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International Journal of Production Economics (Vol.278)

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01. A deterministic fluid model for production and energy mode control of a single machine

Abstract: This study explores the use of a deterministic fluid model to improve machines' energy efficiency by analysing dynamic energy mode control policies. The model considers machines operating in different energy modes, with different energy consumption levels. The model helps in determining optimal thresholds and associated costs, proving that a policy operating between working and off or working and idle modes is always better than a hybrid policy. The model is used to propose an approximate policy for machines with stochastic production, warmup, and demand processes. The results show that the proposed approximation method predicts the optimal policy type with 89.3% accuracy, with an average error of 1.37% for 729 different cases tested. The computational efficiency of the proposed approximation is around 250 times better than the MDP approach. The approximation method is an easy-to-implement and effective policy for controlling energy modes to minimize total energy, inventory, and backlog costs.

<https://doi.org/10.1016/j.ijpe.2024.109418>

02. Algorithm aversion during disruptions: The case of safety stock

Abstract: Algorithm aversion is a phenomenon where organizations or individuals reject optimal analytical decision support in favour of informal, subjective decisions. This phenomenon is believed to negatively impact decision quality in volatile supply chain environments. This paper investigates algorithm aversion behaviour in safety stock settings, using data from a retail company. The study found that algorithm aversion occurs during supply chain disruptions, with algorithmic decisions significantly outperforming human judgment. A theory is proposed to explain this behaviour, attributed to reduced sense of fitness among algorithm users and lack of resources for both users and developers. This theory offers insights into how algorithm adoption and adaptation influence decision performance during disruptive events.

<https://doi.org/10.1016/j.ijpe.2024.109442>

03. Choosing between additive and conventional manufacturing of spare parts: On the impact of failure rate uncertainties and the tools to reduce them

Abstract: Additive manufacturing (AM) has gained interest for producing spare parts due to its short lead times and near-point of use, reducing the need for large inventories. However, AM faces challenges such as high production costs and uncertain failure rates. A study using a periodic review model reveals that AM is heavily penalized by higher failure rate uncertainties than conventional manufacturing (CM). To reduce AM failure rate uncertainties, tools like porosity assessment and in-situ monitoring have been developed. The study found that reducing failure rate uncertainty by five and six percentage points is worthwhile for investing in these tools. Porosity assessment is typically the most competitive uncertainty reduction tool.

<https://doi.org/10.1016/j.ijpe.2024.109438>

04. A sustainable semiconductor supply chain under regulation

Abstract: This paper examines the semiconductor industry as a closed-loop supply chain, focusing on the processing and recycling of old semiconductors for new silicon and chips. It examines the impact of a commonly applied subsidy scheme on semiconductor firms operating in upstream and downstream layers. The supply chain includes a return function sensitive to monetary incentives, a subsidy legislation rewarding end-users for recycling, and upstream and downstream industries. The study finds that the subsidy scheme does not distort firms' strategies or cause inefficiency, but stimulates circular economy activities and provides economic and environmental benefits.

<https://doi.org/10.1016/j.ijpe.2024.109426>

05. Digital servitization in digital enterprise: Leveraging digital platform capabilities to unlock data value

Abstract: The study explores digital platform capabilities and their role in unlocking data value in digital enterprises. It uses the Dynamic Capability Theory and a single case study approach to identify three key capabilities: data integration, data analytics, and data productization. These capabilities act as reservoirs, catalysts, and pipelines, facilitating successful implementation of digital servitization. The study also highlights differences in digital servitization between digital enterprises and traditional manufacturers, including motivation, key service design activities, and benefits. The findings enrich existing literature on digital platform capabilities and data value.

<https://doi.org/10.1016/j.ijpe.2024.109434>

World Development (Vol.184)

<https://www.sciencedirect.com/journal/world-development/vol/184/suppl/C>

01. Religious affiliation, education, and fertility in sub-Saharan Africa

Abstract: The study examines the relationship between female education and fertility in Sub-Saharan Africa (SSA), a region where religions significantly influence individuals and communities. The research, using Demographic and Health surveys from 23 countries, found that the association between female education and fertility does not differ between religious groups in most SSA countries. The study suggests that education plays an emancipatory function by modifying women's reproductive norms, regardless of their religious background, suggesting that religion does not weaken the negative educational gradient of fertility in SSA.

<https://doi.org/10.1016/j.worlddev.2024.106723>

02. How clientelism works: Evidence from the Barinas special election

Abstract: Do politicians target the benefits of social programs to party loyalists or to swing voters? Traditional tests of this question are clouded by an identification problem caused by

the simultaneity of politician and voter choices to participate in the exchange of assistance for votes. I use the holding of an unanticipated repeat gubernatorial election in the Venezuelan state of Barinas in 2022 as a natural experiment to identify the effects of elections on the distribution of government assistance. I estimate that the holding of the election led to an increase in the probability of voters in Barinas receiving food packages in comparison with the control group of voters in the state of Apure. I also find that moderate opposition and third-party voters received larger increases in food benefits. These results are consistent with the predictions of the spatial model of distributive politics, according to which elections lead governments to direct more benefits to swing voters instead of core supporters. The findings illustrate why investigation of cross sectional correlations is insufficient to test the implications of theories of voting if it is not accompanied by a clear identification strategy to help isolate the source of the underlying shocks.

<https://doi.org/10.1016/j.worlddev.2024.106734>

03. Accumulation by contamination: Worldwide cost-shifting strategies of capital in waste management

Abstract: This article explores the link between capital development and environmental injustices. It argues that capital-driven industrial policies lead to socio-environmental impacts and ecological distribution conflicts. The authors use Kapp's ecological economics theory and David Harvey's accumulation by dispossession concept to highlight the role of capital accumulation in environmental injustices through cost-shifting strategies, referred to as "Accumulation by Contamination" (AbC). Waste-related conflicts are explored at various industrial stages, with waste management often favouring businesses. The authors emphasize the need to integrate ecological economics and Marxist critical geography to address environmental challenges. They also study the diverse actors responding to capital strategies, highlighting climate change as a significant waste disposal conflict due to excessive carbon dioxide production.

<https://doi.org/10.1016/j.worlddev.2024.106725>

04. Unsustainable prosperity? Decoupling wellbeing, economic growth, and greenhouse gas emissions over the past 150 years

Abstract: Modern economic growth since the Industrial Revolution has led to significant improvements in human wellbeing but also produced environmental impacts that threaten material prosperity. The challenge of the 21st century is to improve global wellbeing while mitigating environmental impacts. Some scholars argue for decoupling economic growth from its environmental costs, while others argue for decoupling wellbeing from economic growth. A long-term analysis of decoupling patterns between an augmented human development index (AHDi) and greenhouse gas emissions (GHGe) is presented, identifying when these patterns were explained by growth decoupling, wellbeing decoupling, both, or neither. Results show that at low income levels, all world regions experienced episodes of wellbeing decoupling, and as they became richer, growth decoupling became more common. However, such decoupling episodes have proven reversible, and no country has achieved very high levels of human wellbeing within planetary boundaries.

<https://doi.org/10.1016/j.worlddev.2024.106754>

05. Within the cracks of the cosmic race: Income inequalities by race and ethnicity in Latin America

Abstract: Recent studies have begun to examine income inequalities by race, defined as skin colour gradation, in 17 Latin American countries. However, most research equates ethnic self-identification with race, leading to confusion on the root of discrimination. This paper uses data from the Americas Barometer to investigate these income gaps, using non-linear

regressions and decomposition methods. The results show substantial differences in average income among different ethnic and racial groups, mainly due to differences in observable characteristics like years of education and employment status. The heterogeneity analyses indicate that ethnic and racial disparities vary across Latin America and can be partially explained by unobserved variables like discrimination. The results suggest that skin colour and ethnic self-identification should be accounted for simultaneously when evaluating inequality.

<https://doi.org/10.1016/j.worlddev.2024.106764>

06. Toward a portfolio theory of talent development: Insights from financial theory, illustrations from the Asia-Pacific

Abstract: We propose Talent Portfolio Theory (TPT) as a new framework for studying human resource development. Drawing insights from Modern Portfolio Theory in financial investment, TPT views a nation's talent development as creating a "talent portfolio" composed of four "B"s: brain train, brain gain, brain circulation, and brain linkage. TPT attends to how a talent portfolio, like a financial one, is diversified to minimize risk, and how diversification can be maintained via rebalancing. As such, TPT provides a framework that captures the overall picture of a country's talent strategy and offers a lens through which to understand how a country changes or "rebalances" its talent portfolio over time. It also provides a tool for examining cross-national variation in talent development strategy. We illustrate the utility of TPT with the cases of Japan and Singapore. While human resource development was crucial to the economic rise of both countries, TPT demonstrates that Japan's and Singapore's approaches to constructing and rebalancing their talent portfolios took different routes with diverging outcomes. We conclude with discussions of theoretical and policy implications of this new approach for the study and implementation of talent development.

<https://doi.org/10.1016/j.worlddev.2024.106755>

07. Global plastic pollution, sustainable development, and plastic justice

Abstract: This review article examines the current state of plastic waste and pollution, in particular in the form of marine litter, as it affects the goal of sustainable development and is affected by global North-South dynamics. The rise in plastic waste has had a deleterious effect on local populations and ecosystems, and remains a problem with numerous governance challenges, posing constraints to achieving the United Nations Sustainable Development Goals. This crisis is analysed under the lens of global North-South dynamics, as the consequences for different nations differ in regard to their capacity to cope with waste, and other inequality issues. China's decision to stop serving as the world's central recycling location has pushed plastic waste exports into other Asian countries, and COVID-19 responses have utilized large quantities of plastic products. However, localized initiatives that involve non-governmental actors are making some headway in countries such as Brazil. This review article introduces the problem, examines extant literature linking plastic pollution with the United Nations' Sustainable Development Goals, offers a brief Brazilian case study of a coordinated response, outlines key research gaps and needs, and articulates the concept of *plastic justice* as a progressive normative design and framework for further analysis.

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European Economic Review (Vol.171)

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01. Regional variations in corporate tax responsiveness: Evidence from Switzerland

Abstract: Drawing on panel variation across Swiss municipalities and cantons, we show that the elasticity of corporate taxable income is large in remote, non-central locations and insignificant in cities. In the full panel, we find that an increase in a jurisdiction's corporate net-of-tax rate by 1% results in an increase in aggregate corporate income by around 3.5%. This effect becomes small and insignificant if we weight by initial tax base, which is large in cities, indicating that the overall tax base is inelastic. We explore margins of firms' responsiveness, revenue effects, and implications for regional policy.

<https://doi.org/10.1016/j.eurocorev.2024.104891>

02. Where are the female composers? Human capital and gender inequality in music history

Abstract: Ludwig van Beethoven, Johann Sebastian Bach, and Frédéric Chopin are household names, but few will recognize Francesca Caccini, Elisabeth Lutyens or Amy M. Beach, who are among the top-10 female composers of all time. Why are female composers overshadowed by their male counterparts? Using novel data on over 17,000 composers who represent the entire history of western classical music, we conduct the first quantitative exploration of the gender gap among composers. We use the length of a composer's biographical entry in *Grove Music Online* to measure composer prominence, and shed light on the determinants of the gender gap with a focus on the development of composers' human capital through families, teachers, and institutionalized music education. The evidence suggests that parental musical background matters for composers' prominence, that the effects of teachers vary by the gender of the composer but the effects of parents do not, and while musician mothers and female teachers are important, they do not narrow the gender gap in composer prominence. We also find that the institutionalization of music education in conservatories increases the relative prominence of female composers.

<https://doi.org/10.1016/j.eurocorev.2024.104893>

03. The effects of digitalization on production

Abstract: How does digitalization transform the macroeconomic production function? Using a model where firms can choose their technology, we find that sectors with more digital capital exhibit a higher elasticity of substitution between value added and intermediate inputs and between capital and labour. This shift in the elasticity of substitution is consistent with a higher complementarity of input-specific technologies on the technology frontier. We further show that the link between technological complementarity and digital intensity can be rationalized using a task-based approach. Out of the three types of digital capital, only the levels of information technology and software/databases have a significant impact on the production function, whereas communication technology has no effects. We also find that digital technical change in value added is Hicks-neutral.

<https://doi.org/10.1016/j.eurocorev.2024.104896>

04. Labor reallocation effects of furlough schemes: Evidence from two recessions in Spain

Abstract: We examine the impact of furlough schemes in scenarios where aggregate risk has a large sector-specific component and workers accumulate sector-specific human capital. In particular, we investigate the different dynamic responses of the Spanish labor market during the Great Recession and the Great Contagion as both downturns were triggered by such shocks. A big difference between these recessions is that job losses were much lower during the pandemic crisis, possibly due to firms' widespread use of furlough schemes (ERTEs), which had been seldom activated during the Great Recession. In line with the consensus view, we find that this policy helps stabilize the unemployment rate by keeping matches alive in those industries hardest hit by a crisis. However, under their current design, we argue both

empirically and theoretically that ERTes: (i) crowd out labor hoarding by employers in the absence of those schemes, (ii) increase the volatility of effective working rates and output, and (iii) hinder worker reallocation, especially in short recessions.

<https://doi.org/10.1016/j.euroecorev.2024.104894>

05. Income or leisure? On the hidden benefits of (un)employment

Abstract: The study explores the trade-off between income and leisure in labor supply decisions, comparing non-employed individuals and employed individuals. The results show that increased non-working time during unemployment leads to higher free-time satisfaction and improved family life satisfaction, possibly due to more time for home production. However, there is a decline in satisfaction with household income, particularly among unemployed men. The study also examines the role of social norms in this context, arguing that individuals obtain identity utility through having a job that ensures self-sufficiency. The study provides evidence on the importance of earning a living from work and shows that home production can help mitigate the pressure to comply with this norm, which applies to both men and women.

<https://doi.org/10.1016/j.euroecorev.2024.104879>

International Journal of Production Economics (Vol.279)

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01. Scalable probabilistic forecasting in retail with gradient boosted trees: A practitioner's approach

Abstract: The M5 competition has advanced retail forecasting, but the challenges faced in large e-commerce companies are significant. Large datasets and a larger stock assortment lead to more intermittent data. To scale to larger dataset sizes, a two-layer hierarchy is proposed, focusing on decision-level product unit sales and aggregated levels. A top-down approach is proposed, which generates probabilistic forecasts under distributional assumptions. The method is evaluated on both proprietary and publicly available datasets, showing differences in characteristics between e-commerce and brick-and-mortar retail. The top-down forecasting framework enters the top 50 of the original M5 competition.

<https://doi.org/10.1016/j.ijpe.2024.109449>

02. Logistics service sharing in cross-border e-commerce

Abstract: While the demand for cross-border e-commerce has grown rapidly, challenges have emerged for both retailers and consumers participating in this global market. Retailers have been struggling with high logistics costs to fulfill cross-border demand, while the lack of trust in foreign retailers is a major issue for consumers. In this paper, we study a cross-border collaboration scheme between a domestic and a foreign retailer to mitigate these challenges. This entails a co-opetition framework where the domestic retailer performs the last-mile delivery of the foreign retailer's orders in exchange for a logistics service fee. We model demand via a Multinomial Logit (MNL) choice model where the consumers are trust- and price-sensitive. We compare the market outcomes of the two retailers in "pre-collaboration" and "post-collaboration" settings. We find that there exist win-win outcomes where both retailers benefit from collaboration under realistic settings. We also show that a cooperative mechanism can lead to higher profits for both retailers compared to the non-cooperative mechanism for setting the logistics service fee, if the contract terms are decided carefully.

<https://doi.org/10.1016/j.ijpe.2024.109460>

03. Digital transformation in public-private collaborations: The success of humanitarian supply chain operations

Abstract: Recent years have seen the extensive use of big data analytics, related technological infrastructure, and machine learning applications for digital transformation. The resource dependency related to data-driven applications elicits public-private collaborations (PPCs) between governments and private or non-government organizations (NGOs) for value creation. Such collaborations are effective for the success of humanitarian supply chain operations (HSCOs), particularly in the event of large-scale disasters. By building on resource dependence theory (RDT), our study explores the links between digital transformation, PPCs, and HSCO success. Using structural equation modeling on data collected from 224 key decision-makers and experts, we found that digital transformation mediates the relationship between private-NGO collaborations and HSCO success while host government support moderates it. Our study thus makes an original contribution to RDT and the emerging domains of contemporary digital and data-driven applications in HSCO. The implications and future research directions arising from this study are also discussed in this research paper.

<https://doi.org/10.1016/j.ijpe.2024.109461>

04. The co-evolution of actor engagement and value co-creation on digital platforms

Abstract: Digital platforms are enabling the introduction of Platform-as-a-Service (PaaS) offerings, particularly in the asset management industry. This study explores the co-evolution of actor engagement (AE) and value co-creation (VCC) through reciprocal resource integration. The findings reveal distinct pathways for platform development and scaling, driven by the interplay between AE and VCC. The freemium model fosters a "viral" community-building path, while the subscription model follows a controlled ecosystem-building path. Key factors influencing these dynamics include business model characteristics, actor roles, and feedback loops. The study emphasizes the importance of integrating AE and VCC practices to enhance platform utilization and scalability.

<https://doi.org/10.1016/j.ijpe.2024.109467>

05. Integrating collaboration scenarios and workforce individualization in collaborative assembly line balancing

Abstract: The integration of collaborative robots into assembly lines offers a significant opportunity for industries to support human workers and execute tasks autonomously. Human-robot collaboration (HRC) can enhance productivity compared to traditional robots. However, workforce diversity is crucial for successful implementation. This study proposes a mathematical model to optimize HRC performance, considering skill level and fatigue differences. The model integrates various collaborative scenarios and assigns workers and cobots to stations based on individual characteristics. The model is applied in a case study to provide managerial insights and results.

<https://doi.org/10.1016/j.ijpe.2024.109450>

06. Sustainability diffusion in the Chinese semiconductor industry: A stakeholder salience perspective

Abstract: The semiconductor sector plays a crucial role in shaping national strategies and driving economic growth; however, it faces significant challenges prompting a shift towards sustainable development. This study aims to investigate whether sustainability initiatives of the focal firm can diffuse throughout the semiconductor supply chain, leveraging stakeholder salience theory and archival data from listed firms in China. Methodologically, we conduct a regression analysis using STATA 17.0 to examine the impact of the focal firm's sustainability disclosure on supply chain sustainability. Findings indicate a positive correlation between

the focal company's sustainability disclosure and enhanced sustainability performance of its key suppliers and customers. This relationship is strengthened when the focal firm demonstrates significant market power, sustainability legitimacy, and urgency in addressing sustainability concerns. Our study contributes to the sustainable supply chain management literature by elucidating sustainability diffusion from a stakeholder salience perspective and offers practical insights for semiconductor managers and policymakers striving to foster sustainable practices within the sector.

<https://doi.org/10.1016/j.ijpe.2024.109470>

07. Optimizing Attended Home Delivery: Multiple recovery options and customer availability profiles to face synchronization failures

Abstract: The study explores the Attended Home Delivery Problem with Recovery Options (AHDPRO), which aims to minimize synchronization failures and improve service quality and logistics efficiency in the growing sector. The AHDPRO involves customers specifying their probability of being at home during different timeslots and their preferred recovery option in case of a failure. The algorithm uses valid inequalities and heuristic procedures to solve a Mixed-Integer Linear Programming model. The results provide managerial insights for companies operating in the Attended Home Delivery sector, such as timeslot length, perceived service quality, and other operational factors contributing to efficient planning and improved customer satisfaction. The results also yield several managerial insights for companies operating in the Attended Home Delivery sector.

<https://doi.org/10.1016/j.ijpe.2024.109463>