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Contemporary U.S. Consumerism Shapes the Lives of Child Cobalt Miners in the DRC

INTRODUCTION

The widespread use of lithium-ion batteries in everyday devices connects U.S. citizens to cobalt mined under hazardous conditions in the Democratic Republic of the Congo (DRC). Around 20% of this cobalt is mined by hand, frequently by children facing severe health risks, environmental devastation, and disrupted education. Increased consumer demand in the U.S. indirectly fuels child labor, highlighting the urgent need for stricter ethical sourcing regulations.

• Everyday Connection: Smartphones, laptops, and EVs depend on cobalt mined by children in the DRC.

• Health Crisis: Child miners risk serious illnesses, including tumors, respiratory issues, and genetic damage.

 Community Devastation: Mining displaces traditional jobs, contaminates water, and fuels local violence.

• Ethical Action Needed: Implementing U.S. sourcing regulations could reduce child labor and improve conditions.



RESEARCH METHODOLOGIES

This study employed a hybrid research methodology combining case study research and content analysis to investigate the link between U.S. consumerism and child labor in cobalt mining in the Democratic Republic of the Congo (DRC).

Case study research allowed for an in-depth exploration of both qualitative and quantitative impacts on local communities, specifically examining education and quality of life. Content analysis enhanced this by systematically reviewing U.S. media, advertisements, and corporate documents related to lithium-ion batteries and cobalt sourcing.

These methods provided a comprehensive, balanced view by integrating diverse data sources such as expert interviews, policy reports, and promotional materials, effectively addressing gaps in current research.

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The global demand for cobalt has dramatically increased in recent decades due to rapid growth in lithium-ion battery usage. Global battery sales have surged, creating a "battery" domino effect" that further boosts cobalt demand (Figure 1).

Cobalt production in the DRC rose significantly—from 60,000 metric tons in 2010 to 170,000 metric tons in 2023—driven largely by foreign investment, especially from Chinese firms (Figure 2). Despite increased output, the cobalt industry remains unstable due to ongoing political conflict, poor infrastructure, and inconsistent government policies.

In the U.S., cobalt consumption has shown fluctuations due to industry demand shifts and supply chain complexities (Figure 3). Efforts by companies like Apple to use recycled cobalt illustrate attempts to reduce dependence on newly mined cobalt.

Dominant cobalt applications: Superalloys for aerospace and chemical uses for rechargeable batteries

• Fastest-growing cobalt sector: Rechargeable lithium-ion batteries, expected to surpass traditional uses

Supply-chain issues: Complex global supply chains make cobalt tracing challenging. • Impacts in the DRC: Increased cobalt demand has intensified human rights abuses, environmental damage,

CONCLUSIONS AND ANALYSIS

This study confirms a clear link between rising global cobalt demand, driven mainly by rechargeable battery technologies—and persistent child labor in the Democratic Republic of the Congo (DRC). Despite positive U.S. efforts to reduce cobalt consumption through recycling, these initiatives remain insufficient compared to the broader global market pressures sustaining exploitative practices. • U.S. efforts are positive but limited, overshadowed

- by global demand.
- international action.



• Complex supply chains obscure ethical sourcing. • Rapid battery-sector growth continues to fuel child labor in the DRC, highlighting the urgent need for

ACKNOWLEDGEMENTS / REFERENCES

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IMPLICATIONS AND NEXT STEPS

This research highlights how everyday purchasing habits in the U.S. directly influence child labor exploitation in cobalt mines in the DRC. Despite corporate initiatives such as Apple's commitment to recycled cobalt, rapidly increasing global cobalt demand continues to exacerbate child labor conditions.

These findings stress that ethical responsibility extends beyond corporations and policymakers—it also falls on everyday consumers who use cobalt-containing devices. Greater public awareness is essential to understanding the hidden human costs behind widely promoted technologies like EVs and smartphones.

Future research should:

- Evaluate if corporate sustainability initiatives genuinely reduce unethical cobalt demand or are mostly symbolic.
- Investigate how consumer-awareness campaigns could practically reduce cobalt dependency.
- Explore enforceable international regulations or agreements to create genuinely ethical cobalt sourcing systems.

Real progress requires accountability and cooperation among consumers, companies, and governments alike.

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