大国博弈下提升我国产业链韧性的内在逻辑与实现路径

肖皓　贾真　赖明勇*

湖南大学经济与贸易学院

摘　要：党的二十大报告明确提出“着力提升产业链供应链韧性和安全水平”。当前，大国博弈趋于激化，地缘政治因素成为推动全球产业链重构的“加速器”，严重威胁我国产业链的安全稳定。本文旨在深入分析大国博弈下我国产业安全与发展的历史逻辑与现实逻辑，为提升我国产业链韧性提出建议。具体而言，结合大国博弈特征和阶段性发展目标，分四个阶段讨论党在百年历程中的工业体系建设，挖掘独立自主与产业链韧性提升的历史逻辑；围绕当前在产业链领域的关键中间产品、核心技术和长期科技竞争力、合作伙伴关系以及治理四个维度的大国博弈特点，阐释提升产业链韧性在满足现代化产业体系建设要求、应对短期风险与提升长期治理话语权三个方面所体现出的现实逻辑。最后，从加强产业链风险管理与预警，以科技创新突破关键核心技术，拓展产业链合作“朋友圈”，积极参与全球产业链治理等层面提出我国产业链韧性提升的实现路径。

关键词：大国博弈　产业链韧性　独立自主　现代化产业体系

JEL 分类号：F02, F63

一、引言

党的二十大报告明确提出“着力提升产业链供应链韧性和安全水平”，习近平总书记在中共二十届中央政治局第二次集体学习时进一步强调，“打造自主可控、安全可靠、竞争力强的现代化产业体系”。当前，站在科技革命、治理赤字、增长乏力的十字路口，全球分工的风险因素持续上升，大国围绕合作对象选择、科技领先地位、选票政治支持、国际规则制定等展开多维博弈，希冀在百年变局重新洗牌中获得更多筹码。政治因素日益成为推动全球价值链收缩、重构甚至全球化停滞、逆转的“加速器”，严重威胁了全球产业链的安全稳定（黄群慧，2021）。大国博弈的持续“发酵”不仅提升了产业链有意中断的可能性，还严重冲击了原有全球生产网络的合作分工逻辑，使我国产业链面临被迫转移、被动替代、链条回迁、低端锁定、“多方围剿”、圈层“孤立”等一系列新的风险。甚至，全球生产网络中的经济依存结构与政治干预的结合成为一些国家全面遏制打压我国科技崛起的关键手

* 联系人：肖皓，邮箱：xh_26@126.com。

基金项目：本文系湖南省自然科学基金面上项目“中国ICT产业的供应链韧性测度与美国制裁风险的综合评估研究”（2023JJ30172）与教育部哲学社会科学研究重大课题攻关项目“美国印太经济框架研究”（22JZD042）的阶段性成果。

感谢中国人民大学经济学院博士生崔然的前期资料收集工作。

(C)1994-2024 China Academic Journal Electronic Publishing House. All rights reserved.　http://www.cnki.net

段和武器(庞珣、何晴倩,2021),如美国对华发动出口管制与科技制裁等极端政治手段、美日印澳举行四方安全对话成立“四国联盟机制”等。面对我国产业链发展中的新变化和新要求,提升产业链韧性与推动产业链现代化发展成为亟须解决的重要问题。

产业链韧性并非一个全新的话题。回顾百年奋斗史,面对经济建设中的种种重大风险挑战,我党敢于斗争、善于斗争,使我国工业体系实现了“从无到有、从有到强”的飞跃式发展,走出了一条坚持独立自主的内生性产业链安全建设新道路。然而在当前新形势下,产业链韧性被赋予新的内涵与要求。一方面,面对大国博弈加剧下新风险新事件的层出不穷,产业链韧性需要表现出对外部威胁的抵御、适应与恢复重组等能力;另一方面,在现代化产业体系建设要求下,产业链韧性需要在产业链安全保障的基础上进一步实现对产业结构调整、转型升级与竞争力提升等目标的稳步有序推进。在此背景下,立足产业链韧性提升的内在逻辑,探索有效的提升路径,对推动我国现代化产业体系建设与经济高质量发展具有重要意义。

鉴于此,本文立足于新形势下大国博弈的新特点与我国现代化产业体系构建的新要求,深入剖析我国产业链韧性提升的历史逻辑与现实逻辑,进一步探寻提升我国产业链韧性的可能实现路径。

二、坚持独立自主与我国产业链韧性提升的历史逻辑

独立自主是马克思主义关于各国无产阶级政党领导本国人民进行革命所体现出的基本立场,也是中华民族的精神之魂,是我们立党立国的重要原则。回顾中国共产党走过的百年历程,独立自主贯穿于我国产业建设的整个历史脉络中,成为党和国家事业取得胜利的重要法宝。历史上大国博弈始终是国家关系的常态,但随着世界现代化进程演变、国际秩序愿景与不同国家崛起及其利益诉求各异等,在不同发展阶段,大国博弈的特征与影响也具有明显差别。百年来,面对变幻莫测的国际风云,我国遭受了许多严重的打击与挑战,但最终都能化险为夷、转危为安,就是因为中国共产党始终坚持独立自主原则,运用马克思主义立场、观点与方法并结合中国具体实际,明确中国社会发展所处的历史方位,准确把握产业发展过程中的矛盾关系,合理处理开放与自主的辩证关系,最终在产业建设过程中走出了一条独立自主的道路,在开放过程中实现了产业的安全与发展。

(一)新民主主义革命时期:1919—1949年

19世纪末,以英国、法国等为代表的帝国主义大幅扩张,开始争夺全球殖民地和势力范围。1900年夏,英、俄、日、法、德、美、意、奥八国联军入侵中国,使得中国沦为半殖民地半封建社会。大国之间为获取中国的资源、市场和势力范围展开激烈争夺,这导致中国成为竞争对手之间的战略利益交锋点。此时的中国被裹挟到大国博弈之中,处于“人为刀俎,我为鱼肉”的被动处境,不得不在列强

(C)1994-2024 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

之间艰难地维护着国家的生存。如何保障产业的民族性和独立性，快速形成国家力量成为这一历史时期的核心任务。

帝国主义列强的入侵，导致中国在政治层面丧失了主权独立性，行政、司法等政治职能分裂；经济层面受到外来资本强势介入的影响，经济建设的自主性减弱，封建土地关系与高利贷资本、官僚买办资本的勾结极大阻碍了社会进步。此时，中国生产力正处于由传统农业文明向现代工业文明转型的初期阶段，社会生产力水平低下，再加上现代产业被外国资本及其控制的官僚买办资本垄断，即使民族工业有所发展却也难以立足，急需得到解放和发展。

半殖民地半封建社会的社会性质意味着政府无法自主协调生产力与生产关系之间的矛盾，唯有通过暴力革命的方式才能破除束缚中国生产力发展的旧的、反动的生产关系。在这一时期，中国共产党团结带领中国人民，浴血奋战、百折不挠，以武装革命实现了民族独立。为推动革命事业的发展，这一时期中国共产党立足于国际形势与本国国情，开展了一系列经济探索，大力推进农业、工业与商贸流通经济领域的发展，为夺取政权提供了重要的物质基础。毛泽东同志提出的新民主主义革命的三大经济纲领，成为新中国独立自主经济发展道路的早期基因。三大经济纲领包括没收封建地主阶级的土地归农民所有，没收官僚垄断资本归国家所有，保护民族工商业。这些行动纲领为当时中国的战后重建与经济发展提供了方向和政策支持，极大推动了农村改革、铁路和公路等基础设施建设以及城市工业的发展，奠定了国有经济在中国经济建设中的主导地位，通过国家控制资源和民族重要产业，确保国家的主权和经济独立性。

（二）新中国建设时期：1949—1978年

新中国建设时期，大国博弈呈现出冷战对抗与阵营分化的特征。为了争夺世界霸权，美国和苏联两个超级大国展开对抗，开始进入冷战时代，世界从此分裂为两大阵营，即美国领导的西方阵营和苏联领导的社会主义阵营。此时的中国虽然摆脱了半殖民地半封建社会的束缚，但仍不得不在两大阵营对抗的环境中运筹中美苏“大三角”，以维护主权独立、国家安全和国际地位（王鸿刚，2021）。中国先是与苏联结盟，而后在两国产生分歧导致关系恶化后，中国开始寻求改善与美国等西方国家的关系，与西方国家之间的接触也在某种程度上不断增加。如何在“一穷二白”的基础上，以“改善国际关系”“接受援助”“贸易保护”等方式快速积累现代工业体系基础，成为这一历史时期的核心任务。

在该时期内，中国在美国和苏联之间努力保持外交和战略平衡，加剧了产业建设所面临的不确定性。一方面存在国际交往受限、地缘政治风险上升等外部风险；另一方面生产力水平处于工业化初期，工业企业稀少、产业结构残缺、工业布局畸形等问题使得国民经济异常艰难。这一特殊国情意味着：在新中国成立之初的生产力条件下，我国只能在半封闭的状态下发展内向型经济。此时生

(C)1994-2024 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

产关系的变革应在保障民生重要产业的前提下以优先发展重工业为主要目标，从而在产业上实现追赶和跨越式发展，维护国内经济稳定。

1956年社会主义基本制度确立，为适应社会主义制度下的生产力发展条件，必然要求基于社会主义制度框架对生产关系进行变革：在经济上，保护本国民族工商业、没收官僚资本、进行土地改革。在推行工业化的同时，在产业层面对资本主义工商业、农业、手工业进行社会主义改造（“一化三改”），这种变革解放了社会生产力，体现了发展生产力与变革生产关系的有机统一。产业领域的变革适应了社会化大生产的要求，形成了我国在社会主义社会中独立自主进行产业建设的开端。

考虑到当时国际博弈下面临的产业发展机遇与冲击风险，我国接受了以苏联、东欧为代表的国际援助。在“一五”计划时期，基于社会主义阵营的援助，以独立自主为建设方针进行了以156项工程为核心的工业化建设，使我国迅速建立起行业比较齐全的现代工业门类，其中在产业门类方面，以重工业和国防建设为重点，并建成汽车、重型机械等新的产业链，形成了产业上中下游的协调分工；在产业布局方面以内陆为主，并建成了几个重要的工业基地。在产业建设方面接收来自国际的资金和技术援助，并非意味着产业建设丧失了独立性。实际上，国家工业化所秉持的建设方针仍是“独立自主，自力更生”。我国在工业体系构建过程中对于先进技术要求“消化吸收”而非“单纯引入”（李天健，2021），其目的是使中国具备自我生产、自我研发的能力，工业建设的主动权仍掌握在中国人自己手中。出于国家安全需要，关乎国民经济命脉的关键行业由国有企业负责把控，产业安全性得到了最基本的保障。在20世纪50年代后期中苏关系出现恶化后，中国共产党和人民独立自主建设产业的信心进一步增强。“三五”计划前后，由于国际形势严峻，指导思想经历了由“解决吃穿用”到以战备为中心的变化，为使工业布局逐步平衡，并且利于备战，开启了把已有工业搬迁至三线地区或在三线地区建设新工业的三线建设，为我国形成独立的、比较完整的工业体系奠定了基础。

（三）改革开放和社会主义现代化建设初期：1978—2001年

在这一历史时期，分别以美国和苏联为首的北约和华约依旧持续联盟对抗。直至1991年苏联解体，冷战结束，美国成为唯一的超级大国，世界格局呈现出单极化的趋势。经过对当时国际形势的审慎分析，邓小平同志作出“和平与发展是当今世界的两大主题”的重大判断。在这一判断的基础上，中国一方面在美国和苏联之间依旧保持平衡外交战略，避免被卷入冷战对抗，维护自身独立和国家利益；另一方面，积极参与国际组织和多边外交，特别是加强与世界主要发达国家的联系，推行合作而非竞争，为实行改革开放与开展全方位外交创造了良好的外部环境。以经济建设为中心，通过改革和开放进一步释放生产力，稳步推进国内国际要素和商品市场化流动，建设现代企业制度，提升产业运行效率，成为这一历史时期的核心任务。

在改革开放和社会主义现代化建设初期，中国工业生产全而不强，产业基础薄弱，与世界先进

(C)1994-2024 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

生产力之间存在着很大差距。基于对当时我国基本国情和发展阶段的正确认识，党的十一届六中全会提出："我国所要解决的主要矛盾，是人民日益增长的物质文化需要同落后的社会生产之间的矛盾，"最大限度地释放潜在生产力成为当时产业建设的首要目标。先进生产力的发展要求使得推动生产关系由内循环向外循环调整成为必然，生产关系调整不仅要兼顾好国内改革，也要实现外交政策、开放政策等推动下的国外关系协同。在此期间，以邓小平同志为核心的党中央创造性地提出了社会主义市场经济体制，推进国有经济与市场经济的结合，在提高国有企业效率的同时，强化国有经济在关键领域中的引领作用；同时，使得产业链条中的私营经济成分快速兴起，在产业链协同运转中注入市场化力量，实现了"从封闭半封闭到全方位开放的历史性转变"。在产业开放层面，有计划地引进西方先进技术（蔡昉，2022），尤其是学习国外在关键技术环节的先进技术和关键部门中的先进管理经验，通过两种资源、两个市场推动现代工业体系发展。这种主动调整产业发展政策、在独立自主的基础上融入全球竞争和分工体系、通过对外开放来换取先进技术的发展方式对于当时我国产业链的安全发展具有重要意义。在产业门类方面，先进技术及外资的引进能够弥补前期大力发展重工业而造成的轻工业短板，弥补了现有产业链的薄弱之处；在产业升级方面，积极融入全球价值链带来的"干中学"效应推动了我国通过自主创新实现产业升级，产业链现代化进程加快；在产业布局方面，通过实施中部崛起和西部大开发等战略，充分发挥不同地区的比较优势，使我国形成了基本的产业区域分工体系。

（四）加入WTO和扩大对外开放时期：2001—2017年

冷战结束后，资本主义国家迎来第二个发展高潮，涌现出了多个世界大国与地区性大国，国际体系向多极化转型，加剧了大国博弈的复杂形势，同时也给中国进一步扩大开放提供了良好机遇。在这一时期，为了妥善处理开放、稳定与发展之间的关系，中国始终秉持渐进式开放的原则，逐步融入全球经济一体化的浪潮中，通过"市场换技术""分阶段开放"等方式不断夯实产业基础，完备产业体系，提升产业竞争力。

2001年，中国加入WTO，标志着中国"在更大范围、更深程度上参与经济全球化，对外开放进入新阶段"。加入WTO使得中国市场全方位地对外开放，而来自国外的产品和资本的大量涌入也必将对中国的经济和产业结构产生巨大的影响和冲击。一方面，不具备国际竞争优势的产业在开放市场后必然面临严峻挑战；另一方面，更加开放的产业环境意味着更大的产业发展空间，其为我国产业发展和技术进步带来了新的机遇。如何在外部风险与时代机遇并存背景下更加深入地融入全球产业链、推动中国产业链的现代化成为该阶段产业建设的重点。

入世后，国内的产业政策、市场准入政策等将在WTO框架下进行改革调整，为了调和国内生产力发展与国内外生产关系的矛盾，实现生产力水平、国内生产关系与国外生产关系的协调，中国通

(C)1994-2024 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

过渐进式的开放方式融入全球竞争和分工体系，在对外开放的过程中兼顾产业链发展与安全。在前期磋商阶段、缓冲阶段及后续的扩大开放期内均充分发挥了独立自主的产业建设原则，抓住机遇，迎接挑战：对于优势产业鼓励其发挥比较优势，学习国外先进技术及进行国际化发展；支持潜在比较优势产业的技术创新，注重幼稚产业保护；改革国有企业，提高产业竞争力，鼓励各类企业协同发展。加入WTO后，依托比较完整的产业体系和产业链条优势，通过积极参与全球竞争和分工体系，我国融入全球产业链供应链的程度持续加深。尽管嵌入相互依存的全球产业链使我国产业对外部风险的暴露度更高，如2008年由美国次贷危机引发的全球金融危机，使我国经济受到了严重的负面冲击，但是面对危机下严峻的外部经济形势，党中央审时度势，实施了四万亿刺激计划，在充分刺激国内需求的同时促进了国内产业区域调整与产业链国内占比的提升，从而为新一轮经济增长和产业安全打开了空间。其后，创新驱动发展战略、供给侧结构性改革进一步推动了产业链向内涵式发展方向变革。

三、新形势下大国博弈特点及提升我国产业链韧性的现实逻辑

（一）新形势下大国博弈特点

后金融危机时代，世界经济扩张大幅放缓，全球贸易增长的动力减弱。随着中国成为世界第二大经济体，国际力量对比开始发生深刻的变化，国际体系呈现出“东升西降”和“南升北降”的态势，以美国为首的西方国家对中国等新兴崛起国家的战略敌意逐渐加深（秦亚青等，2022）。2014年，中国GDP占美国GDP的比重首次超过60%，达到了“美国给竞争者的一道红线”。到2017年，特朗普政府提出新一轮“中国威胁论”，将中国定位为“战略竞争对手”，主动对华挑起贸易摩擦，中美关系自此进入一个新的阶段。中美贸易战、世纪疫情与俄乌冲突等的相继爆发不断推动着世界格局发生深度调整，世界进入了新的动荡变革期。

伴随着复杂严峻的国际形势，大国之间的地缘政治竞争更加明显。为了争夺战略资源，扩大自身的地缘政治影响力，各国围绕经济、政治、技术、资源、外交、军事、软实力和国际规则等多个领域的博弈不断升级，国际体系的对抗性可能达到了冷战结束以来的较高烈度，全球治理面临严重阻碍。贸易战和经济竞争作为大国博弈的一个关键方面，极大冲击了经济全球化的格局，甚至推动了全球化的停滞与逆转。聚焦在全球产业链领域，为提升各国产业链的安全性、稳定性与竞争力，确保各国在全球产业链中的地位和影响力，大国主要围绕关键中间产品、核心技术和长期科技竞争力、合作伙伴关系以及治理规则与标准四个维度展开博弈。

在关键中间产品维度，以美国为首的西方国家针对半导体与芯片产业链上核心零部件、关键制造设备与材料、战略性矿产资源等实施严格的出口管制，以打压其他国家的科技发展。例如，越

(C)1994-2024 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

来越多的中国半导体企业被美国列入出口管制实体清单，同时从范围和程度上对管制不断升级加码，试图全方位遏制中国半导体产业的崛起。在核心技术与长期科技竞争力维度，由于高科技和尖端制造业已经成为大国战略能力建设的核心驱动力，世界主要国家纷纷围绕核心技术、顶尖人才、标准规范等强化部署，利用技术管控、专利阻碍、人才流动限制等组合拳实施科技封锁，力图在新一轮国际科技和产业变革中掌握主动权。例如，美国总统拜登正式签署了《2022年芯片与科学法案》，在芯片与人工智能、机器人技术、量子计算等尖端科技领域提供研发与生产补贴，并限定可合作交易的盟友范围，试图在科技领域达到与中国“渐进脱钩”的目的。此外，法案中众多条款还涉及教育和培养高技术人才，为美国未来持续占领科技高地蓄势。在合作伙伴关系维度，博弈方式呈现出由双边对抗转向多方阵营，由WTO、FTA等以经济利益为基础的合作协议转向印太战略等以政治利益为基础的合作协议。如中美博弈已从特朗普时期的大规模贸易摩擦转向拜登时期的联合遏制，不仅启动“印太经济框架(IPEF)”，还利用政治盟友体系强化竞争，主导建设美日印澳“四方安全对话(QUAD)”、美印以阿四国机制(I2U2)、澳英美联盟(AUKUS)等“小多边”机制，以“共同价值观”为据强化产业链同盟建设，试图重塑“去中国化”的产业链供应链体系。在治理维度，随着大国博弈的激化，一些国家主要通过影响国际制度规则与扭曲自身国内规范的方式，对他国企业进行遏制与打压。例如欧盟、印度等以“公平经济”的名义，对本国的生产、商业行为规范提出新的评判标准，包括税收、反腐败、劳工及环境、企业责任等，以显性或隐性规则对他国关键产业的企业施加影响。具体案例包括欧盟对中国电动汽车发起反补贴调查，严重扭曲了全球汽车产业链供应链；为了打击中国5G通信技术以及手机产业的发展，欧盟以安全为名禁用中国华为、中兴提供的服务，印度以“违反外汇法”为由冻结小米公司的资产等。

（二）提升我国产业链韧性的现实逻辑

面对百年变局下国内外形势的新变化，党的二十大报告提出“着力提升产业链供应链韧性和安全水平”，这一重大决策部署具有很强的现实逻辑。新形势下提升我国产业链韧性既是建设现代化产业体系的基本要求，又是应对短期产业链新风险点的必然之策，也是克服长期全球产业链治理困境的应然之举。

1.建设现代化产业体系的基本要求

在建设现代化产业体系中，党中央明确将“安全性”作为基本要求之一，这是基于全球产业竞争加剧、外部不确定性增多、国内经济发展底线等多重现实背景提出的。大国博弈下，国家间围绕产业的竞争日趋激烈，我国虽拥有世界最完整的产业体系，部分产业处于全球领先地位，但仍面临关键技术与核心环节被“卡脖子”、重要零部件与原材料对外依赖过高等难题，导致我国产业链出现多处堵点、卡点与脆弱点，产业链断链风险隐患较高。现代化产业体系必须是自主可控、具有韧性且安全的体系，不仅要求我国产业链能在西方国家实施全方位的遏制、围堵、打压等极端情况下仍然保

(C)1994-2024 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

持顺利运转或者及时适应恢复，更加强调产业链在长期国际竞争力与治理影响力等方面的增强。提升我国产业链韧性既符合现代化产业体系建设的基本要求，同时也是实现经济高质量发展的题中应有之义。

2.应对产业链风险激增的必然之策

伴随着大国博弈的持续“发酵”，全球产业链面临的不确定性不稳定性激增。一方面，大国采用显性且具有针对性的对抗方式，直接使得产业链有意中断的可能性大幅提升；另一方面，全球政治经济秩序的不确定性会带来国际投资与贸易行为的新转向，使得原有全球生产网络的合作分工逻辑遭受严重冲击，从而扭曲原有国家间相互依存、共同发展的产供链结构，破坏现有的全球产业链供应链布局。受美国等国家行政干预扭曲行为的影响，我国产业链将面临脱钩断链、被迫转移、被动替代、产业回流、低端锁定、“多方围剿”、圈层“孤立”等新的风险。在这种背景下，提升我国产业链韧性不仅能够减轻西方针对性产业政策的冲击影响，而且能够以产业链自身综合竞争力的提升破解“多方围堵”下我国产业链发展受限难题。

3.克服全球产业链治理困境的应然之举

入世以来，中国产业的快速发展与综合实力的上升使中国对外部环境的影响力和塑造力明显增强。作为世界第二大经济体，同时也是世界上最大的发展中国家，中国在开放、发展、脱贫等治理问题上的成功经验以及党的十八大以来中国在全球治理变革中贡献的关键力量，使得中国已经从全球治理的接受者、参与者向建设者、贡献者、引领者等核心角色转变。因此，面对当前大国博弈激化下的全球产业链治理困境问题，需以负责任大国的形象，以自身产业链韧性的提升推动与引领全球产业链治理赤字的破解。

传统的全球产业链治理通常强调合作与互利，然而，大国博弈的复杂化导致原先基于比较优势的合作模式开始向实力政治与结构性权力主导下的全球产业分工秩序转变，全球产业链治理更加倾向于竞争和对抗。为提升产业链的竞争力和安全性，各国制定贸易保护主义政策与制度，如以美国为代表的西方国家推出的贸易限制、投资审查、技术封锁以及制裁等举动，严重损坏了全球产业链供应链的合作机制。大国博弈下的“价值观外交”更使得一些治理议题意识形态化，对国际组织和多边合作带来了挑战。当前全球产业链治理出现的碎片化和不稳定性，加之大国博弈下供应链“霸凌”政策的影响，对发展中国家争夺全球产业链主导权构成了更大的制约，甚至可能使我国陷入全球产业链“俘获型”治理的困境之中（凌永辉、刘志彪，2021）。因此，我国需要在全球产业链治理中彰显出更大的责任，才能在化解治理障碍的过程中逐步提升我国在全球产业链中的话语权和主导权。在提升产业链韧性过程中，通过优化产业链布局、改进产业链组织形式与强化产业链国际合作等方式能够增大产业链治理机制的灵活性，引导全球产业链治理体系向更适应当前新环境的方向调整。

(C)1994-2024 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

四、大国博弈下提升我国产业链韧性的实现路径

回顾百年奋斗史，中国共产党凭借独立自主、自力更生的重要原则走出了一条具有中国特色的快速工业化建设的新道路，在对外开放的过程中不断提升产业链的安全水平。展望未来，面对全球变局下大国博弈激化、国际形势复杂的新时代背景，我们仍然需要传承独立自主的优良传统与宝贵经验，坚持底线思维，增强忧患意识，把握时代机遇，化解风险挑战，集聚多方力量切实提升我国产业链的韧性水平，打造自主可控、安全可靠、竞争力强的现代化产业体系。具体来看，亟须从以下四个方面实现新的突破。

（一）加强产业链风险管理与预警，建立重点产业链国内备份系统

随着大国博弈的持续升级，产业链面临的断链风险显著上升，亟须对国外形势做出科学预见与审慎判断，特别是对主要国家在半导体、生物医药、高端装备等重点领域的技术贸易政策的动态跟踪，加强产业链风险管理与预警，做到未雨绸缪。针对产业链开展全面评估与清单梳理，完善产业链风险数据库与预警机制建设。强化监测关键领域产业链与核心环节，划分多形态的产业链供应链风险，例如外国依赖、供应来源结构、供应商的脆弱性、市场的脆弱性、供应商市场产能受限、制造业原材料短缺、本土人力资源或基础设施不足等多形态风险，借助大数据、知识图谱与人工智能技术等，构建覆盖多产业、多环节、多形态的产业链风险监测数据库与风险预警平台，为全面识别产业链堵点、卡点与脆弱点提供信息支持。

依托内需主导的新发展格局，推动重点产业链的本土化建设，形成重点产业链国内备份系统。依托全国统一大市场建设，加速要素资源的流动与再配置，完善产业链发展的跨区域、跨部门协作机制，形成区域要素禀赋与产业链分工相匹配的产业链布局。围绕重点城市群、都市圈、国家中心城市等培育优势产业链供应链集群，将其打造为产业链备份基地。引导具备潜力的产业链备份基地有效链接东中西部的产业链，深化产业协作，促进产业链上下游配套发展，通过补链、延链、强链实现重点产业链的国内链条的完备性与自主性，以有效化解可能出现的外部断供风险。

（二）以科技创新突破关键核心技术，构筑科技人才“蓄水池”

大国博弈背景下，美国利用我国部分产业“缺芯”“少核”“弱基”的弱势，持续加码出口管制等制裁措施，试图全面遏制我国半导体芯片产业链的发展。只有积聚力量进行原创性引领性科技攻关，才能打赢关键核心技术攻坚战，从根本上摆脱关键技术受制于人的困境。全面加快科技创新需要“政产学研金用”的深度融合。政府部门应不断完善科技创新的协调联动机制，为良好的科技创新环境保驾护航；企业作为创新的主体，不仅要识别产业链中的技术瓶颈，高效增加对核心技术的研发投入，还要与高校以及研究机构积极参与科研项目的合作，共建科技园区和孵化基地，实现科技

(C)1994-2024 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

成果的共享与转化；金融部门需要推动多层次、多渠道、多元化的创新投入机制的形成，为核心技术攻关提供融资保障。此外，还要引导市场主体提升大数据和人工智能技术等在生产制造中的应用水平，加速推动科技成果产业化。政府部门、大中小企业、高等院校、科研院所和金融机构一起形成强大的创新系统合力，推动以融合协同创新突破产业链环节中的堵点与卡点。

创新引才育才并举机制，构筑我国科技人才“蓄水池”，培养技术领域长期竞争力。突破关键核心技术，归根结底靠的是高水平的创新人才。随着新一轮科技革命与产业革命的蓬勃发展，全球对人才争夺的角逐日益激烈。积极参与全球人才竞争，需要采用更加开放的人才引进政策来吸引海外高端人才。通过对人才相关的各项配套制度进行改革，建立一个具有全球竞争力的人才制度体系，特别是要注重对能够突破关键核心技术、发展高新技术产业、引领新兴学科进步具有战略意义的领军人才的引进吸收。同时，在创新人才培养机制方面，需要以国家重大战略需求为导向，夯实基础学科与面向世界科技前沿、面向经济主战场、面向国家重大需求、面向人民生命健康的“四个面向”的拔尖人才储备。鼓励高校充分整合学科资源、人才优势、科技资源，与企业实践资源有机链接，构建理论与实践相融合的高水平人才培养机制，将人才培养与实际需求紧密结合。

（三）拓展产业链合作“朋友圈”，构造产业链紧密合作网络

产业链合作对象选择是大国之间开展竞合的主要内容之一，如美国以“共同价值观”为据强化产业链供应链同盟建设、打造“友岸外包”体系等，一方面为了保障自身关键领域的产业链安全，另一方面试图重构将中国排除在外的产业链供应链体系。为防范产业链政治化重构对我国带来的断供断链风险，我国须进一步扩宽对外经贸关系，扩大合作“朋友圈”，从而在“实施更大范围”开放中实现产业链供应链多元化发展。在供应链高度集中的产品领域，拓宽供应链的多元化来源地，通过在政治互信基础上建立“友岸供货”供应链，以确保供应的稳定性和可靠性；利用庞大的经济规模、统一的市场优势、完备的工业体系优势、基础设施和人力资本优势等积极融入美国及其朋友圈的经贸体系，同可发展的美国盟友加强合作关系。

构造产业链紧密合作网络，以利益交织降低被动脱钩风险。借助区域经贸合作平台与自贸区协定，建立紧密合作的产业链网络，扩大多层次多维度的利益融合，提高大国博弈下的有意脱钩成本，降低被动脱钩风险。依托“一带一路”、区域全面经济伙伴关系协定（RCEP）以及加入全面与进步跨太平洋伙伴关系协定（CPTPP）等经贸合作平台框架，进一步释放双边贸易合作潜力，持续深化区域产业链合作，如加快中国—东盟产业链供应链、中日韩产业链供应链合作关系的推进；利用各类对外合作平台打造产业链集群，将其作为纽带，深化国内外产业链供应链的对接与联系，如通过链接“一带一路”沿线国家和地区的节点城市，向西拓展开放范围，通过对接边境口岸和境外合作园区，构建稳定的丝绸之路经济带区域产业链供应链体系；以中国的产业规模优势、配套优势和部分

(C)1994-2024 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

领域的先发优势为基础，不断加强对外资的吸引力。同时，实现由吸收外资大国向双向投资强国的转变，逐步提高高端制造和高技术服务等相关领域产业链的对外投资比重，大力支持能够产生明显技术逆向溢出效应的对外投资项目，以及有助于整合外部资源与提升我国产业链现代化水平的对外投资项目等，利用外商投资衔接国内国际两个市场，助力区域产业链网络循环畅通。

（四）积极参与全球产业链治理，推动全球产业链的规则与标准建设

百年未有之大变局下，全球形势发生深刻演变，地缘政治因素所引发的动荡和不确定性迫使全球治理需求上升，然而随着以美国为主的西方国家提供全球治理的意愿和能力的下降，全球产业链治理的赤字不断加大。面对当前全球产业链治理出现的新难题，须坚持维护产业链供应链的公共产品属性，承担起保障全球产业链供应链安全、稳定、高效发展的国际社会责任，依托在国际组织和多边平台上积极发声争取更多话语权，促进产业链治理从霸权治理、强权政治主导向多边治理、合作共赢的模式转变。例如，始终以构建人类命运共同体为理念，积极参与全球治理体制建设，不断提升我国在联合国、世界贸易组织、二十国集团、亚太经合组织、上海合作组织等国际和地区治理机制中的影响力；积极参与产业链热点问题的解决，提出具有中国特色的治理方案，完善补充新兴领域的治理规则空白；贯彻落实世贸组织倡导的非歧视、透明度、公平竞争等供应链标准，促进全球产业链的互利合作发展，破解全球产业链治理赤字。

围绕数字治理、绿色发展等新兴议题，推动全球产业链治理规则与标准建设，助力我国产业链韧性的提升。通过制定我国数字治理框架与治理体系，提出产业链数字治理规则的“中国提案”。通过提高标准制定能力、对标一流产业标准以及与国际化标准组织合作等举措，提升中国标准的国际认可度等。通过全方位、多层次地提高在全球产业链治理规则与标准的制定权和话语权方面的地位，以避免美国等西方国家形成将我国排斥在外的规则或标准制定圈。

参考文献

[1] 蔡昉，2022，《刘易斯转折点——中国经济发展阶段的标识性变化》，《经济研究》第1期。

[2] 黄群慧，2021，《新发展格局的理论逻辑、战略内涵与政策体系——基于经济现代化的视角》，《经济研究》第4期。

[3] 李天健，2021，《“一五”时期工业体系构建的内在逻辑及其对畅通“国内大循环”的启示》，《重庆理工大学学报》(社会科学版)第9期。

[4] 凌永辉、刘志彪，2021，《全球价值链发展悖论：研究进展、述评与化解》，《经济体制改革》第3期。

[5] 庞珣、何晴倩，2021，《全球价值链中的结构性权力与国际格局演变》，《中国社会科学》第9期。

[6] 秦亚青、金灿荣、倪峰、冯仲平、孙壮志、吴志成，2022，《全球治理新形势下大国的竞争与合作》，《国际论坛》第2 期。

[7] 王鸿刚，2021，《大国博弈2050》，中信出版社。

(C)1994-2024 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

Enhancing the Resilience of China's Industrial Chain in the Context of Major-Power Rivalry: Intrinsic Logic and Implementation Pathways

Xiao Hao, Jia Zhen, and Lai Mingyong*
School of Economics & Trade, Hunan University, Changsha, China

Abstract: *The report to the 20th National Congress of the Communist Party of China (CPC) proposes to "focus on enhancing the resilience and security level of industrial and supply chains". At present, the intensification of major-power rivalry, compounded by geopolitical factors, is an accelerator of the restructuring of global industrial chains, posing a severe threat to the security and stability of China's industrial chains. This paper analyzes the historical and present logic underpinning China's industrial security and development, providing recommendations for enhancing the resilience of China's industrial chain. By combining the characteristics of major-power rivalry and phased development goals, we discuss the four stages in the construction of the industrial system over the Party's centennial journey, revealing the historical logic of independence and self-reliance in relation to industrial chain resilience. Focusing on the current rivalry in industrial chains, particularly in key intermediate products, core technologies, long-term scientific and technological competitiveness, partnership relations, and governance, we clarify the practical logic of enhancing industrial chain resilience to meet the needs of a modernized industrial system, explain short-term risks, and interpret long-term governance dialogue. Finally, we propose ways to enhance the resilience of China's industrial chain by strengthening industrial chain risk management and early warning, achieving breakthroughs in key core technologies through scientific and technological innovation, expanding the "circle of friends" in industrial chain cooperation, and participating in global industrial chain governance.*

Keywords: *Major-power rivalry, industrial chain resilience, independence and self-reliance, modernized industrial system*
JEL Classification Code: F02, F63
DOI: 10.19602/j.chinaeconomist.2023.11.04

1. Introduction

The Central Committee of the CPC, in its report to the 20th National Congress, proposed to "focus on enhancing the resilience and security level of industrial and supply chains". During the second collective study session of the Political Bureau of the 20th CPC Central Committee, General Secretary Xi Jinping emphasized that it is important to "create an autonomous, controllable, secure, reliable, and competitively strong modernized industrial system". Currently, technological revolution,

* CONTACT: Xiao Hao, Email: xh_26@126.com.
Acknowledgement: This work is a phase result of the major research project "Study on the U.S. Indo-Pacific Economic Framework" (22JZD042) funded by the Ministry of Education's Philosophy and Social Science Research. We would like to thank the doctoral student Cui Ran from the School of Economics at Renmin University of China for their preliminary work in data collection.

(C)1994-2024 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

governance deficit, and sluggish growth, risks to the global division of labor are escalating. Major powers are engaging in multi-dimensional games centered around choosing cooperation partners, securing technological leadership, garnering political support, and shaping international rules, in an attempt to get more leverage in the reshuffling. Political factors increasingly act as an accelerator of contraction and restructuring, even the stagnation or reversal of globalization, presenting serious threats to the security and stability of global industrial chains (Huang, 2021). The ongoing "fermentation" of major-power games not only increases the likelihood of intentional disruptions in industrial chains but also severely impacts the existing logic of cooperation and division in global production networks, subjecting China's industrial chains to new risks such as forced transfers, passive substitutions, chain relocations, entrapment at the low-end, multi-party encirclement, and isolation within circles (Pang and He, 2021). The combination of economic dependency structures in global production networks and political interventions has become a key means by which some countries contain and suppress China's technological rise. This includes political measures like US export controls and technology sanctions against China, and the establishment of the QUAD security dialogue and alliance mechanism by the US, Japan, India, and Australia. Due to mandated changes in the development of China's industrial chains, enhancing their resilience and promoting their modernization have become significant issues that need to be addressed.

The concept of industrial chain resilience is not new. In the face of major risks and challenges in economic construction, the CPC has led China's industrial system to leapfrog development from non-existence to strength, carving out a path of endogenous industrial chain security based on independence and self-reliance. However, under the current circumstances, industrial chain resilience is being imbued with new connotations and requirements. Faced with new risks and incidents amid intensifying major-power rivalry, industrial chain resilience needs to be able to resist, adapt, and recover from external threats. Under the requirements of modernized industrial system construction, industrial chain resilience should show a steady and orderly progression towards industrial structure adjustment, transformation and upgrading, and competitiveness enhancement based on industrial chain safety. Against this backdrop, exploring the logic of enhancing industrial chain resilience and finding pathways for its improvement are important for advancing the construction of China's modernized industrial system and achieving high-quality economic development.

In view of this, this paper, grounded in the new characteristics of major-power rivalry under the new situation and the new requirements for constructing China's modernized industrial system, examines the historical and practical logic behind the drive to enhance China's industrial chain resilience and explores potential pathways for its enhancement.

2. The Historical Logic of Adherence to Independence and Self-Reliance While Enhancing China's Industrial Chain Resilience

Independence and self-reliance, fundamental principles of Marxism regarding the leadership of proletarian parties in their respective national revolutions, form the soul of the Chinese national spirit and are important principles for the founding and governance of the nation. Looking back at the century-long journey of the CPC, the principles of independence and self-reliance have been threads running through the entire history of China's industrial construction, and are keys to the Party's and the nation's achievements. Historically, major-power rivalry has always been the norm in international relations. With the global evolution of modernization, the international order of dominance changed, and different countries, with varying interests and demands, rose to prominence. For this reason, the characteristics and impacts of major-power rivalries have differed from country to country and across different development stages. Over the past century, faced with an unpredictable international situation, China has encountered many challenges but it has always managed to turn dangers into safety, thanks to the

(C)1994-2024 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

CPC's unwavering commitment to the principles of independence and self-reliance. By applying Marxist principles, viewpoints, and methods tailored to China's specific realities, the Party has identified China's historical position in social development, grasped the contradictions in industrial development, and managed the dialectical relationship between openness and autonomy, carving out an independent path in industrial construction and achieving industrial security and development amidst openness.

2.1 The Period of the New Democratic Revolution: 1919-1949

At the end of the 19th century, with the expansion of imperialism by countries such as Britain and France, a global contest began for colonies and spheres of influence. In the summer of 1900, the invasion of China by the Eight-Nation Alliance, comprising Britain, Russia, Japan, France, Germany, the United States, Italy, and Austria, turned China into a semi-colonial and semi-feudal society. The competition among the major powers for China's resources, markets, and spheres of influence was fierce. At this time, China was exploited and oppressed and struggled to maintain its survival as a nation. Ensuring the national character and independence of industry and building national strength became the core tasks during this historical period.

The invasion by imperialist powers led to the loss of China's political sovereignty, with fragmentation in administration and judicial functions. The introduction of massive amounts of foreign capital weakened economic autonomy. The collusion of feudal land relations with usurious and bureaucrat-comprador capital greatly hindered social progress. At this time, China's productive forces were transitioning from traditional agriculture to modern industries, with low levels of productivity. Modern industries, dominated by foreign and bureaucrat-comprador capital, struggling to become established, urgently needed liberation and development.

The semi-colonial and semi-feudal nature of society meant that the government could not coordinate the productive forces and production relations. The old, reactionary production relations that shackled the development of productive forces could only be broken through violent revolution. During this period, the CPC, uniting and leading the Chinese people, achieved national independence through armed revolution. To propel the revolutionary cause, the CPC, taking into consideration the international situation and China's national conditions, promoted the development of agriculture, industry, and commerce. These efforts provided the material foundation for seizing power. The three major economic programs of the New Democratic Revolution, proposed by Mao Zedong, became the basis for the independent economic development of New China. These programs included confiscation of land from the feudal landlord class, the confiscation of the big banks, major industries, and large commercial enterprises owned by bureaucrat capital, and the national protection of industry and commerce. These actions provided direction and support for post-war reconstruction and economic development, considerably advancing rural reforms, the construction of railways and roads, and urban industrial development. They established the dominant position of the state-owned economy in China's economic construction, ensuring national sovereignty and economic independence through state control of resources and key industries.

2.2 The Period of New China's Construction: 1949-1978

During the period of the construction of New China, Cold War confrontation and bloc division characterized major-power rivalry. The United States and the Soviet Union engaged in a struggle for global dominance, marking the onset of the Cold War. The world split into two camps: The Western bloc, led by the United States, and the socialist bloc, led by the Soviet Union. China had shed the shackles of its semi-colonial and semi-feudal past, but it still had to navigate between the two blocs, balancing its relationships within the complex US-USSR-China "big triangle" to maintain sovereignty, national security, and international status (Wang, 2021). Initially allied with the Soviet Union, China later sought to improve relations with Western countries, including the United States, as Sino-Soviet relations

(C)1994-2024 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

deteriorated. The core task of this period was to build a modern industrial system, utilizing strategies such as improving international relations, accepting assistance, and seeking trade protection.

During this period, China endeavored to maintain a diplomatic and strategic balance between the United States and the Soviet Union, heightening the uncertainty in industrial construction, which was marked by external risks such as limited international engagement and rising geopolitical threats, and by internal challenges such as the beginning stage of industrialization, the scarcity of industrial enterprises, the incomplete industrial structure, and the distorted industrial landscape, making national economic development very difficult. This situation meant that China had to develop an inward-looking economy in a semi-closed state under the conditions of post-founding productive forces. The transformation of production relations prioritized ensuring the success of industries vital for people's livelihood, with a focus on developing heavy industry to achieve catch-up and leapfrog industrial development and maintain domestic economic stability.

With the establishment of the basic socialist system in 1956, the production relations had to be transformed to meet the conditions of productive forces under the socialist system. This involved nationally protecting industry and commerce, confiscating the capital of bureaucrats, and implementing land reform. At the same time industrialization was advanced, capitalist industry and commerce, agriculture, and the handicraft industry underwent socialist transformation ("One Transformation, Three Reforms"), liberating productive forces and reflecting the unity of developing productive forces and transforming production relations. These industrial field transformations adapted to the requirements of socialized mass production, marking the beginning of China's independent and self-reliant industrial construction within the socialist society.

Taking into account the opportunities and risks of industrial development under the condition of international rivalry, China accepted international aid, particularly from the Soviet Union and Eastern Europe. During the First Five-Year Plan, with aid from the socialist bloc and while adhering to the principles of independence and self-reliance, China undertook industrialization centered around 156 projects, establishing a relatively complete modern industrial system, with a focus on heavy industry and national defense. This included the establishment of new industrial chains such as automobile and heavy machinery and formed a coordinated division of labor across various industrial sectors. The industrial layout primarily focused inland, with several important industrial bases being built. Accepting international financial and technical assistance did not mean a loss of independence in industrial construction. In fact, the guiding principles of national industrialization remained "independence and self-reliance, self-reliance". Aiming for self-sufficiency in production and research, China's approach to building its industrial system required "digestion and absorption" rather than mere introduction of advanced technology (Li, 2021). Control over industrial construction remained firmly in Chinese hands. For national security, key industries crucial to the national economy were managed by state-owned enterprises, ensuring basic industrial security. The Chinese people's confidence in independently building their industries was bolstered after the deterioration of Sino-Soviet relations in the late 1950s. Around the time of the Third Five-Year Plan, due to the intense international situation and a shift in ideology from solving basic livelihood issues to focusing on war preparedness, the "Third Front" movement was initiated. This involved relocating existing industries to, or building new industries in, the inland areas (the "Third Line") for better strategic balance and war preparedness, laying the foundation for an independent and relatively complete industrial system.

2.3 The Initial Period of Reform and Opening-up and Socialist Modernization: 1978-2001

During this period, the NATO and Warsaw Pact alliances, led by the United States and the Soviet Union, respectively, regarded each other with an aggressive attitude. At the breakup of the Soviet Union in 1991 and the end of the Cold War, the United States emerged as the sole superpower. After a prudent analysis of the international situation, Deng Xiaoping put forward a critical judgement that "peace

(C)1994-2024 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

and development are the themes of the era". Based on this judgment, China maintained a strategy of balanced diplomacy between the United States and the Soviet Union, avoided involvement in Cold War confrontations and protected its independence and national interests by actively participating in international organizations and practicing multilateral diplomacy, strengthening ties with major developed countries and promoting cooperation over competition, creating a favorable external environment for implementing reform and opening-up. Focusing on economic construction through reform and opening-up to release increased productive forces, promoting the marketization of domestic and international elements and commodities, constructing a modern enterprise system, and enhancing industrial efficiency were the core tasks of this period.

In the early stages of reform and opening-up and socialist modernization, China's industrial production was extensive but unsubstantial, with a weak foundation and a large gap compared to the world's advanced productive forces. Based on a clear understanding of China's basic national conditions and stage of development, the Sixth Plenary Session of the 11th CPC Central Committee put forward that: "The primary contradiction in Chinese society shifted to 'the ever-growing material and cultural needs of the people versus backward social production'". Maximizing the release of productive forces became the number one goal of industrial construction. The development of advanced productive forces required shifting from a domestic circulation to an international circulation in production relations. Not only was it necessary to consider domestic reforms, but also diplomatic and opening-up policies had to coordinate foreign relations. During this period, the CPC, led by Deng Xiaoping, proposed the socialist market economy system, promoting the integration of the state-owned economy and the market economy. Not only did this enhance the efficiency of state-owned enterprises, it also strengthened their role in key areas. The private economy grew rapidly, infusing market forces into the industrial chain, achieving a "historic transformation from closed and semi-closed to all-around openness". In terms of industrial openness, China introduced advanced Western technology (Cai, 2022), learning from foreign advanced technology in key sectors and advanced management experience in key departments. This approach, leveraging both domestic and international resources and markets, was important for the development of China's industrial chain at the time. The introduction of advanced technology and foreign capital helped alleviate the weakness in light industry caused by the prior emphasis on heavy industry, strengthening the industrial chain. Actively integrating into the global value chain and learning through participation accelerated China's industrial chain modernization and upgrading. Strategies like the "rise of central China and the western development" aimed to leverage regional advantages, forming a basic industrial regional division of labor in China.

2.4 Joining the WTO and Expanding Opening-up Period: 2001-2017

Following the end of the Cold War, capitalist countries experienced a surge in development, leading to the emergence of several world and regional powers. The international system transitioned towards multipolarity, intensifying major-power rivalry but also presenting China with opportunities to expand its opening-up. During this period, China adhered to a gradualist principle of opening-up, gradually integrating into the global economy, consolidating its industrial foundation and completing its industrial system through "exchange of market for technology" and "phased opening-up".

Entering a new stage of opening-up, China's admission to the WTO in 2001 marked its more extensive participation in economic globalization. WTO membership led to a major opening of the Chinese market, and the influx of foreign products and capital had a great impact on China's economic and industrial structures. Although industries without international competitive advantages faced severe challenges after market opening, a more open industrial environment provided new opportunities for industrial development and technological progress. Integrating more deeply into the global industrial chain and promoting the modernization of China's industrial chain became the focus of this stage.

(C)1994-2024 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

After joining the WTO, domestic industrial and market access policies underwent reforms within the WTO framework. To harmonize the development of domestic productive forces with domestic and international production relations, China took a gradual opening-up approach to integrating into the global competition and division of labor system, balancing industrial chain development and security. Throughout the initial consultation phase, buffer phase, and expanded opening-up phase, China leveraged its principle of independent industrial construction by seizing opportunities and facing challenges, encouraging industries to leverage their strengths, learn advanced technology from abroad, and pursue international development. All this also supported technological innovation in industries with potential advantages by focusing on the protection of emerging industries, reforming state-owned enterprises, enhancing industrial competitiveness, and encouraging collaborative development among enterprises. After joining the WTO, China deepened its integration into the global industrial supply chain by leveraging its industrial system and the advantages of its industrial chain, actively participating in the global competition and division of labor. However, being embedded in the interdependent global industrial chain exposed China's industry to higher external risks, such as the severe negative impact of the global financial crisis triggered by the US subprime mortgage crisis in 2008. In response to this challenging external economic situation, the Central Committee of the CPC made a strategic decision and implemented a four-trillion-yuan stimulus plan. This plan not only stimulated domestic demand but also promoted regional industrial adjustments and increased the domestic proportion in the industrial chain, paving the way for a new round of economic growth and industrial security. Strategies such as the innovation-driven development strategy and supply-side structural reforms further drove the transformation of the industrial chain in a more content-rich direction of development.

3. Characteristics of Major-Power Rivalry under the New Situation and the Practical Logic of Enhancing China's Industrial Chain Resilience

3.1 Characteristics of Major-Power Rivalry under the New Situation

In the post-financial crisis era, the expansion of the world economy has slowed considerably, and the growth of global trade has weakened. With China emerging as the world's second largest economy, the international balance of power has started to undergo profound changes, presenting a trend of "the East rising and the West declining" and "the South rising and the North declining". This has increased the animosity of Western countries, led by the United States, towards emerging countries such as China (Qin et al., 2022). In 2014, China's GDP exceeded 60% of the United States' GDP for the first time, crossing what has been referred to as "the red line for American competitors". By 2017, under the Trump administration, a new round of the "China threat" theory emerged, positioning China as a "strategic competitor" and actively initiating trade frictions with China, marking a new phase in Sino-American relations. The escalation of the Sino-American trade war, along with the outbreak of the pandemic and the Russia-Ukraine conflict, has required major adjustments in the world order, beginning a new period of turbulence and change.

With the international situation becoming increasingly complex and serious, geopolitical competition among major powers has intensified. Vying for strategic resources and desiring to expand their geopolitical influence, countries are escalating their rivalry in multiple domains, including economy, politics, technology, resources, diplomacy, military, soft power, and international rules. The confrontational nature of the international system has reached its highest intensity since the end of the Cold War, posing serious obstacles to global governance. Trade wars and economic competition, key aspects of major-power rivalry, have seriously impacted economic globalization, promoting its stagnation and reversal. In the global industrial chain domain, to enhance the security, stability, and competitiveness of their industrial chains and ensure their positions and influence, major powers are competing in four dimensions: Key intermediate products, core technologies and long-term technological competitiveness,

(C)1994-2024 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

partnership relationships, and governance rules and standards.

Regarding key intermediate products, Western countries, led by the United States, have imposed strict export controls on core components, critical manufacturing equipment and materials, and strategic mineral resources in the semiconductor and chip industrial chain, with the intention of suppressing the technological development of other countries. An increasing number of Chinese semiconductor companies have been added to the US export control list, with continuous escalation in scope and intensity, in an attempt to contain the rise of China's semiconductor industry. In terms of core technologies and long-term technological competitiveness, since high-tech and cutting-edge manufacturing have become the core drivers of major powers' strategic capacity building, the world's major countries are strengthening their deployment around core technologies, top talents, and standards and norms. They use technology control, patent hindrances, restrictions on talent mobility, and other measures to implement technological blockades, striving to take the initiative in the new round of international technological and industrial transformation. US President Joe Biden officially signed the "2022 Chips and Science Act", providing R&D and production subsidies in cutting-edge technological fields such as chips, artificial intelligence, robotics, and quantum computing. The Act also defines the range of allies with whom cooperation is permissible, aiming to achieve a "gradual decoupling" from China in the technological domain. Additionally, numerous clauses in the Act involve education and the cultivation of high-tech talent, preparing the United States to maintain its technological superiority in the future. In the dimension of partnership relationships, the mode of rivalry is shifting from bilateral confrontations to multi-party alliances and from WTO and FTA-based economic cooperation agreements to politically motivated agreements like the "Indo-Pacific" strategy. The Sino-American rivalry has evolved from large-scale trade frictions during the Trump era to joint containment under the Biden administration. This involves initiating the "Indo-Pacific Economic Framework" (IPEF) and using political alliances to strengthen competition, leading to the establishment of mechanisms like the Quadrilateral Security Dialogue (QUAD), the I2U2 (India, Israel, United Arab Emirates, United States) mechanism, and the AUKUS (Australia, UK, USA) alliance. These "mini-multilateral" mechanisms aim to strengthen industrial chain alliances based on "shared values" and attempt to reshape the industrial and supply chain system by "de-sinicizing" it. In terms of governance, with the intensification of major-power rivalry, some countries mainly use the influence of international institutional rules and the distortion of their own domestic norms to contain and suppress foreign enterprises. For instance, the European Union and India, in the name of "fair economics", have introduced new standards for domestic production and commercial practices, encompassing areas such as taxation, anti-corruption, labor, environment, and corporate responsibility. These standards, whether explicit or implicit, influence enterprises in key industries of other countries. Specific examples include the European Union initiating an anti-subsidy investigation against Chinese electric vehicles, which has greatly distorted the global automotive industry supply chain. Additionally, to counter the development of China's 5G communication technology and smartphone industry, the European Union banned services provided by Chinese companies Huawei and ZTE, citing security reasons. Similarly, India froze the assets of Xiaomi Corporation, alleging violations of foreign exchange laws.

3.2 The Practical Logic of Enhancing the Resilience of China's Industrial Chain

Faced with both domestic and international situational changes, *Report to the 20th National Co ngress of the Communist Party of China (CPC)* proposed that "focusing on enhancing the resilience and security level of industrial and supply chains". This is grounded in practical logic. Enhancing the resilience of China's industrial chain under the new situation is not only a basic requirement for building a modernized industrial system but also a strategy to deal with new short-term risks in the industrial chain and to overcome long-term difficulties in global industrial chain governance.

(C)1994-2024 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

3.2.1 Basic requirement for building a modernized industrial system

In the construction of a modernized industrial system, the CPC Central Committee has identified "security" as one of the basic requirements. This is proposed against the backdrop of intensifying global industrial competition, increased external uncertainties, and the bottom line of domestic economic development. Under the condition of major-power rivalry, competition between nations based on industries has become increasingly ferocious. Although China has the world's most complete industrial system and leads in certain industries, it faces challenges such as critical technology and core linkages being "choked", and excessive reliance on foreign components and raw materials. These issues lead to multiple bottlenecks, vulnerabilities, and risks of supply chain disruptions. A modernized industrial system must be autonomous, controllable, resilient, and secure. Not only should it be able to maintain smooth operation and adapt and recover quickly under extreme conditions such as containment, blockade, and suppression by Western countries, but also it should emphasize strengthening long-term international competitiveness and governance influence. Enhancing the resilience of China's industrial chain aligns with the basic requirements of building a modernized industrial system and is essential for achieving high-quality economic development.

3.2.2 Strategy to address the surge in industrial chain risks

The uncertainties and instabilities facing the global industrial chain have dramatically increased with the ongoing fermentation of major-power rivalry. Major powers are adopting explicit and targeted confrontation methods, greatly increasing the likelihood of intentional disruptions in industrial chains. The uncertainty in the global political and economic order may lead to new shifts in international investment and trade behaviors, seriously affecting the division of labor in the global production network, distorting the interdependent and mutually beneficial structure of global production and supply chains, disrupting the global industrial and supply chain layouts. Affected by non-market interventionist actions of countries like the United States, China's industrial chain will face new risks such as decoupling, forced transfers, passive substitutions, industry backflow, entrapment at the low-end, multi-party encirclement, and isolation within circles. In this context, enhancing the resilience of China's industrial chain can lessen the negative impact of Western targeted industrial policies and solve the development limitations of China's industrial chain under "multi-party encirclement" through the improvement of its own competitiveness.

3.2.3 Overcoming global industrial chain governance challenges

Since joining the WTO, China's rising industrial development and increasing strength have enhanced its influence in the external environment. As the world's second largest economy and the largest developing country, China's experience in governance issues such as openness, development and poverty alleviation, along with its contributions to global governance reform since the 18th National Congress of the CPC, have marked its transition from being a receiver and participant to becoming a builder, contributor, and leader in global governance. Faced with the current challenges of global industrial chain governance under intensified major-power rivalry, it is necessary for China to become a responsible major country and use the enhancement of its industrial chain's resilience to resolve the deficit in global industrial chain governance.

Traditional global industrial chain governance emphasizes cooperation and mutual benefit. However, the complexity of major-power rivalry has caused the cooperation model, based on comparative advantage, to shift towards a global industrial division of labor dominated by power politics and structural power. Global industrial chain governance is leaning increasingly towards competition and confrontation. To enhance the competitiveness and security of their industrial chains, countries are formulating protectionist trade policies and systems. Actions like trade restrictions, investment scrutiny, technological blockades, and sanctions, especially from Western countries led by the United States, have

(C)1994-2024 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

severely damaged the cooperative mechanisms of the global industrial and supply chains. The "value diplomacy" under major-power rivalry has ideologized some governance issues, posing challenges to international organizations and multilateral cooperation. The fragmentation and instability in global industrial chain governance, along with the impact of bullying policies in supply chains affected by major-power rivalry, constrain developing countries from vying for dominance in the global industrial chain. This might even trap China in a "captured" global industrial chain governance dilemma (Ling and Liu, 2021). China needs to shoulder greater responsibility in global industrial chain governance to enhance its leadership in the global industrial chain while resolving governance obstacles. The flexibility of industrial chain governance mechanisms can be increased by enhancing the resilience of the industrial chain through such means as optimizing its layout, improving its organizational form, and strengthening international cooperation, thus guiding the global industrial chain governance system towards a direction that is adapted to the new environment.

4. Pathways to Enhancing the Resilience of China's Industrial Chain under Major-Power Rivalry

The CPC, guided by the principles of independence, self-reliance, and self-strengthening, has forged a path of industrialization with Chinese characteristics, while enhancing the security of the industrial chain during the process of opening-up. Faced with intensifying major-power rivalry and complex international situations in the global landscape, it is important to continue the tradition of independence and self-reliance. Adhering to bottom-line thinking, enhancing awareness of potential difficulties, seizing the opportunities of the era, resolving risks and challenges, and gathering multi-faceted strengths are essential to improve the resilience of China's industrial chain and build an autonomous, controllable, secure, competitive and strong modernized industrial system. New breakthroughs are needed in the following four areas.

4.1 Strengthening Industrial Chain Risk Management and Early Warning, Establishing a Domestic Backup System for Key Industrial Chains

With the escalation of major-power rivalry, the risk of disruptions in the industrial chain has increased considerably. It is prudent to make scientific predictions and judgments about the international situation, tracking major countries' technology trade policies in critical areas like semiconductors, biomedicine, and high-end equipment, proactively strengthening industrial chain risk management and early warning systems. A comprehensive assessment and inventory of the industrial chain should be conducted to improve industrial chain risk databases and early warning mechanisms. Enhanced monitoring of key areas and core segments of industrial chains classifying various supply chain risks, such as foreign dependency, supply source structure, supplier vulnerability, market vulnerability, supplier market capacity constraints, shortages of raw materials in manufacturing, and insufficient local human resources or infrastructure is required. A risk monitoring database and early warning platform covering multiple industries, stages, and forms of risks should be established, leveraging technologies such as big data, knowledge graphs, and artificial intelligence, providing informational support for identifying bottlenecks, weak points, and vulnerabilities in the industrial chain.

Leveraging the new development pattern led by domestic demand, efforts should be made to promote the localization of key industrial chains, forming a domestic backup system for key industrial chains. Accelerating the flow and reconfiguration of factor resources based on the construction of a unified national market, improving cross-regional, cross-departmental collaboration mechanisms in industrial chain development, and forming an industrial chain layout that matches regional factor endowments with industrial chain division of labor are essential. Key city clusters, metropolitan areas, and national central cities should be developed as industrial and supply chain clusters, and they should

(C)1994-2024 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

be turned into backup bases for industrial chains. Potential industrial chain backup bases should be guided to link the industrial chains of the eastern, central, and western regions, deepen industrial collaboration, and promote the development of upstream and downstream matching in the industrial chain. By supplementing, extending, and strengthening chains, the completeness and autonomy of key domestic industrial chains can be achieved, resolving risks of potential external supply disruption.

4.2 Breaking through Key Core Technologies with Scientific and Technological Innovation, Constructing a Reservoir of Scientific and Technological Talent

In the context of major-power rivalry, the United States, exploiting vulnerabilities such as China's dependency on foreign core technologies and its lack of robust foundational industries, has intensified export control and other measures to contain the development of China's semiconductor and chip industry. Only by concentrating on original, leading-edge scientific and technological breakthroughs can the battle for key core technologies be won and the dilemma of dependence on foreign technologies be overcome. The acceleration of scientific and technological innovation requires a deeper integration of government, industry, academia, research, finance and application. Government departments should perfect coordination mechanisms for scientific and technological innovation, creating an environment that is conducive to innovation. Enterprises, as the main innovators, need to identify technological bottlenecks in the industrial chain, increase investment in R&D for core technologies, and actively collaborate with universities and research institutions in research projects. They should also co-build science parks and incubation bases, actualizing the sharing of scientific and technological achievements. Financial departments should devise multi-level, multi-channel, and diversified innovation investment mechanisms, providing financing support for core technology breakthroughs. Additionally, guiding market entities to improve the level of application of big data and artificial intelligence technologies in production and manufacturing, and accelerate the industrialization of scientific and technological achievements is crucial. Government departments, enterprises of all sizes, higher education institutions, research institutions, and financial institutions should together form a powerful system for innovation, driving breakthroughs in the industrial chain through integrated and collaborative innovation.

By creating mechanisms for attracting and cultivating talent, China should build a reservoir of scientific and technological talent, fostering long-term competitive strength in technological fields. Ultimately, key core technologies rely on innovative talent. With the development of a new round of technological and industrial revolutions, global competition for talent is becoming increasingly fierce. Active participation in the competition for global talent calls for more open policies to attract high-end overseas talent. Reforming systems related to talent, establishing a globally competitive talent system, focusing on attracting and absorbing leading talents who can make breakthroughs in key core technologies, develop high-tech industries, and lead emerging disciplines is crucial. In terms of cultivating innovative talents, there is a need to focus on national strategic demands, solidifying the reserve of top-notch talents in foundational disciplines and the "Four Facings" (facing the forefront of science and technology in the world, facing the main battlefield of the economy, facing the major needs of the country, and facing people's lives and health). Encouraging universities to integrate academic resources, talent advantages, and scientific resources with corporate practice, building high-level talent cultivation mechanisms that integrate theory and practice, and closely aligning talent training with practical needs is essential.

4.3 Expanding the Industrial Chain Cooperation "Circle of Friends", Constructing a Tightly-Knit Industrial Chain Cooperation Network

The choice of partners for industrial chain cooperation is one of the main areas of competition and cooperation among major countries. The United States, based on "shared values", is strengthening its industrial and supply chain alliances and creating an "allied outsourcing" system. This is done partly

(C)1994-2024 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

to ensure the security of its key industrial chain areas and partly to construct an industrial and supply chain system that excludes China. To guard against supply disruptions and chain breaks due to the politicization and restructuring of industrial chains, China must widen its external economic and trade relations, expanding its cooperation "circle of friends" to achieve diversified industrial and supply chain development through more extensive opening-up. In product areas where supply chains are highly concentrated, diversifying the sources of supply chains by establishing "allied supply" chains based on mutual political trust is vital to ensure the stability and reliability of supply. Leveraging its huge economic scale, unified market advantages, complete industrial system, infrastructure, and human capital advantages, China should actively integrate into the economic and trade system of the United States and its allies and strengthen cooperation with potential American allies.

Constructing a tightly-knit industrial chain cooperation network to intertwine interests and reduce the risk of decoupling is crucial. By utilizing regional economic and trade cooperation platforms and free trade agreements, a closely cooperative industrial chain network should be established, expanding multi-level and multi-dimensional integration of interests. This will increase the cost of intentional decoupling under the condition of major-power rivalry and reduce the risk of passive decoupling. Building on platforms such as the Belt and Road Initiative, the Regional Comprehensive Economic Partnership (RCEP), and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), bilateral trade cooperation potential can be unleashed, and regional industrial chain cooperation deepened, such as accelerating the progress of the China-ASEAN and China-Japan-South Korea industrial chain and supply chain cooperation relationships. Utilizing various external cooperation platforms to build industrial chain clusters, linking domestic and foreign industrial and supply chains, and deepening their integration and connection are essential. By connecting node cities along the Belt and Road and expanding the scope of opening to the West, and by docking with border ports and overseas cooperation parks, a stable Silk Road Economic Belt regional industrial and supply chain system can be constructed. Based on China's industrial scale, supporting and first-mover advantages, the attractiveness to foreign investment should be strengthened. In order to transition from being a major recipient of foreign investment to becoming a strong bi-directional investor, it is necessary to gradually increase the proportion of foreign investment in high-end manufacturing and high-tech services and support foreign investment projects that can have important technological spillover effects, as well as projects that help integrate external resources and enhance the modernization of China's industrial chain. Utilizing foreign investment to connect domestic and international markets can facilitate the circulation of regional industrial chain networks.

4.4 Actively Participating in Global Industrial Chain Governance, Promoting the Development of Rules and Standards for the Global Industrial Chain

Profound changes in the global situation and the turbulence and uncertainties triggered by geopolitical factors have increased the demand for global governance. However, with the declining willingness and capability of Western countries, led by the United States, to provide global governance, the deficit in global industrial chain governance is expanding. Faced with new challenges in global industrial chain governance, it is essential to protect the public good of the industrial and supply chains by assuming the responsibility for ensuring the safety, stability, and efficient development of global industrial and supply chains. Leveraging active participation in international organizations and multilateral platforms to gain more say, promoting the transformation of industrial chain governance from hegemonic and power politics-dominated to a model of multilateral governance and win-win cooperation is vital. Adhering to the concept of building a community with a shared future for humanity, actively participating in the construction of a global governance system, and enhancing influence in international and regional governance mechanisms such as the United Nations, World Trade Organization, G20, Asia-Pacific Economic Cooperation, and Shanghai Cooperation Organization

(C)1994-2024 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

is crucial. Actively participating in solving hot issues in the industrial chain, proposing governance solutions with Chinese characteristics, and filling the governance gaps in emerging fields are necessary. Implementing WTO-promoted supply chain standards such as non-discrimination, transparency, and fair competition, promoting mutually beneficial cooperation in the global industrial chain, and addressing the deficit in global industrial chain governance are important steps.

Focusing on emerging topics such as digital governance and green development, efforts should be made to promote the development of rules and standards for global industrial chain governance, which will assist in enhancing the resilience of China's industrial chain. By establishing China's own digital governance framework and governance system, China can propose "Chinese solutions" for the rules of digital governance in industrial chains. Efforts to increase the ability to set standards, align with top-tier industrial standards, and cooperate with international standardization organizations can aim to enhance the international recognition of Chinese standards. By comprehensively and multi-dimensionally elevating China's role in the formulation and discussion of rules and standards of global industrial chain governance, steps can be taken to avoid being excluded from the rule-making or standard-setting circles dominated by Western countries. This approach can ensure that China maintains an influential and constructive role in shaping the future landscape of global industrial chain governance.

References:

[1] Cai, Fang. 2022. "Lewis Turning Point—A Significant Change in China's Economic Development Stage." *Economic Research,* 57(01):16-22.

[2] Huang, Qunhui. 2021. "Theoretical Logic, Strategic Connotation and Policy System of the New Development Pattern—Based on the Perspective of Economic Modernization." *Economic Research,* 56(04):4-23.

[3] Li, Tianjian. 2021. "The Inner Logic of Industrial System Construction during the 'First Five-Year Plan' Period and Its Enlightenment for Smoothing the 'Domestic Economic Cycle'." *Journal of Chongqing University of Technology* (Social Science Edition), 35(09):9-20.

[4] Ling, Yonghui, and Zhibiao Liu. 2021. "Paradox of Global Value Chain Development: Research Progress, Review and Resolution." *Economic System Reform,* (03):100-107.

[5] Pang, Xun, and Qingqian He. 2021. "Structural Power in Global Value Chains and the Evolution of the International Pattern." *Social Sciences in China,* (09):26-46+204-205.

[6] Qin, Yaqing, Canrong Jin, and Feng Ni. 2022. "Competition and Cooperation among great Powers in the New Situation of Global Governance." *International Forum*, 24(02):3-32+155.

[7] Wang, Honggang. 2021. *Big Power Game 2050*. Beijing: CITIC Press.

(C)1994-2024 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net