非	11	2	2	2	2	2	1	1	2	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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注：表2按地区的障碍数量和字母顺序垂直排列，按应用的障碍数量水平排列。如果一个应用在不同国家有不同的ID，我们仅使用原始中文版本的ID。应用商店中列出的应用的原始中文名称用括号标记。
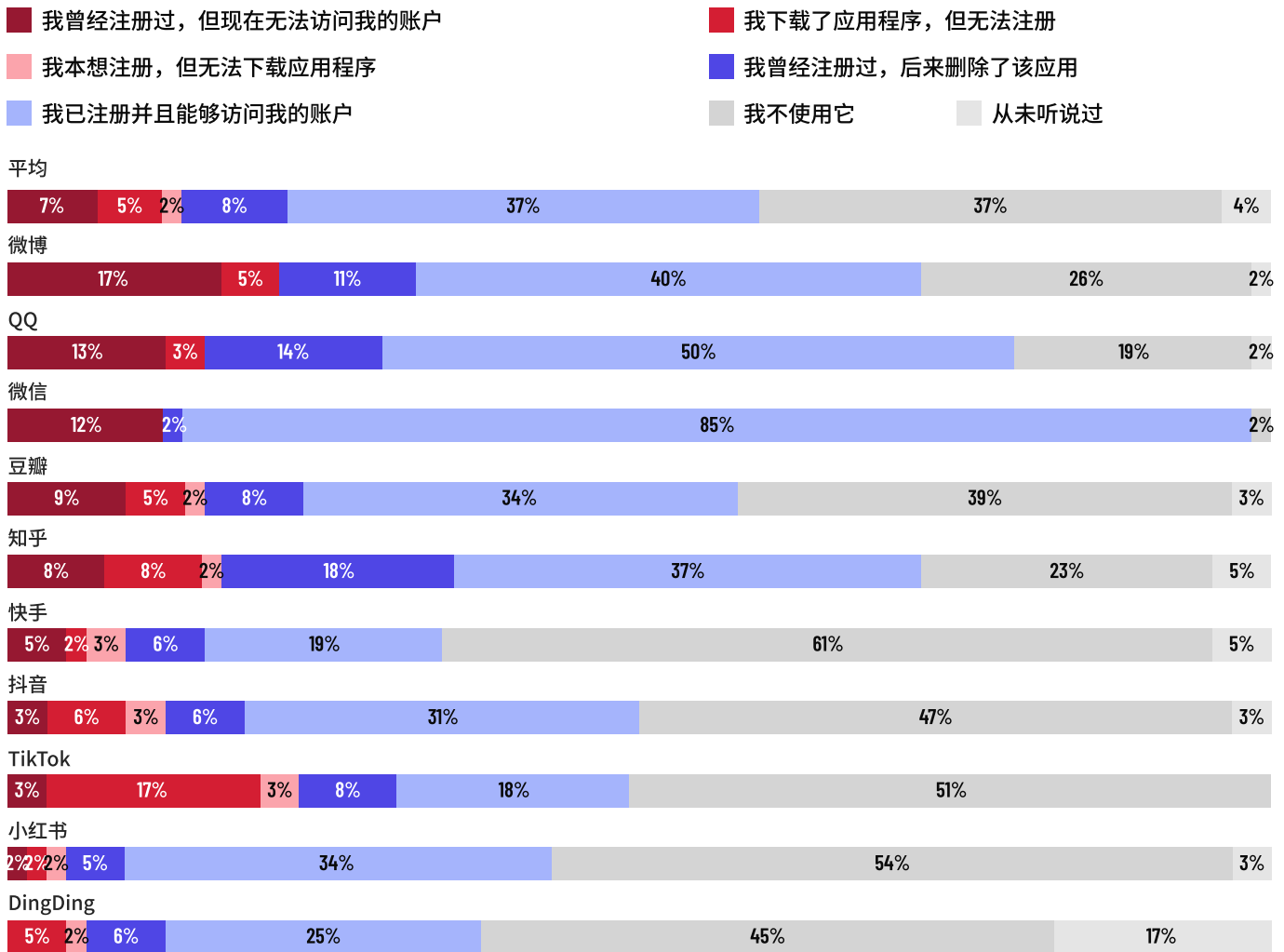
* 仅适用于安卓系统

来源：2024年3月进行的"应用程序漫游"。

我们的调查进一步证实，用户在使用中国最受欢迎的社交应用时遇到了访问困难（见下图7）。在10个使用最广泛的应用中，平均有5%的受访者表示能够下载应用，但最终无法完成注册。此外，受访者反映无法下载应用的情况平均占2%。持续访问已注册账户同样存在问题，有7%的受访者报告他们最终无法继续使用自己的账户，这一问题在微博、QQ和微信中尤为常见，分别有17%、13%和12%的受访者遇到此问题。

最后，我们还研究了用户是如何应对访问障碍的（见下图7）。大多数受访者采取了适应性措施来应对这些障碍，其中29%的人使用专门的手机来运行中国的社交媒体应用，23%的人遵守了相关要求，8%的人表示他们最终不再对这些障碍感到困扰。然而，近五分之一的受访者删除了有访问障碍的应用，因此被排除在灰色地带之外，无法参与到中国的在线社群中。

图7：中国最受欢迎的社交媒体应用的访问障碍，用户感受各不同

问题：请说明您当前是否使用以下应用，并分享您的使用体验

图例			
■ 我曾经注册过，但现在无法访问我的账户		■ 我下载了应用程序，但无法注册	
■ 我本想注册，但无法下载应用程序		■ 我曾经注册过，后来删除了该应用	
■ 我已注册并且能够访问我的账户		■ 我不使用它 ■ 从未听说过	

平均：7% | 5% | 2% | 8% | 37% | 37% | 4%

微博：17% | 5% | 11% | 40% | 26% | 2%

QQ：13% | 3% | 14% | 50% | 19% | 2%

微信：12% | 2% | 85% | 2%

豆瓣：9% | 5% | 2% | 8% | 34% | 39% | 3%

知乎：8% | 8% | 2% | 18% | 37% | 23% | 5%

快手：5% | 2% | 3% | 6% | 19% | 61% | 5%

抖音：3% | 6% | 3% | 6% | 31% | 47% | 3%

TikTok：3% | 17% | 3% | 8% | 18% | 51%

小红书：2% 2% 2% | 5% | 34% | 54% | 3%

DingDing：5% | 2% | 6% | 25% | 45% | 17%

问题：遇到访问障碍时，您通常如何应对？

我会在另一部手机上安装并使用这些应用

29%

我感到担忧，但尽可能尝试遵守

23%

我会停止使用这些应用程序并/或删除它们

18%

以上都不是

12%

其他

9%

我不介意

8%

来源：针对65名处于风险中的社群成员的匿名调查（2024年3月进行）。
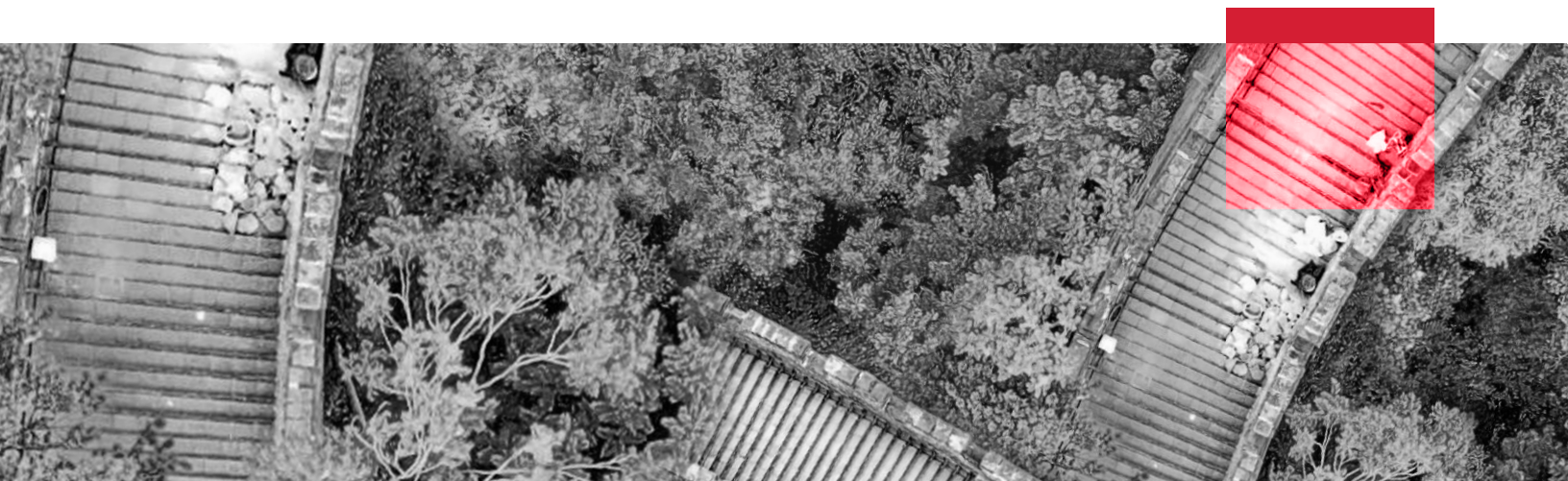
6. 实名注册政策在全世界范围内对应用程序下载量的影响

我们的研究表明，与实名注册相关的访问障碍对中国社交应用的在线社群产生了深远的影响。为评估中国实名注册制度及应用商店审查的境外影响，我们研究了我们识别出有访问障碍的中国社交媒体应用的下载模式。这一分析使用的数据来自应用商店情报提供者Appmagic维护的数据集，该数据集涵盖了2015年至2023年中国公司开发的应用的每月下载数据（详见附录1 - 数据分析）。这些数据为中国实名注册制度作为审查工具的直接或间接全球影响提供了量化指标。

6.1 2017年后, 海外用户下载中国应用呈下降趋势

我们对相关应用程序的下载情况进行了研究，发现中国庞大的意识形态安全防火墙有效地限制了全球社群与中国用户之间的交流渠道。通过分析关键时期的数据，我们估计受到影响的应用下载量下降了82%，相当于丧失了2350万次下载。2017年，这些应用的下载量达到3200万次，但到了2023年，全球范围内的下载量仅剩570万次（详见下方表2）。

如上文第4.2节所述，中国在2017年实施了重大立法改变，加强了互联网公司的实名注册要求。这些规定的实施与我们观察到的，有访问障碍的应用在海外下载量大幅下降之间存在一致性。此外，值得注意的是，尽管存在访问障碍的应用下载量确实出现大幅下降，但那些我们未识别出访问障碍的社交应用在同一时期内的下载量也下降了40%。这种普遍的下降趋势表明，除了实名注册带来的访问障碍之外，还有其他因素导致下载量的减少。因此，前述提到的相关应用丧失了2350万次下载量的数字，应该调整为大约1410万，以便我们能更准确地评估下载量减少带来的影响。

在实名注册要求实施后的两到三年内，几乎所有地区的相关应用的月度下载量都显著下降。对于同时面临两种类型访问障碍的应用，这种影响尤为显著，下载量下降了98%（从2017年的超过2780万次降至2023年的约48.4万次）。在北美，受电话号码障碍和应用商店审查影响的应用，从2017年的900万年度下载量降至2020年的不到100万。

在亚太地区，中国社交应用在2017年达到1200万次的年度下载高峰，但此后已降至不到300万次。在欧盟和英国、东欧和中亚以及中东北非地区也出现了类似的下降趋势——这一趋势随着更多中国应用对跨国用户实施国内实名注册要求可能会持续。

在下载量显著下滑的情况下，我们的研究仍然记录到一些相关应用的下载活动。这些下载是否表明用户成功绕过了审查，还是仅仅因为应用信息提供者搜集数据的方式导致了这一结果，我们无法确定。然而，这些下载可能揭示了中国意识形态安全防火墙存在漏洞，审查者可能会尝试堵上这些漏洞。实际上，基于2020至2023年相关应用的三年平均下载量，我们预计到2024年可能有超过550万次的中国社交应用下载因硬性访问障碍而受到进一步限制。其中，因电话号码障碍影响而未能实现的下载预计约420万次，因应用商店审查影响而损失的约为23万次，同时受到两种情况影响的约有100万次。

表2：2017年之后，受访问障碍影响的应用在全球范围内下载量的下降情况

2015年至2023年各地区中国设计的社交媒体应用的年度下载量（以及根据三年简单移动平均数所做的2024年预测）

注：根据上表（表1）记录的所有国家-应用配对中遇到的访问障碍标记并分为四类：（1）无访问障碍的应用，（2）仅有电话号码障碍的应用，（3）仅有应用商店级别审查的应用，（4）受到两种类型障碍影响的应用。2024年的虚线预测是基于过去三年的平均下载量得出的。
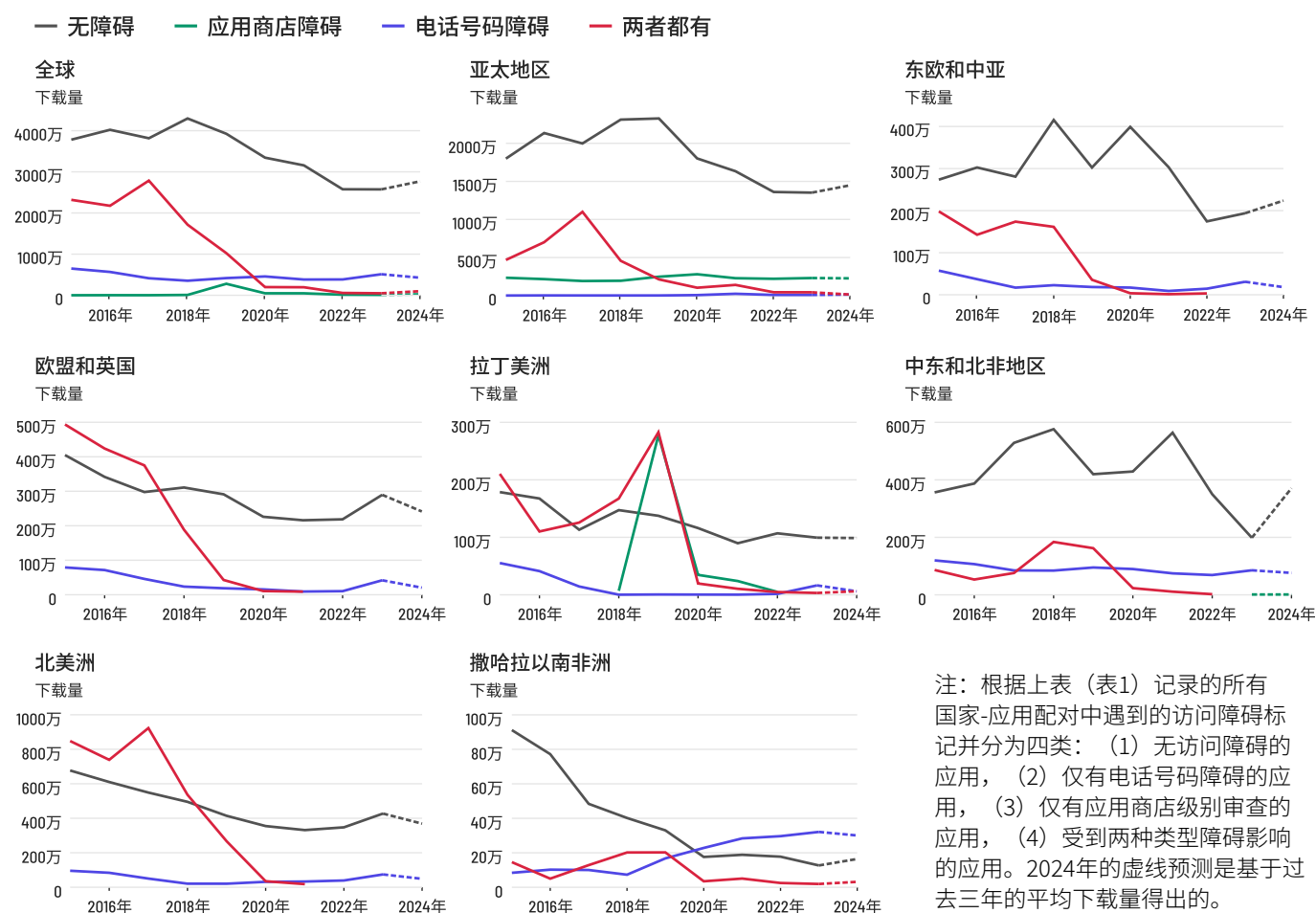
来源：基于Appmagic下载数据的分析和计算。

6.2 海外华人社群受到的影响

我们的研究显示，受相关访问障碍影响最大的是海外华人社群。为了评估这些影响，我们选择了2023年在58个国家中显示有下载量的48款中国社交媒体应用。接着，我们根据这些国家的华人社群规模进行了数据绘图，以此评估访问障碍的相对影响（见下方表3）。相对度量（纵轴）指的是每个国家每一万名居民中应用的平均月下载量。这个比率是基于Appmagic的下载数据和世界银行的全球人口数据计算得出的。然后，我们根据经合组织和联合国对侨民数量的保守估计，将这个比率与侨民数量（横轴）进行对比（更多详情见附录1 - 全球人口数据和侨民数据）。

表4中的每个点代表2023年某个特定国家的某个应用的。如果一个点的位置在图表的右上方，就意味着这个应用在拥有大量华人社群的国家中下载频率较高。图中的趋势线从左下向右上倾斜，说明中国社交应用在侨民较多的国家更受欢迎。

然而令人惊讶的是，访问障碍在华人较多的国家反而更为常见。图中的蓝色点代表应用商店的访问障碍，这种情况在像新加坡这样华人较多的国家尤其普遍，例如快手就是其中的一个例子。而青色的点则代表那些未受访问障碍影响的应用，如巴基斯坦的QQ，在华人人数较少的国家更常见。图表中代表访问障碍的三条趋势线（蓝色、绿色和红色）大部分位于代表无障碍应用的青色趋势线之上，这也表明在华人人口较多的国家，访问障碍更为普遍。我们通过单尾Z检验进行的统计测试显示了一个显著的差异，确认在华人较多的国家中应用的可访问性面临更多挑战（更多详情见附录1 - 统计测试）。

图8：2023年，华人社群使用应用程序面临更多障碍

散点图：每万人下载量与侨民估计值对比，按障碍类型分组

来源：基于Appmagic的下载数据以及联合国、经济合作与发展组织和世界银行的人口数据进行的计算。
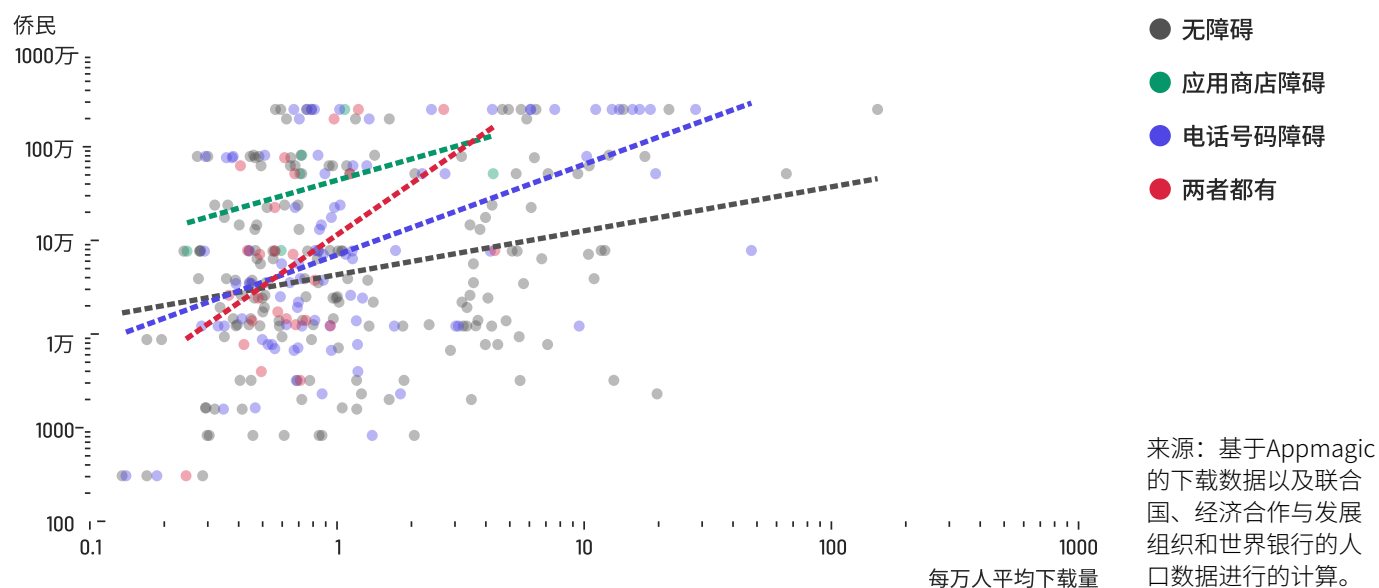
这些结果看似矛盾，但背后的原因可能是海外华人在常常面临访问障碍的情况下设法绕过了政府的审查，成功下载了被禁的社交应用。

由于在中国无法使用美国社交媒体平台，像海外华人这样的跨国社群尤其容易受到中国应用访问障碍的影响。对这些人而言，中国设计的网络平台往往是与中国国内在线社群互动的唯一途径。因此，受访者普遍认为访问障碍的影响是显著的，尤其在获取新闻和信息方面（47%）。受访者还反映受影响的方面包括教育机会（29%）、职业社交（28%）以及与国内的朋友和家人保持联系（23%）。

图9：访问障碍给获取信息带来的负面影响

问题：你认为网络访问障碍在多大程度上对以下几个方面构成阻碍?

■ 高影响　■ 中等影响　■ 低影响　■ 无影响　■ 不适用

	高影响	中等影响	低影响	无影响	不适用
访问新闻和信息	47%	11%	11%	27%	5%
教育机会	29%	13%	21%	30%	8%
与专业网络的沟通	28%	28%	14%	22%	8%
与朋友和家人的沟通	23%	14%	18%	37%	8%
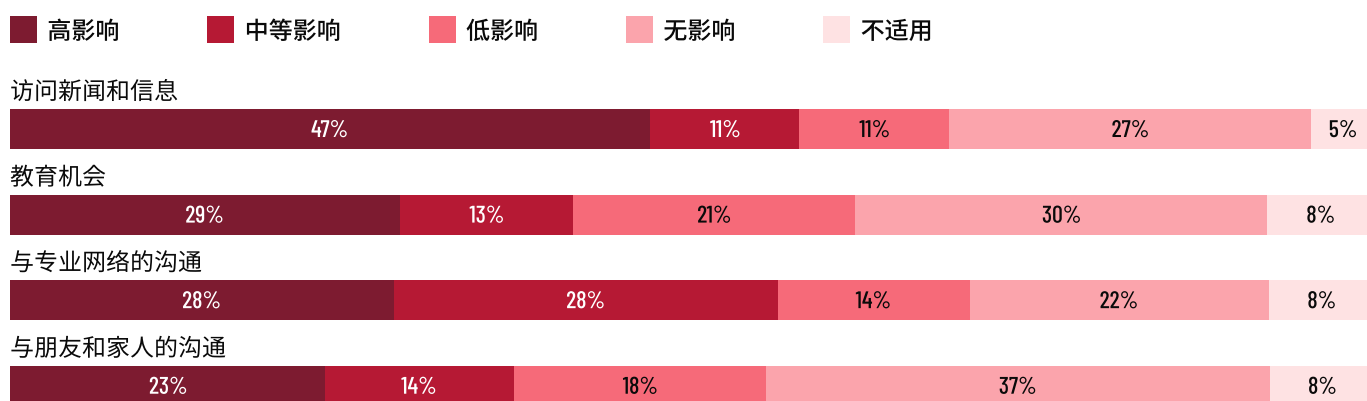
来源：针对65名处于风险中的社群成员的匿名调查（2024年3月进行）。

从更广泛的视角来看，这些结果显示出中国政府一直在努力引导其网民如何看待世界，这导致了实名注册政策的广泛实施。这些政策为社交媒体应用的注册使用设置了障碍，对下载量产生了深远的影响，尤其是对海外华人社群影响显著。因此，我们认为中共通过这些措施来保护所谓的"灰色地带"，从而保护中国国内的网络空间不受被视为"危险"的外国思想侵扰的努力，在很大程度上已经取得了成功。
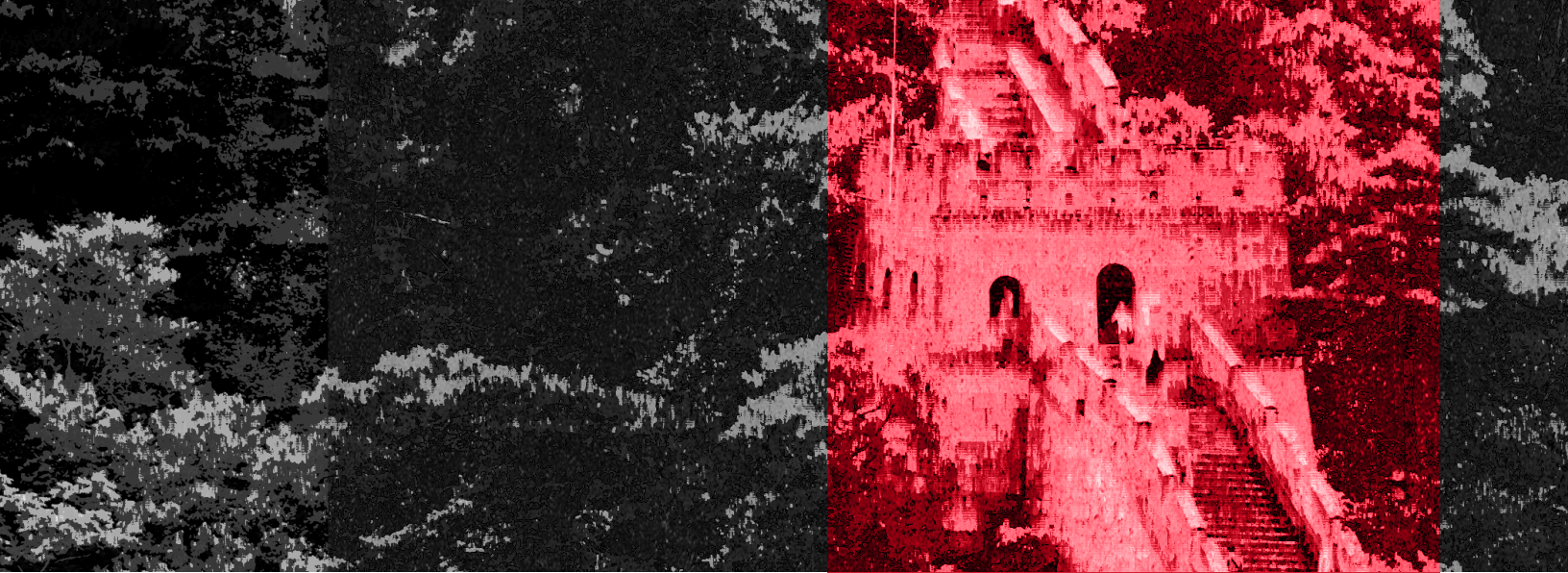
7. 探讨与分析

本研究表明，中国实名注册政策的影响远远超出了国家的地理和数字边界，对全球互联网治理、海外华人的自主权以及国际数字经济产生了深远的影响。如下所述，我们的研究还提示，关于中共如何战略性使用中国的数字平台，我们现有的看法可能需要进行重新评估。

7.1 保护国内的互联网空间，还是动员海外华人社群？

中共通过切断海外用户访问中国社交媒体的途径，有效地限制了外部对中国的影响力。长期以来，中共一直将社交媒体视为一种战场，强调中国需要在社交媒体上发出有力的声音，努力"讲好中国故事"。[101]其主要策略似乎集中在最大化监控和数据收集能力上，利用收集到的数据支持信息宣传活动，以此控制信息空间里的理念和叙事，并"在全球范围内塑造支持"。[102]

然而，实名制相关的访问障碍揭示了中国网络信息战略的复杂性——它不仅仅关注于对外的影响力行动以及动员海外华人群体。相反，中共似乎在开放信息交流的风险与成功实施全球宣传活动的好处之间寻求平衡。因此，我们在研究中测试的社交媒体应用表现出这样的特点，即在泛欧洲地区、中东北非、拉丁美洲和北美的使用门槛带来的影响更大，而在亚太地区和撒哈拉以南非洲地区遇到的障碍较少。

从这些结果可以推断，中共有意为中国社交媒体平台设置了地缘战略性的硬性访问障碍。这种策略旨在限制来自中共认为有问题的地区的信息渗透，而对于那些中共希望保持开放渠道以输出影响力的地区，则不施加这样的限制。

中国设立的新数字边界开辟了新的研究领域。例如，这些访问障碍对中国数字经济带来了怎样的成本？实名注册相关的边界是否超越了社交媒体应用，与其他数字边界相匹配？这一策略如何与中国的其他外国影响活动整合，并可能与中国的经济或安全影响领域融为一体？这些问题及其相关的研究方向为未来的研究提供了关键的途径。

7.2 在网络空间无法建立社群？

本报告揭示的地区间访问障碍的差异也表明，中国的网络主权野心已在全球的数字空间里划定了新的地缘战略边界。通过实施访问障碍，中国实际上在"影响力领域"和"有害信息领域"之间划定了一条新的数字边界。例如，在亚太地区和撒哈拉以南非洲地区，用户可以注册中国的社交应用，但在欧洲，用户却被禁止使用这些应用；拉丁美洲和中东北非地区的用户则被禁止使用其他某些应用。这种做法似乎也削弱了中国在"网络空间命运共同体"的口号下推动的网络外交，这种外交的目的是推广互联互通和跨文化交流，特别是与"多数世界"（即在全球经济和政治体系中常常被忽视的非洲、亚洲、拉丁美洲和大洋洲国家）国家进行交流。[103]而正如美国智库"大西洋理事会"指出的，中国虽然口头表达反殖民和反帝国主义愿望，但实际上希望将全球北方（即主要位于北半球的发达国家）和多数世界分开，以便更好地获得战略资源和出口市场。[104]

7.3 实名制带来的意外后果：流亡媒体的兴起

一个有趣的现象是，实名注册政策的排他性效应可能促进了跨国独立中文网络媒体的兴起。离开中国大陆和香港的记者、学者和活动家随后创建了诸多"流散媒体"和"流亡媒体"项目。[105]这些新平台，例如那些由流亡的香港民主活动家新建的社群所使用的平台，使得流亡社群能够在避免公开身份的条件下进行组织和沟通，甚至制定对抗中国网络监控和审查的策略。这些平台现在也成为了争论的舞台，易受到影响力行动和跨国镇压的影响。[106]居住国应当认识到围绕这些独立媒体论坛的争议，并应提供支持帮助这些社群抵抗统一战线的活动。

7.4 社会障碍即经济障碍

本报告也促使人们重新思考中国的网络平台究竟能否挑战美国的全球主导地位。一些学者指出，[107]中共在国内实施数字保护主义，同时通过补贴帮助中国科技公司在其他市场挑战美国竞争对手。按此逻辑，中国政府理应利用手中的政策和监管工具来支持这些应用的国际扩张——而不是通过实名注册政策来限制它们的使用。然而，正如本报告所揭示的那样，身份验证要求实际上阻碍了中国平台在某些国际市场的广泛推广。这种限制导致了这些应用全球下载量的下降，从而限制了它们的经济价值（参见上图1）。

8. 结论

到2024年，中国仍在通过改变和重塑数字话语空间来全面制度化和国际化其网络主权。目前，四分之三的中国社交媒体平台已经实施了实名注册制度。当实名注册作为针对外国用户的访问障碍实施时，可能导致应用程序在相关地区每年丧失数百万次下载。这些障碍破坏了社交联系，并限制了人与人之间的交流，中国甚至愿意在必要时切断来自境外的互联网访问，以此引导用户的思维方式。[108]因此，意识形态防火墙的实施应被视为一种灵活并具有地域性差异的措施；它不是一堵坚不可摧的"数字墙"，而更像是一层"数字面纱"。换言之，这种审查不是彻底封锁通信，而是提供一种适应性强和临时性的控制机制，使得在必要时限制网络信息的访问。

这类结构性干预已经影响了全球数字通信和互联网作为公共社会经济基础设施的功能。[109]全球政策制定者应该意识到，中国对网络主权的主张带来的结构性挑战，以及这些挑战如何影响其他国家公民的数字主权和权利。除了关注由特定应用带来的威胁外，解决中国网络政策的更广泛影响同样重要。联合国目前正在开发的全球数字契约等全面互联网未来框架[110]可能有助于应对这些问题及其他相关问题。然而，这类框架也必须得到大力保护，以防止中国干扰其实施和执行。[111]

多年来，关于中国的"防火长城"的讨论大多集中在国内信息的压制（或预防性镇压）上，引发了关于中国互联网用户如何能"翻墙"绕过国内审查的探讨。然而，本报告的发现要求我们扩大视角，思考一个新的问题：人们如何能够"翻回去"，重新进入中国的互联网空间？此外，我们还需要研究如何有效解决这种分裂，因为在不久的将来，个人和社群可能需要适应在分隔开的（甚至可能是完全孤立的）的数字通信和网络环境之中生活。

Appendices

Appendix 1: Methodology

Data selection

To identify a representative subset of apps indicative of the implementation of China's RNR-related access barriers and their impact on information exchange between users in China and overseas communities, we relied on a dataset by app store intelligence provider Appmagic. Appmagic's data covers monthly downloads of apps across 60 diverse economies, encompassing 93% of global app downloads.[112] Our data ranges from January 2015 to December 2023. Recorded downloads contain both the Google Play Store and Apple's App Store downloads.[113]

Appmagic manually categorizes apps into 15 main categories, including "Social," "Games," and "Finance," as well as a plethora of subcategories, such as "Chats," "Puzzles," or "Money Transfer."[114] We used the labels provided by app stores in a minority of cases where Appmagic labels were missing.

Our query returned a subset of 247 relevant apps, which:

■ were developed and operated by a company headquartered in the People's Republic of China;

■ were ranked within the top 10,000 in terms of national downloads in of any of the 58 app stores (filtering out the app stores of China and India);

■ were in the main category "Social";

■ were in one of the sub-categories "Chats," "Messengers," or "Social Network" within the main category "Social" (omitting sub-categories, such as "Dating," "Account Status App," and "Other").

Appmagic's download numbers are based on a relational approximation of ranking data. Appmagic assumes this technique provides an average discrepancy of about 10%, with a decline in accuracy at lower download numbers. To maintain accuracy in our quantitative analysis, we dropped apps below a suggested threshold of less than 30,000 global downloads per month.[115]

This curated dataset of apps was further refined to generate a representative group of apps which allowed for the recording of access barriers. We dropped 31 apps, such as "Tencent News" or "Himilaya Life," as they had ceased operations. Another 26 were also disregarded as they only offered social media adjacent services, such as "5000+ Emoji" or "Sparkling Heart Keyboard Theme." This curation resulted in a final list of 62 apps.

App walkthroughs to record type #1 and type #2 access barriers

Data on app store availabilities by AppleCensorship.com (a project that monitors and provides a publicly accessible database of the availability of apps across app stores worldwide) provided evidence for type #1 access barriers.

App walkthroughs on apps that were still in operation revealed the extent of type #2 barriers. In a first round of app walkthroughs, we determined which method of account registration was required by each app. We tested on both iOS and Android devices, as well as the nascent Play Store and App Store. To circumvent local biases, we tested on changing locations in EU, North America, and Africa. As noted in Appendix 4, signing up for or engaging on an app was only possible after providing a phone number and subsequent verification codes in 39 instances. In 22 instances, setting up an account was permitted based on providing an email address, which allows for anonymous use and access.[116] In one instance ("MOGU – Fashion Destination") the provision of further identification was also required.

To record phone-number-related access barriers, we conducted a second round of walkthroughs on the remaining 39 apps, which took place in February 2024. To minimize human error, we automated the process of recording available phone number prefixes by running an optical character recognition program on screen recordings of the app walkthroughs. Overall, we found 664 instances where an app was inaccessible to local users out of a total of 1,914 tested instances. This figure includes 375 phone number barriers, 231 app store barriers, and 58 instances of both.

App ID-resolution

In most instances apps had one universal ID across app stores. Seven apps had more than one ID, where we used the ID of Chinese original app (QQ邮箱, Tencent Conference, Baidu Tieba, DingDing, Kuai Shou, QQ Browser, and Weibo).

Survey

In March 2024, we conducted an online survey to gather user perceptions of foreign-directed access barriers for Chinese-designed apps. The survey was available in both English and Chinese, and participation was voluntary and anonymous. We specifically targeted Chinese overseas communities for dissemination. The survey received 65 responses, with a high response rate of 98%.

Notably, the survey is non-representative and may come with inherent biases given that it was only disseminated to members of the at-risk community. How accurately the results reflect the experiences of other overseas users is not reflected in the survey (it could be argued that members of this community are more sensitive to access barriers than others). Members of the at-risk community may also face barriers due to individual exclusion. The results of this survey should thus be treated as indicative evidence, not as fact.

Data analysis

To gauge the impact of access barriers on the download trajectories of affected apps, we tagged all instances where, as of March 2024, an access barrier was recorded. A data series was therefore only tagged when the access barrier matrix displayed a value of "1," "2," or "3" in a given country. In the time series data of app downloads, we then separated those instances from instances where no access barrier was recorded. This allowed us to isolate the different groups of restrictedness. We extended our analysis beyond the 33 apps within the controlled grey zone internet and included six additional apps in our analysis which permitted no exchange of information (see in Appendix 3). This alteration did not measurably skew the data (<4% of downloads of the entire sample), but rather provided more analytical depth.

Statistical testing

To examine whether the proportion of apps facing access barriers (either from app stores or phone compatibility issues) is appreciably different between countries with varying Chinese diaspora populations, we used a one-tail significance test to determine if larger diaspora countries have a higher proportion of apps with access barriers compared to countries with smaller diaspora populations.

The dataset for this analysis included annual app download data, which was merged with diaspora sizes for each country. Apps were categorized by the type of barrier they faced, and we calculated the proportion of apps with barriers in each country.

Using these proportions, we performed a one-tail Z-test to statistically test the hypothesis that larger diaspora countries have a higher proportion of blocked apps. This involved comparing the mean proportion of blocked apps in countries above and below the median diaspora size.

The results showed a Z-score of 6.227 and a P-value of 0.000, indicating a statistically significant difference. This implies that countries with larger diaspora populations do indeed have a higher proportion of apps facing access barriers compared to countries with smaller diaspora populations.

Global population data

For global population data figures, we primarily relied on the World Bank's population data.[117] An average annual growth rate for each country was calculated based on yearly percentage changes from 2015 to 2022. The estimated population for 2023 was then calculated using the 2022 population and this average growth rate, with the estimated values added to the dataset. Data for Taiwan, which was missing in the original data, was pulled from the National Statistics Bureau of the Republic of China (Taiwan).

Diaspora data

For diaspora data, we used a dataset that was initially populated with available data from the OECD, transferring data for each country and year directly from the OECD records. For seven countries with incomplete OECD data (Canada, Chile, Greece, Ireland, Mexico, New Zealand, and Portugal), averages were calculated using both OECD data and UN data from 2015 and 2020, filling missing values with these averages. For 26 other countries, missing data was estimated based on the rate of change between UN data from 2015 and 2020. The 2015 values were filled with UN data, and yearly changes were calculated to interpolate values from 2016 to 2020, extending this trend to estimate values for 2021 and 2022. Values for 2023 were estimated using a Simple Moving Average of the previous three years (2020, 2021, 2022) to ensure consistency across the dataset.

Country	2015	2016	2017	2018	2019	2020	2021	2022	2023
Argentina	14 401	14 429	14 457	14 485	14 513	14 541	14 569	14 597	14 569
Australia	508 870	557 690	606 310	649 420	667 960	647 720	595 630	637 103	626 818
Austria	15 143	15 986	16 587	16 930	17 339	17 829	17 556	22 275	19 220
Belgium	19 048	19 452	19 915	20 350	21 031	22 053	21 979	21 688	21 907
Brazil	22 671	23 063	23 455	23 848	24 240	24 632	25 024	25 416	25 024
Canada	788 533	649 260	788 533	788 533	788 533	788 533	715 835	788 533	764 300
Chile	12 779	12 779	10 055	12 779	13 603	15 696	13 511	12 779	13 995
Colombia	1 616	1 610	1 603	1 597	1 590	1 584	1 578	1 571	1 578
Czech Republic	4 807	5 170	5 532	5 895	6 257	6 620	6 983	7 345	6 983
Denmark	9 953	10 611	11 341	11 710	12 116	12 452	12 060	12 209	12 240
Dominican Republic	3 776	3 809	3 842	3 876	3 909	3 942	3 975	4 008	3 975
Ecuador	3 025	3 052	3 080	3 107	3 135	3 162	3 189	3 217	3 189
Egypt	495	550	605	661	716	771	826	881	826
Finland	9 433	9 956	10 447	10 862	11 352	11 935	12 616	11 968	12 173
France	109 663	110 529	112 450	113 442	119 909	113 447	115 505	164 000	130 984
Germany	106 000	106 000	121 000	131 000	132 000	143 000	153 000	142 667	146 222
Greece	6 058	1 419	6 058	6 058	6 058	6 058	6 058	15 963	9 360
Hong Kong	2 381 135	2 401 480	2 421 825	2 442 171	2 462 516	2 482 861	2 503 206	2 523 551	2 503 206
Hungary	14 829	18 193	17 460	18 155	17 049	17 774	16 766	17 196	17 245
India	110 098	109 680	109 262	108 844	108 426	108 008	107 590	107 172	107 590
Indonesia	72 302	73 047	73 792	74 538	75 283	76 028	76 773	77 518	76 773
Ireland	10 952	11 262	10 952	10 952	10 952	10 952	10 952	1 270	7 724
Israel	1 110	1 130	1 150	1 150	1 200	1 240	1 250	228 630	77 040
Italy	200 372	212 173	220 088	223 653	218 269	222 408	259 091	233 256	238 252
Japan	714 570	726 835	739 099	751 364	763 628	775 893	788 158	800 422	788 158
Kazakhstan	2 162	2 184	2 207	2 229	2 252	2 274	2 296	2 319	2 296
Lebanon	2 358	2 298	2 238	2 178	2 118	2 058	1 998	1 938	1 998
Malaysia	11 347	11 482	11 618	11 753	11 889	12 024	12 159	12 295	12 159
Mexico	8 860	23 339	23 339	23 339	23 339	23 339	23 339	65 939	37 539
Netherlands	52 545	54 413	56 051	58 329	61 074	64 239	63 787	63 033	63 686

Country	2015	2016	2017	2018	2019	2020	2021	2022	2023
New Zealand	100 311	100 311	100 311	132 906	100 311	100 311	100 311	12 461	71 028
Norway	11 203	11 520	11 655	12 016	12 297	12 684	12 549	12 510	12 581
Pakistan	334	329	325	320	316	311	306	302	306
Peru	18 783	21 413	24 042	26 672	29 301	31 931	34 561	37 190	34 561
Philippines	36 208	36 675	37 141	37 608	38 074	38 541	39 008	39 474	39 008
Poland	1 162	1 240	1 317	1 395	1 472	1 550	1 628	1 705	1 628
Portugal	13 710	13 710	13 710	13 710	13 710	13 710	14 109	13 710	13 843
Romania	3 722	4 286	4 851	5 415	5 980	6 544	7 108	7 673	7 108
Russia	56 231	56 224	56 217	56 210	56 203	56 196	56 189	56 182	56 189
Singapore	505 913	507 552	509 192	510 831	512 471	514 110	515 749	517 389	515 749
South Africa	9 519	9 387	9 254	9 122	8 989	8 857	8 725	8 592	8 725
South Korea	759 204	767 965	776 727	785 488	794 250	803 011	811 772	820 534	811 772
Spain	155 713	158 717	161 870	165 941	171 456	176 653	176 087	174 732	175 824
Sweden	28 699	28 410	29 640	31 333	33 288	35 282	36 023	34 864	35 390
Switzerland	20 817	22 286	23 434	24 136	24 974	25 913	26 322	25 499	25 911
Thailand	73 828	74 518	75 209	75 899	76 590	77 280	77 970	78 661	77 970
Turkey	12 426	17 831	14 839	16 037	20 776	22 820	26 483	23 360	24 221
Ukraine	6 560	6 582	6 603	6 625	6 646	6 668	6 690	6 711	6 690
United Kingdom	114 000	209 000	226 000	210 000	198 000	211 000	245 000	218 000	224 667
United States	2 065 431	2 130 352	2 216 810	2 221 943	2 250 230	1 942 972	1 952 823	2 048 675	1 981 490
Vietnam	3 005	3 037	3 070	3 102	3 135	3 167	3 199	3 232	3 199

Notably, this data represents a low-end estimate of diaspora communities since the UN data only refers to first-generation migrants. The actual diaspora groups at risk may be four times as large or more, if second and subsequent generations of the original cohorts of migrants from China are included. In particular, Indonesia, Malaysia, the U.S. and Thailand may host considerably larger groups of individuals identifying as Chinese or dependent on communication with people in the PRC.

Appendix 2: Regulatory and legislative framework of China's Real-Name Registration system (实名制[登记]).

Relevant laws, regulations, speeches, and other party documents issued by institutions such as the CAC, the State Council, or the National People's Congress.

Month	Document	Impact/Key Provisions
Nov 2022	Provisions on the Administration of Internet Posting and Commenting Services 互联网跟帖评论服务管理规定	■ RNR should include phone numbers and ID. ■ **Article 4:** Platforms need to establish a "censorship before release" system. Comments should be first reviewed by platforms before publication and regularly report to the CAC. ■ Update to prior regulation from 2017 with the same title (see Aug 2017).
Sep 2022	Law of the People's Republic of China on Combating Telecom and Online Fraud 中华人民共和国反电信网络诈骗法	■ Most comprehensive regulation of RNR that summarizes and combines previous legal texts in Article 21. ■ **Article 21:** Telecommunications and internet service providers are required by law to ask users for their real identity information when they sign up for or confirm services. If a user does not provide their real identity information, the following services must not be provided: Internet access; Network address translation services such as network proxies; Internet domain name registration, server hosting, space rental, cloud services, content distribution services; Information and software publishing services, instant messaging, online transactions, online gaming, online live streaming, advertising services.
Jun 2022	Administrative Provisions on Mobile Internet Applications Information Services 移动互联网应用程序信息服务管理规定	■ **Article 6:** Application providers that provide information release, instant messaging, and other services to users shall authenticate the real identity information of users who apply for registration based on mobile phone numbers, identity document numbers, or unified social credit codes. Users who do not provide their true identity information, or use their organization or other people's identity information to register falsely, shall not be provided with relevant services.
Jun 2022	Provisions on the Management of Internet User Account Information 互联网用户账号信息管理规定	■ **Article 11-13:** Reiterates obligation of RNR and IP address registration of internet information service providers (互联网信息服务提供者), such as news information services, online publication services, search engines, instant messengers, interactive information services, livestreaming, and application software downloads. ■ **Article 14:** Identification data needs to be regularly reviewed and old accounts suspended if necessary.

Month	Document	Impact/Key Provisions
Nov 2021	Online Data Security Management Regulations 网络数据安全管理条例	■ Platform operators (互联网平台运营者) need to register IP-address of domestic users to prevent any re-registration of accounts that were previously closed for violating laws and regulations. ■ For overseas-based users, internet platform operators must show the country they are located in.[118]
Mar 2021	Notice on Issuing the Regulations on the Scope of Necessary Personal Information for Common Types of Mobile Internet Applications 常见类型移动互联网应用程序必要个人信息范围规定	■ Ensures mobile applications collect only necessary personal data to uphold user privacy. ■ Specific categories of mobile applications are defined as well as the essential personal information necessary for their core services. This includes requirements for apps across sectors such as navigation, transportation, communication, and e-commerce.
Dec 2019	Provisions on Ecological Governance of Network Information Content 网络信息内容生态治理规定	■ **Article 5:** All online content creators and news providers (网络信息内容生产者) are encouraged to produce nationalistic and patriotic content. ■ **Article 6:** Content is prohibited that could damage national honor or interest, spread rumors, or disrupt economic or social order.
Feb 2018	Provisions on the Administration of Microblog Information Services 微博客信息服务管理规定	■ Article 4: Microblog service providers must acquire a publishing license at the CAC. ■ Suggests enforcement of public real names for all users on microblogging platforms, and a move away from the old system (see "前台自愿，后台实名," Feb 2015). ■ Requires microblogging platforms to ensure user registration, content review, safety measures, and proper staffing to uphold content security and legal compliance. ■ Microblogging platforms are responsible for the accuracy of their content. They should correct misinformation, such as spreading vulgar content "散布低俗内容" or confusing the public "混淆视听"
Aug 2017a	Provisions on the Administration of Internet Posting and Commenting Services 互联网跟帖评论服务管理规定	■ Article 5: Commenting and posting reaction on news feeds and social media should only be allowed when adhering to RNR principles.
Aug 2017b	Regulations on the Administration of Internet Forum Community Services 互联网论坛社区服务管理规定	■ **Article 5 & Article 8:** Community platforms and online forums must enforce RNR and apply 2015 principles.
July 2017	Regulations on the Administration of Internet Forum Community Service 互联网群组信息服务管理规定	■ Requires platforms to implement RNR.

Month	Document	Impact/Key Provisions
Jun 2017	Cybersecurity Law 网络安全法	■ **Article 24:** Network operators (网络运营者) must establish a RNR before supplying any service. ■ **Article 37:** Access of "important information" from outside of the PRC must undergo a security assessment. ■ **Article 47:** Network operators are responsible for user content and must delete it upon request by authorities.
May 2017	Regulations on Internet News Information Service Management 互联网新闻信息服务管理规定	■ **Article 15:** Internet news providers (互联网新闻信息服务提供者,including platforms that disseminate news over the internet, whether through websites, apps, forums, blogs, microblogs, public accounts, instant messaging tools, or live streaming) must verify the real identity information of their users. If users do not provide authentic identity information, services should not be offered to them. ■ **Article 17:** Features that have the capacity to influence public opinion or mobilize society must be approved by the CAC.
Jan 2017	Opinions on Promoting the Healthy and Orderly Development of Mobile Internet 关于促进移动互联网健康有序发展的意见	■ Formulates the vision of a "healthy and orderly" mobile internet. ■ **Article 16:** Private companies and mobile services must not support activities that advocate for the overthrowing of state power (吹推翻国家政权) or separatism (分裂思想).
Jun 2016	Regulations on the Management of Mobile Internet Application Information Services 移动互联网应用程序信息服务管理规定	■ **Article 7:** Addresses the responsibilities of all app providers and developers, who should establish RNR based on the backend identity system established in 2015 ("后台实名、前台自愿"). These providers should also enact content moderation and dispose of accounts in instances where a violation occurs.
Feb 2015	Internet User Account Name Management Regulations 互联网用户账号名称管理规定	■ Internet information service providers (互联网信息服务提供者) must take on new RNR obligations. ■ Such providers should adhere to a new concept: real identity verification at the backend while allowing front-end anonymity if the user chooses ("后台实名、前台自愿"). ■ Ensure users do not post content that aims to subvert state power (颠覆国家政权), undermine national unity (破坏国家统一), damage national honor (国家荣誉), or spread rumors (散布谣言).
Dec 2012	Decision of the Standing Committee of the National People's Congress on Strengthening Network Information Protection 全国人大常委会关于加强网络信息保护的决定	■ **Article 5:** Providers of platforms must manage content posted by their users for compliance with laws or regulations, and report to the relevant authorities if necessary. ■ **Article 6:** Platform providers must verify users' real identity information when providing web access, telecommunication services, or information posting services.

| Month	Document	Impact/Key Provisions
Aug 2008	Notice on Issuing Guiding Opinions on Building a Unified Human Resources and Social Security Network Trust System关于印发建设统一的人力资源社会保障网络信任体系指导意见的通知	■ Initial guidelines for an effective and unified identity authentication mechanism. Identities should be verified before access to online services is granted to improve government control and secure services.
Dec 2005	Regulations for the Registration Management of Non-Commercial Internet Information Services) 非经营性互联网信息服务备案管理办法	■ Non-commercial online services, such as research platforms, educational, non-profit or cultural entities, need to ensure accountability of their content. ■ These platforms are also responsible for ensuring the legality of the content they provide.
May 2005	Opinions on Further Strengthening Internet Management 关于进一步加强互联网管理工作的意见	■ **Article 2:** Introduces the obligation to monitor and block harmful content from abroad.
Dec 2000	Decisions about maintaining Internet security 关于维护互联网安全的决定	■ **Article 2:** Defines the core tenets of internet censorship, including the safeguarding of national security and social public interests, as well as the criminalization of content that may subvert state power or incite the overthrowing of China's the socialist system.

Appendix 3: Extended Access Barrier Matrix

	Count of type 1&2 AB	Czech Republic	United Arab Emirates	Denmark	Finland	Hungary	Ireland	Romania	Belgium	Dominican Republic	Greece	Poland	Sweden	Netherlands	Ukraine	Nigeria	Portugal	Austria	France	Italy	Brazil	Germany	South Korea	Canada	Mexico
Kuai Shou	58	3	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2	3	3	3	2	2	3
Baidu Tieba (百度贴吧)	58	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1
PosterLabs	58	2	3	3	3	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2
DingDing - Make It Happen	58	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DouYin (抖音)	58	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
QQ空间	58	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3	1	1	1	1	1	1	1	3	1
Himalaya FM (喜马拉雅FM)	57	2	3	2	3	2	2	2	2	2	3	2	3	2	3	2	2	2	2	2	3	3	3	3	3
QQ Browser	57	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1
WeChat Reading	57	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Hertz (赫兹)	53	2	3	3	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2	2	3	2
Mango Live (芒果直播)	50	3	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	0	2	2
Wefun	39	2	3	2	2	2	2	2	2	0	2	0	2	2	2	2	2	0	0	0	2	0	0	1	3
Douban	33	1	0	1	1	1	1	1	1	1	0	1	0	0	1	1	1	0	0	0	1	0	0	0	1
Butter Camera - New camera, feel free to shoot	27	1	1	1	1	1	1	0	1	1	0	1	1	1	1	1	0	1	0	0	0	0	0	0	0
MOMO陌陌	23	2	1	2	2	2	2	2	2	0	2	2	2	3	0	0	2	2	2	2	0	2	0	1	0
Ola Party - Live, Chat & Party	22	2	0	2	2	2	2	2	2	0	2	2	2	2	0	0	2	2	2	2	0	2	0	0	0
Meipai	21	2	0	2	2	2	2	2	2	0	2	2	2	2	0	0	2	2	2	2	0	2	2	0	0
HeeSay - Blued LIVE & Dating	17	3	0	3	2	3	3	3	3	0	3	3	3	2	0	0	1	3	3	3	0	1	0	0	0
Nonolive - Live Streaming	13	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
QQ	9	0	1	0	1	0	1	0	0	0	0	0	1	0	3	0	1	0	1	0	0	0	0	0	0
BabyTree Pregnancy-Special software for pregnancy preparation and parenting	8	1	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0
SUGO: Voice Live Chat Party	8	2	0	0	0	2	0	2	0	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0
Zhihu (知乎)	6	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Zhihu Daily (知乎日报)	6	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Weibo (微博)	4	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YoHo: Group Voice Chat Room	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0
WeCom-Work Communication&Tools	3	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yingke Live (映客直播)	2	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BeautyCam - Beautify & AI Art	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Star Idol: 3D Avatar Creator	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Calamansi - Pinoy Live Cast	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
iPick	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JusTalk - Video Chat & Calls	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JusTalk Kids - Safe Messenger	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Uplive-Live Stream, Go Live	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WeChat (微信)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haya: Best Audio Experience	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUAWEI FamCare	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Little Red Book (小红书)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nekogram*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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	Count of type 1&2 AB	Peru	Saudi Arabia	Spain	Switzerland	Argentina	Belarus	Chile	Ecuador	Israel	Kazakhstan	United Kingdom	Algeria	Azerbaijan	Norway	Russia	South Africa	Colombia	Kuwait	Lebanon	Egypt	Pakistan	Philippines	Indonesia	New Zealand
Kuai Shou	58	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Baidu Tieba (百度贴吧)	58	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
PosterLabs	58	2	2	2	2	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2
DingDing - Make It Happen	58	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DouYin (抖音)	58	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
QQ空间	58	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	3	1	1
Himalaya FM (喜马拉雅FM)	57	2	2	2	3	3	2	2	3	2	3	3	2	3	2	2	2	2	2	2	2	3	3	2	2
QQ Browser	57	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
WeChat Reading	57	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Hertz (赫兹)	53	2	2	2	3	2	2	2	2	2	3	3	2	2	2	2	2	2	2	2	2	2	2	3	2
Mango Live (芒果直播)	50	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	2	2	2
Wefun	39	2	2	0	2	2	2	2	2	2	0	2	2	3	2	2	2	2	3	2	2	2	0	0	0
Douban	33	1	1	0	0	1	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	0	0	0	0
Butter Camera - New camera, feel free to shoot	27	1	0	0	1	0	1	1	1	1	0	1	1	1	0	0	0	0	1	1	1	0	0	0	1
MOMO陌陌	23	1	0	2	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Ola Party - Live, Chat & Party	22	0	0	0	2	0	0	0	0	2	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0
Meipai	21	0	0	2	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0
HeeSay - Blued LIVE & Dating	17	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nonolive - Live Streaming	13	2	0	2	0	2	0	2	2	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	1
QQ	9	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BabyTree Pregnancy-Special software for pregnancy preparation and parenting	8	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
SUGO: Voice Live Chat Party	8	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0
Zhihu (知乎)	6	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Zhihu Daily (知乎日报)	6	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weibo (微博)	4	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YoHo: Group Voice Chat Room	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
WeCom-Work Communication&Tools	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yingke Live (映客直播)	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BeautyCam - Beautify & AI Art	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Star Idol: 3D Avatar Creator	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Calamansi - Pinoy Live Cast	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
iPick	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JusTalk - Video Chat & Calls	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JusTalk Kids - Safe Messenger	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Uplive-Live Stream, Go Live	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WeChat (微信)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haya: Best Audio Experience	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUAWEI FamCare	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Little Red Book (小红书)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nekogram*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table continues on the next page.

	Count of type 1&2 AB	Turkey	Vietnam	Hong Kong	Thailand	Australia	Japan	Malaysia	Singapore	Taiwan	United States
Kuai Shou	58	2	2	3	2	2	2	2	2	2	2
Baidu Tieba (百度贴吧)	58	1	1	1	1	1	1	1	1	1	1
PosterLabs	58	2	2	2	2	2	2	2	2	2	2
DingDing - Make It Happen	58	1	1	1	1	1	1	1	1	1	1
DouYin (抖音)	58	1	1	1	1	1	1	1	1	1	1
QQ空间	58	1	1	1	1	1	1	1	3	1	1
Himalaya FM (喜马拉雅FM)	57	2	2	0	3	2	3	2	2	2	2
QQ Browser	57	1	1	1	1	1	1	1	1	1	0
WeChat Reading	57	1	1	1	1	1	1	1	1	1	1
Hertz (赫兹)	53	2	2	0	3	1	0	2	0	0	0
Mango Live (芒果直播)	50	2	2	0	0	2	0	0	0	0	0
Wefun	39	2	0	0	1	0	0	0	0	0	1
Douban	33	1	0	0	0	0	0	0	0	0	0
Butter Camera - New camera, feel free to shoot	27	0	0	0	0	0	0	0	0	0	0
MOMO陌陌	23	0	0	0	0	0	0	1	0	0	0
Ola Party - Live, Chat & Party	22	0	0	3	0	0	0	0	0	2	0
Meipai	21	0	0	0	0	0	0	0	0	0	0
HeeSay - Blued LIVE & Dating	17	0	0	0	0	0	0	0	0	0	0
Nonolive - Live Streaming	13	0	2	1	0	0	0	0	0	0	0
QQ	9	0	0	0	0	0	0	0	0	0	0
BabyTree Pregnancy-Special software for pregnancy preparation and parenting	8	0	0	0	0	0	0	0	0	0	0
SUGO: Voice Live Chat Party	8	0	0	0	0	0	0	0	0	0	0
Zhihu (知乎)	6	0	0	1	0	0	1	0	0	0	1
Zhihu Daily (知乎日报)	6	0	0	1	0	0	1	0	0	0	1
Weibo (微博)	4	0	0	1	0	0	0	0	0	0	0
YoHo: Group Voice Chat Room	3	0	0	0	0	0	0	0	0	0	0
WeCom-Work Communication&Tools	3	0	0	1	0	0	0	0	0	0	0
Yingke Live (映客直播)	2	0	0	0	0	0	0	0	0	0	0
BeautyCam - Beautify & AI Art	1	0	0	0	0	0	0	0	0	0	0
Star Idol: 3D Avatar Creator	1	0	0	0	0	0	0	1	0	0	0
Calamansi - Pinoy Live Cast	1	0	1	0	0	0	0	0	0	0	0
iPick	0	0	0	0	0	0	0	0	0	0	0
JusTalk - Video Chat & Calls	0	0	0	0	0	0	0	0	0	0	0
JusTalk Kids - Safe Messenger	0	0	0	0	0	0	0	0	0	0	0
Uplive-Live Stream, Go Live	0	0	0	0	0	0	0	0	0	0	0
WeChat (微信)	0	0	0	0	0	0	0	0	0	0	0
Haya: Best Audio Experience	0	0	0	0	0	0	0	0	0	0	0
HUAWEI FamCare	0	0	0	0	0	0	0	0	0	0	0
Little Red Book (小红书)	0	0	0	0	0	0	0	0	0	0	0
Nekogram*	0	0	0	0	0	0	0	0	0	0	0
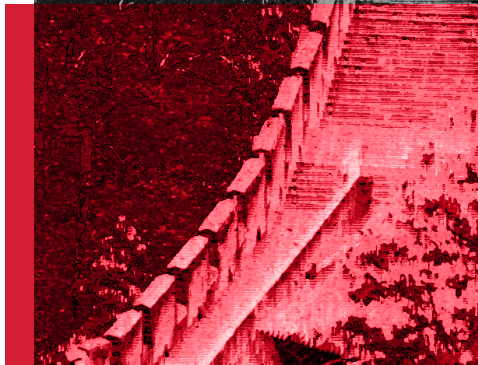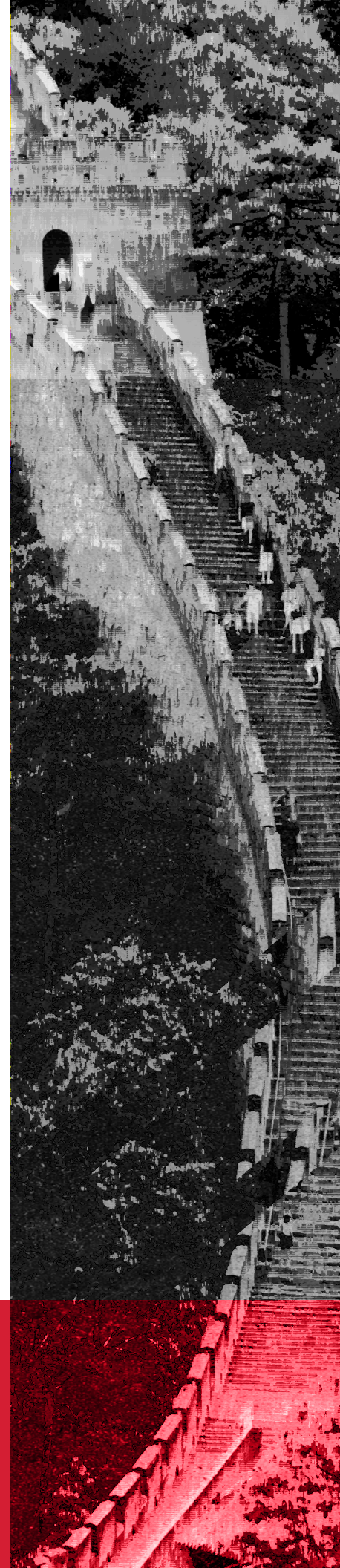
Appendix 4: Recorded account registration requirements by app

App name	App Store ID or Google Play Store URL	Allows exchange of information between users	Account Registration Identifier
BabyTree Pregnancy	id523063187	no	Phone Number
Baidu Tieba - chat about interests, go to Tieba	id477927812	yes	Phone Number
Beautiful pictures stickers	id477678113	no	E-mail address or account-free access
Beauty Camera – Selfie Cam	id471802217	no	E-mail address or account-free access
BeautyCam - Beautify & AI Art	id592331499	no	Phone Number
Binance Messenger	id6446617631	yes	E-mail address or account-free access
Butter Camera - New camera, feel free to shoot	id587176822	no	Phone Number
Calamansi - Pinoy Live Cast	id1476680678	yes	Phone Number
Clean Doctor - Clean My Phone	id855008026	no	E-mail address or account-free access
DingDing - Make It Happen	id930368978	yes	Phone Number
Dolphin Zero Incognito Browser*	id=com.dolphin.browser.zero	yes	E-mail address or account-free access
Douban	id907002334	yes	Phone Number
Douyin	id835599320	yes	Phone Number
FotoRus -Camera & Photo Editor	id457517348	no	E-mail address or account-free access
Haya: Best Audio Experience	id1485364632	yes	Phone Number
HeeSay - Blued LIVE & Dating	id1090274263	yes	E-mail address or account-free access
Hertz-make friends by listening to sounds	id1448999159	yes	Phone Number
Himalaya FM (listening community)	id876336838	yes	Phone Number
HUAWEI FamCare	id1383652311	yes	Phone Number
InstaBeauty - Makeup Camera!	id599534650	no	E-mail address or account-free access
InstaMag - Photo Collage Maker	id615187629	no	E-mail address or account-free access
iPick	id912765938	no	Phone Number
JusTalk - Video Chat & Calls	id627958823	yes	Phone Number
JusTalk Kids - Safe Messenger	id1403744827	yes	Phone Number
Kuai Shou	id440948110	yes	Phone Number
Litmatch Lite*	id=com.litatom.lite	yes	E-mail address or account-free access
Little Red Book – Your Guide to Life	id741292507	yes	Phone Number
Mango Live-Popular Short Videos	id1061501109	yes	Phone Number
Meipai	id847334708	yes	Phone Number

Table continues on the next page.

App name	App Store ID or Google Play Store URL	Allows exchange of information between users	Account Registration Identifier
Meitu- Photo Editor & AI Art	id416048305	no	E-mail address or account-free access
Messaging+ 6 SMS, MMS*	id=com.crazystudio.mms6	yes	E-mail address or account-free access
MOGU - Fashion Destination	id452176796	no	ID
MOMO陌陌	id448165862	yes	Phone Number
Nekogram*	id=tw.nekomimi.nekogram	yes	Phone Number
Nonolive - Live Streaming	id1113374949	yes	Phone Number
O2Cam: Take photos that breath	id1407731945	no	E-mail address or account-free access
Ola Party - Live, Chat & Party	id1525829883	yes	Phone Number
Pitu - Best selfie and PS Soft	id724295527	no	E-mail address or account-free access
PosterLabs	id875654777	no	Phone Number
QQ	id444934666	yes	Phone Number
QQ Browser	id370139302	yes	Phone Number
QQ空间	id364183992	no	Phone Number
QQ邮箱	id473225145	yes	E-mail address or account-free access
SayHi Chat Meet Dating People	id469609836	yes	E-mail address or account-free access
Sogou Input Method-Emoji Art&Funny Sticker	id917670924	no	E-mail address or account-free access
Star Idol: 3D Avatar Creator	id416048305	no	Phone Number
SUGO: Voice Live Chat Party	id1574436604	yes	Phone Number
Tencent Conference	id1497685373	yes	E-mail address or account-free access
TikTok	id1142110895	yes	E-mail address or account-free access
Uplive-Live Stream, Go Live	id1235469329	yes	Phone Number
WeChat	id414478124	yes	Phone Number
WeChat Reading	id952059546	yes	E-mail address or account-free access
WeCom-Work Communication&Tools	id1087897068	yes	Phone Number
Wefun	id1476921059	yes	Phone Number
Weibo	id350962117	yes	Phone Number
Weibo intl	id1215210046	yes	Phone Number
Xiaomi Community	id=com.mi.global.bbs	yes	E-mail address or account-free access
YI IoT	id=com.yunyi.smartcamera	no	E-mail address or account-free access
Yingke Live	id978985106	yes	Phone Number
YoHo: Group Voice Chat Room	id1509635224	yes	Phone Number
Zhihu	id432274380	yes	Phone Number
Zhihu Daily	id639087967	yes	Phone Number

Endnotes

1   Viola Zhou, "'Please give me a chance': WeChat users are handwriting apologies to get their banned accounts back," Rest of World, November 8, 2022, https://restofworld.org/2022/handwritten-wechat-apology-letters/; Ling Qingning [李卿宁], "WeChat Unblocking Appeal Agreement" [《微信限制解申诉承诺书》], Xiaohongshu [小红书], June 30, 2022, https://web.archive.org/web/20240423144826/https://www.xiaohongshu.com/explore/62bd466700000000210386e6; Zeyi Yang, "WeChat users are begging Tencent to give their accounts back after talking about a Beijing protest," MIT Technology Review, October 16, 2022, https://www.technologyreview.com/2022/10/16/1061713/wechat-accounts-begging-tencent-beijing-protest/.

2   WeChat is without alternatives for the communication with China, which is why scholars from media and communications speak about a "infrastructuralization" of WeChat. See Jean-Christophe Plantin and Gabriele de Seta, "WeChat as infrastructure: the techno-nationalist shaping of Chinese digital platforms," Chinese Journal of Communication, 12(3), 2019, https://doi.org/10.1080/17544750.2019.1572633.

3   It has been often argued that China's resolve in overcoming technological dependencies stems from frustrations over global standard setting dynamics, where Western coalitions rejected technically viable standards by Chinese engineers, such as WAPI for wireless internet connections. See Michael Sutherland, "CSR 2019: Setting a New Standard: Implications of China's Emerging Standardization Strategy," SAISCSR, https://saiscsr.org/2019/10/29/setting-a-new-standard-implications-of-chinas-emerging-standardization-strategy/; and Severine Arsène, "Global Internet Governance in Chinese Academic Literature," China Perspectives, 25–35 (2), 2016, https://www.kas.de/en/single-title/-/content/china-s-approach-to-cyber-sovereignty. In his analysis of China's conception of cyber sovereignty, Creemers posits that the key objectives are "territorialization and indigenization [of cyber space]. With territorialization, Beijing seeks to delineate its national boundaries in cyberspace, ensure that online processes affecting important Chinese interests take place within those boundaries, and unwanted activities can be barred from entering. Indigenization, in turn, attempts to substitute foreign actors and technologies by homegrown equivalents, reducing reliance on the outside world and building a competitive digital sector." See Rogier Creemers, "China's Approach to Cyber Sovereignty. In Governing Cyberspace: Behavior, Power and Diplomacy," Konrad Adenauer Stiftung, November 24, 2020, https://www.kas.de/en/single-title/-/content/china-s-approach-to-cyber-sovereignty; Rogier Creemers, "China's Conception of Cyber Sovereignty: Rhetoric and Realization," In D. Broeders & B. van den Berg (Eds.), Governing Cyberspace: Behavior, Power, and Diplomacy, 2020, https://ssrn.com/abstract=3532421.

4   According to O'Hara and Hall, "A Paternal Internet sees the Internet as continuous with and integrated within the offline world, and asserts that Internet engineering and governance should be subordinate to centrally defined beneficial outcomes." See Keiron O'Hara and Wendy Hall, "Four Internets: Data, Geopolitics, and the Governance of Cyberspace," Oxford University Press, 2020, Chapter 11.

5   Jyh-An Lee and Ching-Yi Liu, "Real-Name Registration Rules and the Fading Digital Anonymity in China," Washington International Law Journal, 25(1), 2016, https://digitalcommons.law.uw.edu/wilj/vol25/iss1/3/, page 3. Margaret Roberts, "Censored: Distraction and Diversion Inside China's Great Firewall," Princeton University Press, 2020, Chapter 3.

6   Zhuang Pinghui, "Be more positive, Chinese internet tsar Lu Wei tells celebrity weibo users," SCMP, August 15, 2013, https://www.scmp.com/news/china/article/1296768/be-more-positive-chinese-internet-tsar-lu-wei-tells-celebrity-weibo-users.

7   The "post-centralization" period in Chinese cybersecurity governance refers to the phase following the establishment of centralized control by the Central Cyberspace Affairs Commission, marked by a strategic emphasis on integrating Internet governance with national security and development policies, leading to a more top-down, government-led approach. See Jinhe Liu, "Rethinking Chinese multistakeholder governance of cybersecurity," in Ian Johnston, et al. (Ed.), "Building an International Cybersecurity Regime," Elgar Online, 2023, https://doi.org/10.4337/9781035301546.00015.

8   See, e.g., "PEN presents a list of 80 cases of internet users who have been targeted or punished by the government for their online expression." https://pen.org/research-resources/forbidden-feeds/.

9   In "The Sentinel State," Minxin Pei provides detailed accounts of China's structures and methods that "stymie the opposition before it can act," including the distribution of surveillance mandates to non-traditional security entities and the targeted and continuous surveillance of between 7.3 to 12.7 million "key individuals." See Minxin Pei, "The Sentinel State," Harvard University Press, 2024. Margaret Roberts explains that preventive repression works through instilling fear in users, inserting friction in connectivity, and producing floods of distracting information. See Margaret Roberts, "Censored: Distraction and Diversion Inside China's Great Firewall," Princeton University Press, 2020.

10   China adopts a strategy that manages and directs anger, dissidence, and dissatisfaction towarcs the local government in China. See Jason Gainous et al., "Directed Digital Dissidence in Autocracies: How China Wins Online," Oxford University Press, 2023.

11   José van Dijck, "The Culture of Connectivity: A Critical History of Social Media," Oxford University Press, 2013.

12   Per Article 19, "the protection of anonymity is a vital component in protecting both the right to freedom of expression and the right to privacy." See Article 19, "Right to Online Anonymity - Policy Brief," June 2015, https://www.article19.org/data/files/medialibrary/38006/Anonymity_and_encryption_report_A5_final-web.pdf. Similarly, DeNardis discusses the consequences of abolishing online anonymity. See Laura DeNardis, "The Global War for Internet Governance," Yale University Press. 2014, page 237. McKinnon discusses anonymity in repressive regimes. See Rebecca McKinnon, "Consent the Networked: The Worldwide Struggle For Internet Freedom," Basic Books, 2012.

13   Maike Gilliot, Vashek Matyas, Sven Wohlgemuth, "Privacy and Identity," in Kai Rannenberg, Denis Royer, André Deuker (Ed.), "The Future of Identity in the Information Society," Springer, Berlin, 2009, https://doi.org/https://doi.org/10.1007/978-3-642-01820-6_9, pages 251–390; Jyh-An Lee and Ching-Yi Liu, "Real-Name Registration Rules and the Fading Digital Anonymity in China," Washington International Law Journal, 25(1), 2016, https://digitalcommons.law.uw.edu/wilj/vol25/iss1/3/, page 29.

14   Laura DeNardis, "The Global War for Internet Governance," Yale University Press. 2014, page 237.

15   Another example is the blocking of securely encrypted traffic that uses TLS 1.3 and ESNI. See Catalin Cimpanu, "China is now blocking all

encrypted HTTPS traffic that uses TLS 1.3 and ESNI," ZDNet, August 8, 2020, https://www.zdnet.com/article/china-is-now-blocking-all-encrypted-https-traffic-using-tls-1-3-and-esni/. In addition, Douyin announced more thorough verification mechanisms for "parties involved in high-profile events and suspected fabricated content." See Global Times, "Douyin initiates verification on trending topics to combat clout-chasing behaviors lacking moral integrity," May 28, 2024, https://archive.is/PCa1J.

16   Coco Feng, "Chinese social media to display user locations based on IP address, including platforms from ByteDance and Zhihu," SCMP, April 17, 2022, https://www.scmp.com/tech/big-tech/article/3174487/chinese-social-media-display-user-locations-based-ip-address.

17   Zeyi Yang, "How 2023 marked the death of anonymity online in China," MIT Technology Review, December 22, 2023, https://www.technologyreview.com/2023/12/22/1085820/death-of-anonymity-online-china/; Qiao Langjun [俏郎君], "Is Front Desk Real-Name System Coming? De-anonymization on the Internet is Inevitable" [前台实名制要来了？互联网'去匿名化'已是大势所趋], 36Kr, October 25, 2023, https://archive.is/khLvP.

18   Phoebe Zhang, "Crackdown on anonymous Chinese social media accounts heightens concerns over privacy and free speech," SCMP, October 21, 2023, https://www.scmp.com/news/china/politics/article/3238739/crackdown-anonymous-chinese-social-media-accounts-heightens-concerns-over-privacy-and-free-speech.

19   Rebecca Arcesati et al., "China's digital platform economy: Assessing developments towards Industry 4.0," MERICS, May 2020, https://merics.org/en/report/chinas-digital-platform-economy-assessing-developments-towards-industry-40.

20   Jonathan E. Hillman, "The Digital Silk Road: China's Quest to Wire the World and Win the Future," Profile Books, 2021.

21   Samantha Hoffman, et al., "Truth and reality with Chinese characteristics," ASPI, May 2024, https://www.aspi.org.au/report/truth-and-reality-chinese-characteristics; Peter Raymond, "Re-platformed Planet? Implications of the Rise and Spread of Chinese Platform Technologies," CSIS, March 2023, https://www.csis.org/analysis/re-platformed-planet-implications-rise-and-spread-chinese-platform-technologies.

22   Reporters Without Borders, "Pursuit of a New World Media Order," March 2019, https://rsf.org/en/rsf-report-chinas-pursuit-new-world-media-order; Daniel Crain, "America's Cognitive Warfare Against China," Sinification, January 25, 2024, https://www.sinification.com/p/americas-cognitive-warfare-against-451.

23   Glenn Tiffert, et al., "Telling China's Story: The Chinese Communist Party's Campaign To Shape Global Narratives," Hoover Institution, July 2020, https://www.hoover.org/research/telling-chinas-story-chinese-communist-partys-campaign-shape-global-narratives.

24   Hannah Bailey, "Discursive Statecraft: China's Information Operations," Council on Geostrategy, March 2023, https://www.geostrategy.org.uk/research/discursive-statecraft-chinas-information-operations/

25   "WeChat users outside of China are increasingly finding themselves trapped in a mobile extension of the Great Firewall of China through which they're subjected to surveillance, censorship and propaganda." See Fergus Ryan, Audrey Fritz, Daria Impiombato, "TikTok and WeChat: Curating and Controlling Global Information Flows," ASPI, September 2020, https://www.aspi.org.au/index.php/report/tiktok-wechat.

26   Jeffrey Knockel, et al., "We Chat, They Watch," May 2020, Citizen Lab, https://citizenlab.ca/2020/05/we-chat-they-watch/.

27   Luwei Rose and Yi Kang, "Loyalty to WeChat beyond national borders: a perspective of media system dependency theory on techno-nationalism," Chinese Journal of Communication, 14 (4), 2021, https://doi.org/10.1080/17544750.2021.1921820.

28   Yan Xiaojun and Li La, "Propaganda beyond state borders: the deployment of symbolic resources to mobilize political support among the Chinese diaspora," The Pacific Review, 36 (3), 2023, https://doi.org/10.1080/09512748.2021.1968020.

29   Audrey Wong, "The Diaspora and China's Foreign Influence Activities," in Lucas Myers (Ed.), "Essays on China and U.S. Policy," The Wilson Center, 2022, https://www.wilsoncenter.org/publication/diaspora-and-chinas-foreign-influence-activities.

30   Chia Zhang, "WeChatting American Politics: Misinformation, Polarization, & Immigrant Chinese Media," in Wanning Sun and Haiqing Yu (Ed.), "WeChat and the Chinese Diaspora," Routledge, 2022, https://doi.org/10.4324/9781003154754.

31   Article19, "Blog: In China, when cyber censorship fails, resort to old-fashioned intimidation," March 12, 2024, https://www.article19.org/resources/blog-in-china-when-cyber-censorship-fails-resort-to-old-fashioned-intimidation/.

32   Alex Joske, "The Party Speaks for You," ASPI, June 2020, https://www.aspi.org.au/report/party-speaks-you.

33   According to Freedom House (an independent human rights watchdog), China conducts the "most sophisticated, global, and comprehensive campaign of transnational repression (TNR) in the world." China's transnational repression is conducted by different agencies, such as the Ministry of State Security, the Ministry of Public Security, and the People's Liberation Army and includes assassination attempts, physical assaults, and unlawful extraditions. See Freedom House, "China: Transnational Repression Origin Country Case Study," February, 2022, https://freedomhouse.org/report/transnational-repression/china. Human Rights Watch (an advocacy organization on human rights), further points to collaborative efforts with host states, such as Turkey and Egypt, who facilitate targeted and direct attacks on Uyghurs outside of the PRC. See Human Rights Watch, "Beyond Borders: China's Transnational Repression of Uyghurs," January 15, 2024, https://hrf.org/beyond-borders-chinas-transnational-repression-of-uyghurs/.

34   Shen Lu, "Chinese Tweeter in Exile Ran One-Man News Hub on Protests," The Wall Street Journal, December 13, 2022, https://www.wsj.com/amp/articles/chinese-tweeter-in-exile-ran-one-man-news-hub-on-protests-11670958834.

35   Safeguard Defenders, "Patrol and Persuade - A follow up on 110 Overseas investigation," December 2022, https://safeguarddefenders.com/en/blog/patrol-and-persuade-follow-110-overseas-investigation.

36   In February 2024, leaked documents revealed that state-backed hacking group i-Soon had successfully breached the digital security measures of countless devices. See Frank Bajak and Dake Kang, "An online dump of Chinese hacking documents offers a rare window into pervasive state surveillance," February 24, 2024, AP News, https://apnews.com/article/china-cybersecurity-leak-document-dump-spying-aac38c75f268b72910a94881ccbb77cb.

37   Bradley Jardine, "Great Wall of Steel: China's Global Campaign to Suppress the Uyghurs," The Wilson Center, 2022, https://www.wilsoncenter.org/book/great-wall-steel; David Tobin and Nyrola Elimä, "'We know you better than you know yourself': China's transnational repression of the Uyghur diaspora," University of Sheffield, 2023, https://www.sheffield.ac.uk/seas/research/we-know-you-better-you-know-yourself-chinas-transnational-repression-uyghur-diaspora.

38   Overseas students rely on exploitable Chinese state-approved apps to communicate with their family and friends in China. The monitoring of these apps has led to threats being made to family members in mainland China. These threats include revoking their passports, getting them fired from their jobs, preventing them from receiving promotions and retirement benefits, or even restricting their physical freedom. See Amnesty International, "China: Overseas students face harassment and surveillance in campaign of transnational repression," May 13, 2024, https://www.amnesty.org/en/latest/news/2024/05/china-overseas-students-face-harassment-and-surveillance-in-campaign-of-transnational-repression/; Dake Kang and Huizhong Wu, "Two Chinese bloggers in exile warn that police are interrogating their followers," Associated Press, February 27, 2024, https://apnews.com/article/china-police-interrogate-censorship-twitter-users-f09537e94d7ff4254d57848818e91fef.

39   The "post-centralization" period in Chinese cybersecurity governance refers to the phase following the establishment of centralized control by the Central Cyberspace Affairs Commission, marked by a strategic emphasis on integrating Internet governance with national security and development policies, leading to a more top-down, government-led approach. See Jinhe Liu, "Rethinking Chinese multistakeholder governance of cybersecurity," in Ian Johnston, et al. (Ed.), "Building an International Cybersecurity Regime," Elgar Online, 2023, https://doi.org/10.4337/9781035301546.00015.

40   Rongbin Han, "Contesting Cyberspace in China - Online Expression and Authoritarian Resilience," Columbia University Press, 2018, Chapter 2: Harmonizing the internet.

41   Deng Kai, David Demes, and Chih-Jou Jay Chen, "Xi Jinping's Surveillance State-Merging Digital Technology and Grassroots.

42   Kai Yang, "Demobilizing Veterans: Campaign-Style Stability Maintenance in China," Modern China, 50 (4), 2023, https://doi.org/10.1177/00977004231209992; Katja Drinhausen and Helena Legarda, "Confident Paranoia," MERICS, September 2022, https://www.merics.org/en/report/comprehensive-national-security-unleashed-how-xis-approach-shapes-chinas-policies-home-and.

43   These political movements resulted in regime changes in various post-Soviet states during the Color Revolutions and in the Middle East and North Africa during the Arab Spring. They also inspired regime critics in China to call for their own Jasmine Revolution, which, as CCP outlets and political scientists in the West have pointed out, caused China's party-state to double down on internet controls. See Kan Daoyuan [阚道远], "Improving Political Discrimination Ability in the Internet Age" [提高网络时代的政治鉴别力], Red Flag Manuscript [红旗文稿], January 16, 2016, https://archive.ph/DD0yk; Rongbin Han, "Contesting Cyberspace in China - Online Expression and Authoritarian Resilience," Columbia University Press, 2018, Chapter 1: Introduction; Elizabeth Economy, "The Third Revolution," Oxford University Press, 2018, Chapter 3: Chinanet.

44   This quote comes from the 2013 speech titled "The Internet has become the main battlefield in the struggle for public opinion" [互

联网已经成为舆论斗争的主战场]. See China Digital Times, "Full Text of Xi Jinping's August 19 Speech: Be Bold in Grasping, Managing, and Wielding the Sword in Speech" [网传习近平8·19讲话全文：言论方面要敢抓敢管敢于亮剑," China Digital Times [中国数字时代], April 11, 2013, https://chinadigitaltimes.net/chinese/321001.html. Note that the speech has been frequently cited or referred to in Chinese state media. See Lin Hui [林晖] et al., "Building a Strong Cyber Nation to Aid National Rejuvenation" [建设网络强国 助力民族复兴], People's Daily [人民日报], July 14, 2023, https://archive.ph/YNFb3.

45   Ibid.

46   ChinaCopyrightMedia, "Xi Jinping's 19 August speech revealed? (Translation)," November 12, 2013, https://chinacopyrightandmedia.wordpress.com/2013/11/12/xi-jinpings-19-august-speech-revealed-translation/.

47   Li Zhiqiang [李志强], "Creating a Clean and Healthy Cyberspace" [南方时论：营造一个风清气正的网络空间], Southcn.com, April 21, 2016, https://web.archive.org/web/20160422011832/http://news.xinhuanet.com/politics/2016-04/21/c_128917353.htm.

48   Sang Linfeng [桑林峰], "Military Report: Hostile Forces' Network Strategic Offensive, Lack of Responsibility Among a Few Military Leaders" [敌对势力网络战略进攻　军队少数领导缺担当], PLA News, May 20, 2015, https://archive.ph/ORaxv.

49   Rogier Creemers, "Cybersecurity Law and Regulation in China: Securing the Smart State," China Law and Society Review, 6 (2), 2023, https://doi.org/10.1163/25427466-06020001.

50   Stella Chen, "'Hostile Forces' in the Digital Age," China Media Project, November 11, 2021, https://chinamediaproject.org/2021/11/11/hostile-forces-in-the-digital-age/.

51   San Yi Shenghuo [三易生活], "Public Intellectuals Sing a Different Tune Again, But Real-Name Registration for Mobile Phones is Not a Disaster" [公知又唱反调 但手机实名制并不是洪水猛兽], Sohu, October 11, 2016, https://archive.ph/wm1Ty.

52   As mentioned in the lead article in of a PLA newspaper. See Jie Yiping [解一平], "Front Page of Military Newspaper: The Internet May Become a 'Heart Disease' for Contemporary China" [军报头版：互联网或成当代中国"心头之患"], China National Defense News [中国国防], January 15, 2016, https://archive.ph/9hbTo.

53   Sang Linfeng [桑林峰], "Military Report: Hostile Forces' Network Strategic Offensive, Lack of Responsibility Among a Few Military Leaders" [敌对势力网络战略进攻　军队少数领导缺担当], PLA News, May 20, 2015, https://archive.ph/ORaxv.

54   Cheng Guilong and Xie Jun [程桂龙 谢俊], "Cyber Ideological Security Governance from the Perspective of Non-Traditional Security" [非传统安全视阈下网络意识形态安全治理], Network Ideological and Political Education Research [网络思政研究], March 10, 2023, https://archive.ph/AuF7x.

55   Zhang Li [张立], "Strengthening the National Cybersecurity Barrier" [筑牢国家网络安全屏障], Red Flag Manuscript [红旗文稿], January 29, 2024, https://archive.ph/a7Fkt.

56   Daniel Crain, "America's Cognitive Warfare Against China," Sinification, January 25, 2024, https://www.sinification.com/p/americas-cognitive-warfare-against-451.

57   BBC, "Is There Privacy After Comprehensive Real-Name Registration? — Chinese Netizens View on 'Internet Real-Name System'" [全面实名后还有隐私吗——中国网民看"网络实名制"], June 1, 2017, https://www.bbc.com/zhongwen/simp/chinese-news-40056223.

58   Xue Song [薛松], "Buying a Mobile SIM Card at a Business Hall Requires an ID Card Starting Today" [营业厅买手机卡今起须持身份证], Guangzhou Daily [广州日报], September 1, 2010, https://archive.ph/0VOAn.

59   "Unfettered access to SIM card location data through state-run carriers und rules requiring every SIM card location to be linked to the user's government ID meant the government could uncover the location of any mobile user in the country at any time." See Josh Chin and Liza Lin, "Surveillance State: Inside China's Quest to Launch a New Era of Social Control," St. Martin's Press, 2022, page 235.

60   Liu Gang [刘刚], "The Origin, Debate, and Possible Solutions of China's Real-Name Registration System" [我国网络实名制的缘起、争论及可能出路], Journal of University of Electronic Science and Technology of China (Social Sciences Edition) [电子科技大学学报社科版], 17(4), 2015, https://dx.doi.org/10.14071/j.1008-8105(2015)04-0055-05, pages 55-59; Li Xiguang [李希光], "Talking About News Reform: Should the People's Congress Legislate to Prohibit Anyone from Posting Anonymously Online?" [谈新闻改革：人大应该立法禁止任何人匿名在网上发表东西？], Blogchina.com [博客中国], May 26, 2003, https://archive.is/MJPq9.

61   Sophie Wu, "Real-name registration required for China mobile users," Internet Governance Project, September 7, 2010, https://www.internetgovernance.org/2010/09/07/real-name-registration-required-for-china-mobile-users/.

62   Ye Pan [叶攀], "Black Market Mobile SIM Cards Still Openly Sold Online: These Details Must Be Guarded Against" [手机"黑卡"仍在网上公开兜售 这些细节不得不防], CCTV News [央视新闻客户端], February 16, 2019, https://web.archive.org/web/20200613035711/http://www.chinanews.com/cj/2019/02-16/8756076.shtml; Cao Yin, "IM Rules Are Tightened to Stem Rumors, Pornography," China Daily USA, August 8, 2014. https://archive.ph/voL7p.

63   Lily Kuo, "China Brings in Mandatory Facial Recognition for Mobile Phone Users," The Guardian, December 2, 2019, https://www.theguardian.com/world/2019/dec/02/china-brings-in-mandatory-facial-recognition-for-mobile-phone-users.

64   The principle was adopted by China's seminal Cybersecurity Law, which was followed by a host of regulations in 2016 and 2017, clarifying specific requirements for various internet sectors, such as app wallets, mobile apps, online news providers, comment functions, and online forums. See also CAC, "Internet User Account Name Management Regulations" [互联网用户账号名称管理规定], February 4, 2015, https://archive.ph/TmHgz; Charles Custer, "China's Wallet Apps Require Real-Name Registration by July 1 – Or Else," TechinAsia, May 30, 2016, https://www.techinasia.com/chinas-epayment-platforms-require-realname-registration-july-1.

65   The CSL put into law what the National People's Congress had already introduced in 2012. To bolster "network information security" (网络信息保护), a decision mandated that "network service providers" (网络服务提供者) must verify users' identities using IDs or other legal documents before granting access to internet services and social media platforms. While the obligation for real-name registration (RNR) for internet access therefore predates Xi Jinping's concept of the tri-zone internet, the legislative justification for it has gradually shifted. According to the original 2012 decision, RNR was intended to prevent the spread of pornographic content, combat fraud, and protect minors.

66   A legal expert at the Beijing University of

Posts and Telecommunications explains that RNR, as defined in Article 24 of the Cybersecurity Law, serves one main purpose: to support the establishment of a purified internet environment (净化网络环境) and to psychologically deter netizens who attempt to commit crimes, such as anonymously spreading rumors. See Xie Yongjiang [谢永江], "Backend Real-Name System Has Become a Global Reality, Strengthening Personal Information Protection is Key" [【专家谈】后台实名制已成全球性现实 强化个人信息保护成为关键], People's Daily [人民日报], September 11, 2017, https://web.archive.org/web/20240114105031/http://opinion.people.com.cn/n1/2017/0911/c1003-29527979.html. Similarly, according to Tian Li, Associate Professor at Peking University's New Media Research Institute, RNR turns the internal moral constraints of netizens into external legal constraints, for which the "Seven Base Lines" should provide guiding principles, as defined by Lu Wei, formerly head of the CAC and deputy head of the Propaganda Department. See Dong Siyu [董丝雨] and Jiang Qiguang [蒋齐光], "Three Questions on Internet Real-Name System: Information Protection, Technological Supervision, and Freedom of Speech" [三问网络实名制：信息保护、技术监管、言论自由], People's Daily [人民日报], June 1, 2017, https://archive.ph/ymiNI.

67	Xu Hongzhou [许红洲], "The Strictest Mobile Real-Name Registration System Has Arrived!" [最严手机实名制来了！], Economic Daily [经济日报], May 25, 2016, https://archive.ph/wip/o8D0a.

68	Gao Yaping Team [高亚平团队], "How App 'Real-Name Authentication' Follows the 'Minimum Necessary Principle'" [新经济与法｜App"实名认证"如何遵循"最小必要原则"], The Paper [澎湃], January 6, 2022, https://web.archive.org/web/20240622134450/https://www.thepaper.cn/newsDetail_forward_16165104.

69	Central Cyberspace Affairs Commission [中央网络安全和信息化委员会], "Ministry of Public Security and the Cyberspace Administration of China on the 'National Network Identity Authentication Public Service Management Measures (Draft for Comments)' Public Solicitation of Comments" [公安部　国家互联网信息办公室关于《国家网络身份认证公共服务管理办法（征求意见稿）》公开征求意见的公告], July 26, 2024, https://archive.is/wtdi6.

70	Meaghan Tobin and John Liu, "China Wants to Start a National Internet ID System," New York Times, July 31, 2024, https://www.nytimes.com/2024/07/31/business/china-national-internet-id.html.

71	WeChat, developed by Tencent, is a multifunctional social media app that integrates messaging, social networking, and payment functionalities, widely adopted across China. It is integral to daily digital interaction and commerce in the country. Alipay, created by Alibaba's affiliate Ant Group, functions primarily as a digital wallet and payment platform, playing a pivotal role in facilitating online and mobile transactions in China.

72	Available for download in iOS: https://archive.is/t33of.

73	OIDAA, "CTID Platform: Strategic Practice of China's Network Trusted Identity with Chinese Characteristics" [CTID平台：中国特色网络可信身份战略实践], June 19, 2020, https://web.archive.org/web/20210621200418/https://www.oidaa.org.cn/news/newsinfo/68.html.

74	Information Security Research [信息安全研究], "Exploration and Prospects of the Development Path of China's Network Trusted Identity" [我国网络可信身份发展路径探索与展望], December 20, 2022, https://web.archive.org/web/20230720101244/https://www.secrss.com/articles/50211; ANICERT [中盾安信], "Managing Trusted Identity Based on Legal Documents to Create a Clear and Bright Cyberspace Environment" [基于法律证件开展可信身份管理　共

同营造风朗气清的网络空间环境], Police Technology Special Issue [警察技术专刊], June 4, 2020, https://web.archive.org/web/20210920104429/https://www.anicert.cn/industry/industryinfo/87.html.

75	OIDAA, "Technical Architecture and Standards of the 'Internet + Trusted Identity Authentication Platform'" ["互联网+可信身份认证平台"技术架构与标准], May 29, 2020, https://web.archive.org/web/20210621193528/https://www.oidaa.org.cn/news/newsinfo/65.html.

76	After CSL came into effect, the RNR system still lacked, especially in terms of data protection, technical infrastructure and supervision and coordination clarity. See Jia Dengxun [贾登勋] and Du Yiran [杜一冉], "The Dilemma and Way Out of China's Internet Real-Name System" [我国网络实名制的困境与出路], People's Forum [人民论坛], March 9, 2017, https://web.archive.org/web/20240622131344/http://www.rmlt.com.cn/2017/0309/463620.shtml.

77	After Tencent (a Chinese big tech company focusing on games) introduced RNR for its mobile online game "Honor of Kings," overseas users periodically experienced account closures. See shixi, "National Server Mobile Games Launch Real-Name Authentication, Foreign Players: Babies Feel Bitter" [国服手游开启实名认证,外服玩家：宝宝心里苦], Game Tea House [游戏茶馆], May 27, 2017, https://web.archive.org/web/20240613121221/http://youxichaguan.com/news/13116.html. Alipay users had a similar experience the year before. See Jiang Yannan [江雁南] and Su Xinqi [苏昕琪], "When Alipay Pushes Real-Name System in Its Own Way, What About Its Overseas Users?" [当支付宝用"自己的方式"推实名制,它的海外用户怎么办？], The Initium [端传媒], May 20, 2016, https://theinitium.com/zh-Hans/article/20160520-mainland-alipayrealname.

78	Weibo wrote in its 2017 account policy update: "Overseas users need to prepare employer certificates and business cards, ID cards, driver's licenses or passports, and relevant industry certificates for real-name authentication." See Anonymous [佚名], "Introduction to Sina Weibo Real-Name Authentication Rules and Authentication Steps" [新浪微博实名认证规则及认证步骤方法介绍], PConline, November 16, 2017, https://web.archive.org/web/20240613122536/https://pcedu.pconline.com.cn/1029/10297361.html. See also Chen Yuxi [陈宇曦], "Bilibili Requires Real-Name Verification for Video Uploads: Responding to Policy Requirements, Domestic Users Can Bind Mobile Phones" [B站上传视频需实名验证：响应政策要求,国内用户可绑定手机], The Paper [澎湃], June 25, 2017, https://archive.is/RYJjL.

79	As explained in a public statement by Kuaishou in April 2018. See Guzi [谷子], "Why Can't 'Kuaishou' Be Downloaded? Introduction to the Reasons for the Inability to Download" [《快手》为什么不能下载了？无法下载原因介绍], 3DMGame, April 10, 2018, https://web.archive.org/web/20240603143801/https://shouyou.3dmgame.com/gl/79797.html.

80	High-level representatives of these companies are often summoned (约谈) to closed-door meetings and are compelled to comply through large-scale internet cleanup campaigns such as Qinglang and Cybersword, as well as the new app rectification platform. For example, the CAC annually calls in representatives and forces, or they need to acquire licenses to carry out any services, as is the case for microblogging platforms in February 2018. See William Zheng, "In Just 3 Months, China's Internet Censor Has Closed Over 4,000 Websites and Removed 55 Apps," SCMP, May 2, 2023, https://www.scmp.com/news/china/politics/article/3219119/just-3-months-chinas-internet-censor-has-closed-over-4000-websites-and-removed-55-apps. Similarly, the platform "全国APP技术检测平台" by China Academy of Information and Communications Technology of Ministry of

Industry and Information Technology tests 180,000 apps per month. According to official reporting, app developers must undergo data collection tests and approval by the ministry before apps can be delivered to app stores. The ministry argues these tests are for the sake of protection of personal data of users, the platform monitors each apps data collection practices, including personal and device data (MAC addresses and IMEI numbers). In the first year after launch in 2020, almost 2.5 million apps were tested and more than 2,000 were "rectified." See The Paper [澎湃], "Monitored by Mobile Apps? Ministry of Industry and Information Technology: Enhance Detection Capabilities, Build a Full-Chain Supervision System" [被手机APP监视？工信部：提升检测能力，建全链条监管体系], November 25, 2021, https://web.archive.org/web/20240603170838/https://m.thepaper.cn/kuaibao_detail.jsp?contid=15554170&from=kuaibao.

81   Similar to search engine level censorship evidence. See Jeffrey Knockel, Ken Kato, Emile Dirks, "Missing Links - A Comparison of Search Censorship in China," The Citizen Lab, April 2023 https://citizenlab.ca/2023/04/a-comparison-of-search-censorship-in-china/.

82   Jeffrey Knockel, et al., "We Chat, They Watch," May 2020, Citizen Lab, https://citizenlab.ca/2020/05/we-chat-they-watch/; "During June Fourth, Sina Weibo Prohibits Overseas Users from Posting Images, Videos (Updated)" [六四期间 新浪微博禁止海外用户发图、视频(更新)], China Digital Times, June 2, 2017, https://chinadigitaltimes.net/chinese/560401.html.

83   To limit the countries in which their apps are available for download. See Tech Transparency Project, "Apple Is Censoring its App Store for China," December 23, 2020, https://www.techtransparencyproject.org/articles/apple-censoring-its-app-store-china; Mathew Ingram, "Apple's censorship in China is just the tip of the iceberg," Columbia Journalism Review, April 25, 2024, https://www.cjr.org/the_media_today/apple_appstore_china_censorship.php.

84   Talek Harris, "China's Weibo eyes global expansion, foreign-language products," The Jakarta Post, November 30, 2018, https://www.thejakartapost.com/life/2018/11/30/chinas-weibo-eyes-global-expansion-foreign-language-products.html.

85   AppleCensorship, "快手," available at: https://applecensorship.com/app-store-monitor/app/440948110, accessed on May 5, 2024.

86   AppleCensorship, "快手极速版," available at: https://applecensorship.com/app-store-monitor/app/1472502819, accessed on May 5, 2024.

87   AppleCensorship, "Kwai-download&share video," available at: https://applecensorship.com/app-store-monitor/app/1550102968, accessed on May 5, 2024.

88   AppleCensorship, "Kwai - Video Social Network," available at: https://applecensorship.com/app-store-monitor/app/1338605092, accessed on May 5, 2024.

89   AppleCensorship, "噗叽," available at: https://applecensorship.com/app-store-monitor/app/1439077104, accessed on May 5, 2024.

90   AppleCensorship, "Weibo intl.," available at: https://applecensorship.com/app-store-monitor/app/1215210046, accessed on May 5, 2024.

91   AppleCensorship, "微博," available at: https://applecensorship.com/app-store-monitor/app/350962117, accessed on May 5, 2024.

92   AppleCensorship, "DingTalk," available at: https://applecensorship.com/app-store-monitor/app/1502941291, accessed on May 5, 2024; AppleCensorship, "DingDing," available at: https://applecensorship.com/app-store-monitor/app/930368978, accessed on May 5, 2024.

93   AppleCensorship, "抖音," available at: https://applecensorship.com/app-store-monitor/app/1142110895, accessed on May 5, 2024.

94   AppleCensorship, "WeChat," available at: https://applecensorship.com/app-store-monitor/app/414478124, accessed on May 5, 2024.

95   Qiao Long [乔龙], "Tencent Implements 'One WeChat, Two Systems'" [腾讯实行"一微两制"], RFA, September 10, 2021, https://www.rfa.org/mandarin/yataibaodao/meiti/ql1-09102021045914.html.

96   Such as Virtual Private Networks, downloading apps from third-party providers, changing country settings for a devices app store or acquiring different sim cards.

97   This overview excludes China. We also omitted India because the Modi administration has effectively banned hundreds of Chinese apps from national app stores since 2020. As such, India operates the only government other than the CCP responsible for nationwide app-store-level censorship. See "The problem with India's app bans," Justin Sherman, "The Problem with India's App Bans," The Atlantic Council, March 2023, https://www.atlanticcouncil.org/blogs/southasiasource/the-problem-with-indias-app-bans/.

98   One "country-app pair" refers to a combination of one country and one app, such as Zhihu in Canada. Given 33 apps and 58 countries in our sample, there are 1,914 possible "country-app pairs."

99   China Daily, "Report Reveals CIA Behind 'Color Revolutions'," June 25, 2023, https://web.archive.org/web/20240607085057/https://www.chinadaily.com.cn/a/202306/25/WS6497a2b0a310bf8a75d6b6e7.html.

100   This overview excludes China. We also omitted India, because the Modi administration has effectively banned hundreds of Chinese apps from national app stores since 2020. As such, India operates the only government other than the CCP responsible for nationwide app store level censorship. See "The problem with India's app bans," The Atlantic Council, https://www.atlanticcouncil.org/blogs/southasiasource/the-problem-with-indias-app-bans/.

101   Reporters Without Borders, "Pursuit of a New World Media Order," March 2019, https://rsf.org/en/rsf-report-chinas-pursuit-new-world-media-order.

102   Samantha Hoffman, "Truth and Reality with Chinese Characteristics," ASPI, May 2024, https://www.aspi.org.au/report/truth-and-reality-chinese-characteristics; Samantha Hoffman, "Engineering Global Consent: The Chinese Communist Party's Data-Driven Power Expansion," ASPI, October, 2019, https://www.aspi.org.au/report/engineering-global-consent-chinese-communist-partys-data-driven-power-expansion; Peter Raymond, "Re-platformed Planet? Implications of the Rise and Spread of Chinese Platform Technologies," CSIS, March, 2023, https://www.csis.org/analysis/re-platformed-planet-implications-rise-and-spread-chinese-platform-technologies.

103   Rogier Creemers, "Common Destiny in Cyberspace: China's Cyber Diplomacy From," in Frank N. Pieke (Ed.), "Global East Asia," University of California Press, 2021, https://doi.org/10.1525/9780520971424-027, pages 263-270.

104   On the political concept Jointly Building a Community with a Shared Future in Cyberspace, the Atlantic Council writes, "China's vision for the internet is really a vision for global norms around political speech, political oppression, and the proliferation of tools and capabilities that facilitate surveillance." The author finds that China strategically supports other authoritarian

governments to adopt its repressive vision for the internet to preserve access to strategic resources and export markets. See Dakota Cary, "Community Watch: China's Vision for the Future of the Internet," The Atlantic Council, December 2023, https://www.atlanticcouncil.org/in-depth-research-reports/report/community-watch-chinas-vision-for-the-future-of-the-internet/.

105 Lingua Sinica, "Guarding the 'Precious Embers' of Resistance," January 19, 2024, Substack, https://linguasinica.substack.com/p/guarding-the-precious-embers-of-resistance.

106 Ryan Ho Kilpatrick, "Long-Distance Resistance" [遠對抗], China Media Project, August 8, 2023, https://chinamediaproject.org/the_ccp_dictionary/long-distance-resistance/.

107 Caleb Foote and Robert D. Atkinson, "Chinese Competitiveness in the International Digital Economy," ITIF, November 2020, https://itif.org/publications/2020/11/23/chinese-competitiveness-international-digital-economy/.

108 In line with work on tolerated and even orchestrated non-threatening forms of resistance. See Jason Gainous et al., "Directed Digital Dissidence in Autocracies: How China Wins Online," Oxford University Press, 2023.

109 Laura DeNardis and Francesca Musiani, "Governance by Infrastructure," in Francesca Musiani et al. (Eds.), "The Turn to Infrastructure in Internet Governance," Palgrave Macmillan, 2016.

110 United Nations, "Global Digital Compact," available at: https://www.un.org/techenvoy/global-digital-compact, accessed on June 21, 2024.

111 Justin Sherman and Konstantinos Komaitis, "China's New UN Internet Proposal Could Resonate with Growing Economies," Tech Policy, July 12, 2023, https://www.techpolicy.press/chinas-new-un-internet-proposal-could-resonate-with-growing-economies/.

112 Max Samorukov, "The Essentials Of Using AppMagic," Appmagic, May 15, 2020, https://appmagic.rocks/research/essentials.

113 Ibid.

114 Max Samorukov, "Genre Classification," Appmagic, February 27, 2020, https://appmagic.rocks/tool-descriptions/genre-classification.

115 Max Samorukov, "The Essentials Of Using AppMagic," Appmagic, May 15, 2020, https://appmagic.rocks/research/essentials.

116 Article19, "Side-stepping Rights: Regulating Speech by Contract," June, 2018, https://www.article19.org/resources/side-stepping-rights-regulating-speech-by-contract/.

117 The World Bank, "World Development Indicators," 2024, available at: https://databank.worldbank.org/reports.aspx?source=2&series=SP.POP.TOTL, accessed: February 2, 2024.

118

Tracy Qu, "China updates rules on real-name registration online in crackdown on schemes to revive banned user accounts," SCMP, October 27, 2021, 6:20pm, https://www.scmp.com/tech/policy/article/3153887/china-updates-rules-real-name-registration-online-crackdown-schemes.

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