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# Blockchain for Factory Workers: A Study of Levi's Worker Well-Being Program

Mary Basile 25 March 2020 Blockchain & the Law Prof. Michele Benedetto Neitz

Since the beginning of industrialization in the United States, the wellbeing of individuals in factories manufacturing product and attending to heavy machinery has usually been forgotten in the name of profit, efficiency, and progress. Society's response to the myriad grotesque human rights violations that came to light overtime emerged through various employment and labor organizing laws and standards. International human rights laws and standards outlined in the United Nations Declaration of Human Rights ("UNDHR") and by the International Labour Organization ("ILO") reflect similar interests to protect manual laborers' autonomy, safety, and health. Enforcement of these regulations and standards has typically come in the form of paper surveys or independent auditing committees doing walkthroughs of factories. While continuing with walkthroughs and other methods of review, a new and more effective way of reporting compliance through a survey has been introduced by putting the survey on a blockchain. The potential of using blockchain technology goes beyond mere compliance with labor laws that seek to protect workers' rights. It also touches on amplifying these workers' voices in a way that they can advocate meaningfully for themselves to ensure corporate compliance with these laws and increase accountability.

Part I of this paper will provide a bit of background on blockchain technology, and the Worker Well Being Program ("WWBP") implemented at Levi Strauss through their Levi Strauss Foundation. Part II will expand on relevant international law related to labor rights, with a particular focus on the UNDHR and the ILO. Part III will analyze the current state of and need for a shift in focus on worker well-being, especially considering the current global pandemic and recurring need for a federal minimum wage that moved beyond just a living wage, which it currently is not, to one that allows for saving and flexibility. This section also includes notes from an interview with Levi's WWBP's Director, Ms. Kim Almeida, and her background in

labor rights and her experience with structuring the WWBP. Part IV will discuss recommendations for future incorporation of blockchain in the corporate setting, especially to improve factory workers' well-being. Part V will be a conclusion.

#### Part I: Background on Blockchain, Labor Rights, and the Worker Well Being Program

Not until recently has blockchain emerged as a viable solution to not only addressing labor exploitation but expanding this focus to trying to improve the well-being of factory laborers. Blockchain technology's popularity has steadily been growing over the past 10 years after bitcoin emerged and took the world by storm. Because of bitcoin, the most common association with blockchain is peer-to-peer digital currency transfer without a third-party intermediary but with more states legislating around this new technology, there have been more discussions about the potential implications of blockchain technology beyond investments and finance. A blockchain is a digital ledger of transactions shared across a network of multiple participants and can be thought of as a mechanism to store data in a decentralized way where everyone with access to chain has the same information updated in real time without control over changing the information. The data is cryptographically encrypted and recorded sequentially and permanently into smaller datasets called "blocks". <sup>2</sup> One of blockchain's most appealing features is its accessibility, especially for a public blockchain, by anyone at any time if they have the software programed to access the information on that blockchain. This has become particularly appealing to companies, like those wishing to monitor but improve well-being and the standards implemented in their factories. The information sought is compiled into a survey that is disseminated and then data is collected onto a blockchain. This data is accessible to any and all employees tasked with measuring, enforcing, and improving compliance with relevant

<sup>1</sup> Marcia Narine Weldon & Rachel Epstein, Beyond Bitcoin: Leveraging Blockchain to Benefit Business and Society, 20 Transactions: Tenn. J. Bus. L. 837, 846 (2019).

<sup>&</sup>lt;sup>2</sup> *Id*. at 847.

employment and labor law, as well as international human rights standards that most countries have adopted and implemented in their own countries.

Enforcement is one of the larger issues related to avoiding human rights violations in the workplace because there is no single body of regulations that takes precedence over another; each country is charged with its own enforcement based on whatever legislation it has, or does not have, and countries that belong to the United Nations ("UN") are charged with working towards the standards they have promulgated.<sup>3</sup> We are aware of companies, like Nike, running sweatshops where employees make less than a living wage and work in substandard factory settings to make its product, so it is abundantly clear that enforcement can be improved so these labor employment issues do not happen so blatantly and frequently.<sup>4</sup> Other companies, on the other hand, have taken a far different approach and go beyond the standards outlined by the UNDHR and the ILO.

Companies like Levi's have taken the initiative to go a step further by not only abiding by applicable labor laws but also promoting overall worker wellbeing. Levi's was awarded a two-year grant by the U.S. State Department to develop a blockchain platform. With those funds, Levi's partnered with the Sustainability & Health Initiative for NetPositive Enterprise ("SHINE") at Harvard's School of Public Health in 2019 to survey workers about their daily experience and overall well-being in the workplace to better understand if, in fact, "what's good for workers is also good for business." SHINE's Worker Well Being survey was adapted to

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<sup>&</sup>lt;sup>3</sup> G.A. Res. 217 (III)A, Universal Declaration on Human Rights (Dec. 10, 1948).

<sup>&</sup>lt;sup>4</sup> Marc Bain, Nike is Facing a New Wave of Anti-Sweatshop Protests, by Bad Flashback, Quartz (Aug. 1, 2017), https://qz.com/1042298/nike-is-facing-a-new-wave-of-anti-sweatshop-protests/.

<sup>&</sup>lt;sup>5</sup> Unzipped Staff, "A New Way to Measure Worker Well-Being", Levi Strauss & Co. (Jan. 24, 2019), https://www.levistrauss.com/2019/01/24/new-way-measure-worker-well/.

meet the needs of what the Levi's WWBP wanted to get a better idea of, like any issues related to health, financial security, and gender equality in the workplace.<sup>7</sup>

This grant is the first time the State Department has provided an opportunity for an organization to leverage blockchain technology to track and measure worker well-being.<sup>8</sup> Levi's WWBP director, Kim Almeida, explained that Levi's "partnership with SHINE was for three years and this grant allows us to extend the period by another two years, which will yield important insights into the through lines between worker well-being and factory productivity."9 Levi's put this survey on blockchain software technology company Consensys' blockchain for factory workers to answer on iPads that were set up at stations in the factory in the native language of the factory workers. The Levi's WWBP operates on the belief that when workers are content, healthy, and engaged, factory productivity will increase as well. <sup>10</sup> They are concerned with safe workspaces as well worker autonomy and concern for their employee's mental health.<sup>11</sup>

#### Part II: Legal Framework – International Human Rights Law and the United Nations

The UN adopted its UNDHR in 1948 as a means of establishing the basic rights afforded to all its member nations after suffering the atrocities of World War II. <sup>12</sup> Of the 30 Articles outlined therein, quite a few outline standards related to labor for member nations to abide by. Article 4 prohibits slavery and forced labor and Article 20 addresses the right to peaceful assembly and association. <sup>13</sup> Article 23 goes into more detail stating, "everyone has the right to work, freely choose employment, protection against unemployment, equal pay for equal work without discrimination, favorable renumeration ensuring for himself and his family an existence

<sup>&</sup>lt;sup>7</sup> *Id*.

<sup>&</sup>lt;sup>8</sup> *Id*.

<sup>&</sup>lt;sup>9</sup> Telephone Interview with Kim Almeida, Director of Worker Well Being, Levi Strauss Foundation (Feb. 28, 2020).

<sup>&</sup>lt;sup>11</sup> *Id*.

<sup>&</sup>lt;sup>12</sup> The United Nations, The Universal Declaration of Human Rights, <a href="https://www.un.org/en/universal-declaration-">https://www.un.org/en/universal-declaration-</a> human-rights/, (last visited Apr. 21, 2020).

13 G.A. Res. 217 (III)A, *supra* note 3, at 2, 5.

worthy of human dignity, and supplemented, if necessary, by other means of social protection if they are working, and form and to join trade unions for the protection of his interests." Article 24 outlines a right to rest and leisure, including periodic holidays with pay and reasonable limitation on working hours. Finally, Article 25 establishes a right to a standard of living "adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control."

Within the UN, the International Labour Organization (ILO) has also compiled standards that range from legally binding (between member states) conventions and non-legally binding recommendations. These conventions are meant to be implemented as basic regulations to follow that are then expanded upon by recommendations. The ILO's governing body has identified "fundamental" conventions, covering subjects that are considered to be central principles and rights at work. These are: (1) the freedom of association and the effective recognition of the right to collective bargaining; (2) the elimination of all forms of forced or compulsory labour; (3) the effective abolition of child labour; and (4) the elimination of discrimination in respect of employment and occupation. Additionally, the ILO governing body has designated another four Conventions as "governance (or priority) instruments," related to (1) labour inspection, (2) employment policy, (3) labour inspection related to agriculture, and (4)

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<sup>&</sup>lt;sup>14</sup> *Id*. at 6.

<sup>&</sup>lt;sup>15</sup> *Id*.

<sup>&</sup>lt;sup>16</sup> *Id*. at 7.

<sup>&</sup>lt;sup>17</sup> Int'l Labour Org. [ILO] Conventions and Recommendations (1996) <a href="https://www.ilo.org/global/standards/introduction-to-international-labour-standards/conventions-and-recommendations/lang--en/index.htm">https://www.ilo.org/global/standards/introduction-to-international-labour-standards/conventions-and-recommendations/lang--en/index.htm</a> (last visited March 23, 2020).

<a href="https://www.ilo.org/global/standards/introduction-to-international-labour-standards/conventions-and-recommendations/lang--en/index.htm">https://www.ilo.org/global/standards/introduction-to-international-labour-standards/conventions-and-recommendations/lang--en/index.htm">https://www.ilo.org/global/standards/introduction-to-international-labour-standards/conventions-and-recommendations/lang--en/index.htm</a> (last visited March 23, 2020).

establishing a tripartite consultation for international labour standards to emphasize their importance and encourage member states to ratify them.<sup>19</sup>

#### Part III: Analysis of Present-Day Concerns and Application

Currently, we are seeing the exploitation and subsequent labor organizing that has exposed by coronavirus disrupting the basic framework of global commerce. <sup>20</sup> This tragic situation is shedding light on our massive dependence on factory labor for not only clothing, everyday products, but especially medical supplies. Various news outlets have been sharing stories of workers from Whole Foods and General Electric who are walking out and picketing for safe workspaces, higher wages, personal protection equipment, and shifting production focus to ventilators and other medical equipment that health providers need. <sup>21</sup> Many of us are working and studying from home, while "essential" workers are still called to show up and risk exposing themselves to COVID-19. These workers often do not make a living wage and are not given the recognition that they very obviously deserve, only exacerbating the need for a higher minimum wage throughout the nation so these workers can pay rent, buy groceries and pay their bills. The discussion around minimum wage, unfortunately, is not even one focused on workers' well-being overall but rather a factory workers' ability to meet their basic, daily expenses to survive.

Since 2007, the federal minimum wage has gone up from \$5.15 to \$7.25 per hour. This is generally not considered a living wage and often times, especially when laborers are majority women and/or immigrants, these wage and hour laws are not complied with. A U.S. Department of Labor survey found that in 1999, 65% of all garment-manufacturing businesses in New York

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<sup>&</sup>lt;sup>20</sup> German Lopez, Why America Ran Out of Protective Masks – and What Can Be Done About It, Vox (Mar. 27, 2020 at 2:50pm), <a href="https://www.vox.com/policy-and-politics/2020/3/27/21194402/coronavirus-masks-n95-respirators-personal-protective-equipment-ppe">https://www.vox.com/policy-and-politics/2020/3/27/21194402/coronavirus-masks-n95-respirators-personal-protective-equipment-ppe</a>.

<sup>&</sup>lt;sup>21</sup> *Id.*; see also Edward Ongweso Jr., General Electric Workers Launch Protest, Demand to Make Ventilators, Motherboard Tech by Vice, Vice (Mar. 30, 2020 at 10:44am), <a href="https://www.vice.com/en\_us/article/y3mjxg/general-electric-workers-walk-off-the-job-demand-to-make-ventilators">https://www.vice.com/en\_us/article/y3mjxg/general-electric-workers-walk-off-the-job-demand-to-make-ventilators</a>

City violated wage and hour laws, and a 2000 study similarly found that 65% of businesses in the Los Angeles garment industry violated the minimum wage law. <sup>22</sup> Furthermore, low-wage positions do not allow for the same amount of bargaining power often associated with positions of a higher pay and this problem is exacerbated by naturalization status, sex, and race. <sup>23</sup> Millions of immigrants who have left their home countries in search of work are subject to officially sanctioned discrimination and unredressed workplace abuses, including restricted rights to crucial workers' compensation benefits in several states, and limitations on their freedom of association.<sup>24</sup> Some have sought out the help of the Occupational Safety and Health Administration (OSHA) to address issues or relay their concerns. However, OSHA does not have the resources necessary to protect the safety and health of factory laborers, and workers in general, on its own. <sup>25</sup> Penalties for serious violations of the Occupational Safety and Health Act, those that pose a substantial probability of death or serious physical harm, carry a national average penalty of only \$883.<sup>26</sup> For massive, global brands like Nike and H&M, spending less than \$1,000 for an OSHA violation is less than a slap on the wrist and a small price to pay rather than spending the additional money it should to make sure their laborers are making enough money to feed themselves and their families. These workers should be paid enough to live the healthy life we are all entitled to.

The more tragic aspect of this, especially given the global pandemic we find ourselves in, is these laborers are often not offered paid sick leave, covered by health insurance, or do not

<sup>&</sup>lt;sup>22</sup> Rebecca Smith, Human Rights at Home: Human Rights as an Organizing and Legal Tool in Low-Wage Worker Communities, 3 Stan. J. C.R. & C.L. 285, 289 (2007).

<sup>&</sup>lt;sup>23</sup> *Id*.

<sup>&</sup>lt;sup>24</sup> *Id*. at 286. <sup>25</sup> *Id*. at 291.

<sup>&</sup>lt;sup>26</sup> *Id*.

make enough to buy into it.<sup>27</sup> If they were to catch this virus, it would not only be devastating for their health and livelihood but their finances as well because treatment is incredibly costly.<sup>28</sup> Typically, union membership brings with it higher wages and better working conditions for workers; 26% more union workers are covered by health benefits through their jobs than non-union workers.<sup>29</sup> Thus, when low wage workers are barred from organizing and unionizing, not only does it impact their ability to negotiate for better working conditions and higher pay but their ability to receive adequate health coverage. This can be a lethal problem right now as these factory workers are working in close proximity to one another for long hours. They often work with little to no personal protection equipment as there is a shortage even for medical professionals.<sup>30</sup>

Both the ILO references and Article 25 of the UNDHR, listed above, create complimentary standards providing for solutions for these workers. Those laws' focus on labor rights and attempting to balance economic power between executives and their employees in a way that moves beyond simply complying with labor laws were the foundation of Kim Almeida's career and her primary motivators in structuring Levi's WWBP. Early on in her career, she spent a good amount of time working in labor compliance of global supply chains, looking at labor audits of factories and other workplaces around the world focused on agriculture, apparel, furniture, and any other variety of consumer good manufacture. From this experience, she realized that compliance with national labor laws and any relevant codes of conduct were on a spectrum, with many brands doing the bare minimum for compliance while

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<sup>&</sup>lt;sup>27</sup> Alina Selyukh, Amazon Workers Stage New Protests Over Warehouse Coronavirus Safety, Coronavirus Live Updates, NPR (April 21, 2020), <a href="https://www.npr.org/sections/coronavirus-live-updates/#id839888501">https://www.npr.org/sections/coronavirus-live-updates/#id839888501</a>.

<sup>&</sup>lt;sup>28</sup> Abigail Abrams, Total Cost of her COVID-19 Treatment: \$34,927.43, Health, Time Magazine (Mar. 19, 2020), <a href="https://time.com/5806312/coronavirus-treatment-cost/">https://time.com/5806312/coronavirus-treatment-cost/</a>.

<sup>&</sup>lt;sup>29</sup> *Id*. at 292.

<sup>&</sup>lt;sup>30</sup> Selyukh, *supra* note 26.

<sup>&</sup>lt;sup>31</sup> Interview, *supra* note 8.

<sup>&</sup>lt;sup>32</sup> *Id*.

others had shown much more proactive efforts to uphold their companies to a higher standard. Additionally, she noticed that labor audits were only successful in meeting minimum requirements to avoid egregious labor rights violations like using child labor, retaining passports, and forced labor. Deeper issues related to making sure people have a dignified work experience and maintaining workplaces free of harassment and discrimination could not be addressed by labor audits.

Ms. Almeida said she drew upon Levi's history of worker empowerment and their previous programs that benefitted workers to create a program that would address the industry's need to move beyond just compliance to a space focused on education and wellbeing.<sup>33</sup> One example she touched on was providing female workers in their factories with information on menstruation and access to products they might need and seeing absenteeism drop. She pointed out that one of the best parts of using blockchain was seeing there was a need to measure impact on factory culture and the factory workers' lives. This benefit has led to Levi's surveying about 13,000 of their workers within their supply chain. Levi's has learned a lot more from their factory workers than those involved in the WWBP had imagined, especially in relation to the benefits that come from programs geared towards educating factory workers and providing them with forums to voice their concerns and questions based in respect, trust, and fairness.<sup>34</sup> The part of blockchain that truly allows this fairness and trust to flourish from these worker programs is allowing factory workers to share their experiences in an anonymous capacity, without fear of embarrassment or retaliation from a supervisor.<sup>35</sup>

#### **Part IV: Recommendations**

<sup>&</sup>lt;sup>33</sup> *Id*. <sup>34</sup> *Id*.

In many ways my recommendations mirror the trajectory of Ms. Almeida's career. Many companies still rely on manufactured goods and thus, still rely on audits and factory walkthroughs to ensure compliance with labor laws. As Ms. Almeida saw that this provided a good foundation to begin addressing questions related to labor rights but did not do enough to protect them and expand them, the goal is that other companies will begin to follow and expand on this vision by following in Levi's and their WWWP's footsteps. Levi's continues to pioneer incorporating blockchain into its efforts to mitigate human rights and labor abuses in the workplace, especially as the use of blockchain technology is still very much in a nascent stage. As the technology becomes inevitably more popular, sophisticated, and widely accessible, we will surely see the myriad benefits it provides shift not only the way we do business but the way we interact as a global community.

Early adopter companies and stock exchanges already use blockchain for facilitating more transparent shareholder communications, managing supply chains, providing real time data for internal audit, and increasing cybersecurity. More specifically, the benefits blockchain bestows on business and the corporate sector will only keep growing the more attention is given to implementing it in an ethical and transparent way. Scholars have already acknowledged that blockchain benefits business because:

it depends on consensus, meaning that all participants agree on a transaction's validity; participants know where the assets came from and who owned it (provenance); the transactions are immutable-participants cannot tamper with the transactions and any corrections are visible to all participants in real time; and it provides finality and a one-stop for participants to determine when a transactions is complete. Additionally, blockchain can also assist regulated companies by making it easier for internal and external auditors to access and monitor data and for regulators to verify compliance.<sup>37</sup>

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<sup>&</sup>lt;sup>36</sup> Weldon, *supra* note 1, at 840-41.

<sup>&</sup>lt;sup>37</sup> *Id.* at 842.

For these examples of all its benefits, I believe it is incredibly important to focus on regulating this technology and its applications and uses in a way that balances the ethics behind public data storage. This was apparent in my discussion with Ms. Almeida as she had not really considered the legal implications of blockchain technology on her program. It was wonderful to share this thought and have a discussion with her about how blockchain's evolution could really help expand the WWBP and consider the importance of worker well being in a new way, even beyond labor rights. Furthermore, I feel regulations and potential use standards should attempt to address the inevitable fall out of certain jobs, companies, and positions that will likely become obsolete as blockchain technology becomes more sophisticated and efficient with streamlining business and our lives. We do not live in a society that gives much trust to government as a regulatory institution and as such, I do not expect each state to hold out space for individuals that might lose their jobs or their companies in place of evolving technology. I do hope this is a consideration so there is not such strong backlash and distrust for blockchain use to the point that we lose out on the benefits we are seeing with Levi's that can be applied in other areas of our lives, our businesses, our governments, and our cultures within those spaces to improve them. I recommend apparel companies, especially those frequently infringing on labor rights, take note from Levi's and their WWBP as they are creating a more sustainable and transparent path in the industry that I believe should become the standard rather than just wishful thinking or some idealized goal.

#### **Part V: Conclusion**

It is clear that there is still plenty of progress to be made with how corporations dependent on labor for their profits attempt to bridge the gap between meeting baseline expectations provided by domestic and international labor laws and the necessary demand to

focus on worker well-being in the workplace. This is especially true now as we face a global pandemic that is increasingly more and more dependent on manual laborers in factories and warehouses to provide and manufacture personal protective equipment, testing materials, and everyday products we as a consuming society use daily. Blockchain's transparency, immutability, and accessibility make it an optimal resource for corporate accountability. This is particularly relevant in a time where we are seeing an increasing amount of workplace harassment and discrimination cases being exposed. It is hardly a stretch of the imagination to think about how blockchain technology can be utilized in a professional setting to benefit workers in every field and at any rung of the corporate ladder. As blockchain technology evolves, it would behoove those legislating around it include language for those who seek to employ it to not only protect but reinforce and expand the integrity and rights of laborers and workers in their counties, states, and countries all over the world.