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Matthew McLaughlin

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# THE FUTURE OF MISSISSIPPI'S ECONOMY: THE MAKER MOVEMENT

*Matthew McLaughlin*\*

## I. INTRODUCTION

For the first half of the twentieth century, American manufacturing dominated the world. It changed the trajectory of World War II, expedited the defeat of Nazi Germany, helped rebuild war-torn Europe and Japan, and allowed the United States to outlast the Soviet Union in the Cold War. In addition to catalyzing each of these historic world events, American manufacturing also met the material needs of the American people. It created the American middle class, fed American consumerism, and triggered the growth of the United States and world economy.

For decades, the United States held a competitive advantage in making new, high-value products. Product design, customer feedback, and manufacturing were all inextricably linked in process and proximity. As markets for consumer products grew, however, standardization and competition created opportunities for relatively rich countries to begin manufacturing products similar to those made in the United States.

This intensifying competition mandated American manufacturers give more attention to costs, specifically labor costs. This new focus on labor costs caused many American manufacturers to outsource their manufacturing operations to areas of the world where labor was cheaper relative to the United States—Mexico, India, and China. This extreme pressure on labor costs, coupled with the explosion of technology and communication advances in the late 1990s and 2000s, resulted in a cataclysmic decline in American manufacturing jobs.

Labor data from these decades corroborates these points. Manufacturing jobs peaked in 1979 at 19.6 million.<sup>1</sup> Over the next two decades, however, the number of manufacturing jobs in the United States slowly declined as companies moved jobs overseas and steadily adopted new laborsaving technologies. Since 2000, manufacturing jobs have fallen precipitously: Between 2000 and 2010, the

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\* Matthew McLaughlin is the founder of McLaughlin, PC and focuses his practice on business and corporate transactions, business relocation and expansion, and historic preservation and community development projects. Mr. McLaughlin is the co-founder of Coalesce and a co-owner of Saltine Restaurant in Fondren, Mississippi. He received a B.A. from Millsaps College, a J.D. from Mississippi College School of Law, and an LL.M. in tax from the University of Florida Fredric G. Levin School of Law. Mr. McLaughlin was a panelist at the Mississippi College Law Review's 2016 Symposium, entitled "Innovation, Entrepreneurship and the Law: The 'Real World' Effects of Mississippi Law on Business and Entrepreneurial Endeavors."

1. Lyda Ghanbari & Michael D. McCall, *Current Employment Statistics survey: 100 years of employment, hours, and earnings*, Bureau of Labor Statistics Monthly Labor Review, UNITED STATES DEPARTMENT OF LABOR (Aug. 2016), <http://www.bls.gov/opub/mlr/2016/article/current-employment-statistics-survey-100-years-of-employment-hours-and-earnings.htm>.

United States lost manufacturing jobs at a rate seven times faster than between 1980 and 2000.<sup>2</sup>

It is unlikely the United States will ever see the relatively historic high number of manufacturing jobs it once experienced in the 1970s. All hope is not lost, however, for two critically important phenomena are occurring, working to redefine and reshape manufacturing in the United States.

First, United States companies have begun restoring manufacturing jobs as labor rates have risen over the last decade. In addition, consumer attitudes toward products “made in China” and elsewhere have changed over time, shifting from a preference for the low cost of imported products to a strong desire to purchase more products made in the United States.

The second interesting dynamic—and the primary focus of this article—is who or what is actually creating the products. Democratized information, technological advances, and increased access to 3D printers have resulted in the birth of a new generation of American manufacturers.

Under the old paradigm, large companies were the principal manufacturers in the United States and beyond. Now, as technology intersects tools, consumers are able to become creators. The evolution of traditional manufacturing and proliferation of “do-it-yourselfers” have created a movement aptly named the maker movement, a movement of artisans, designers, coders, programmers, tinkerers, hobbyists, and craft cottage manufacturers.

## II. ANALYSIS

### A. *The Maker Movement and Makerspaces*

Given its diverse nature, the maker movement is difficult to define as a whole. In its most simplistic form, the movement is amorphous and inclusive, embodying a convergence of diverse talents and interests. In an article entitled “Which Big Brands Are Courting the Maker Movement, and Why”, Joan Voight, writing for *Adweek*, defined the maker movement in the following way:

The maker movement, as we know, is the umbrella term for independent inventors, designers, and tinkerers . . . [A] convergence of computer hackers and traditional artisans [who] . . . tap into an American admiration for self-reliance and combine that with open-source learning, contemporary design and powerful personal technology like 3-D printers. The creations, born in cluttered local workshops and bedroom offices, stir the imaginations of consumers numbed by generic, mass-produced, made-in-China merchandise.<sup>3</sup>

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2. Charles Fishman, *The Insourcing Boom*, THE ATLANTIC (Oct. 9, 2016, 3:50 PM), <http://www.theatlantic.com/magazine/archive/2012/12/the-insourcing-boom/309166/>.

3. Joan Voight, *Which Big brands Are Courting the Maker Movement, and Why From Levi's to Home Depot*, ADWEEK (March 17, 2014, 6:11 AM), <http://www.adweek.com/news/advertising-branding/which-big-brands-are-courting-maker-movement-and-why-156315>.

According to Atmel Corporation, the leading manufacturer of microcontrollers and touch technology semiconductors and a major backer of the maker movement, there are an estimated 135 million U.S. adults who are makers. In 2013, *Wired* magazine reported that the overall market for 3D printing products, and similar maker services, reached \$2.2 billion in 2012, a compounded annual growth rate of almost 29 percent when compared to the \$1.7 billion the industry recorded in 2011. Projections are expected to reach \$6 billion by 2017, and reach \$8.4 billion by 2020.<sup>4</sup>

Media focus and objective data like that cited in the previous paragraph show that the maker movement is much more than just a passing fad. This movement enables Americans to meet a market demand by creating a product of utility with relatively few barriers to entry. Further, the maker movement is accelerating a profound shift in how Americans are working by tying into the co-working movement<sup>5</sup> that has swept throughout the United States.

Non-technical hobbyists and entrepreneurial makers alike are congregating in makerspaces as a means to leverage resources. The creation of experimental makerspaces, hackerspaces, tech shops, and fabrication laboratories provides a physical space for like-minded explorers to share ideas and equipment. Many of these spaces offer a wide range of tools, such as 3D printers, electronic and plastic labs, laser cutters, wood and machine shops, waterjet cutters, and wood shops.<sup>6</sup>

Generally, members of makerspaces must pay for access to the space, tools, and equipment. Despite this fee, makerspaces are drastically decreasing the startup costs for maker entrepreneurs. Until recently, an entrepreneur could easily spend six figures to develop a prototype. Now, entrepreneurs can produce prototypes for a few thousand dollars and repeat the process much quicker than before.

By decreasing the time and costs necessary to produce a prototype, makerspaces are becoming de facto centers for entrepreneurship. For example, the company that manufactures Square, a mobile credit card reader, created its prototype in a makerspace and is now a multi-billion dollar, publicly traded company.<sup>7</sup> Case studies such as Square have caught the attention of federal and state policymakers.

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4. Brooks Rainwater, *Does the Maker Movement Hold the Key to Economic Growth?*, CITIES SPEAK (Feb. 12, 2016), <https://citysspeak.org/2016/02/12/does-the-maker-movement-hold-the-key-to-economic-growth>.

5. The coworking movement aims to provide diverse groups of freelancers, remote workers, and other independent professionals with opportunities to work together in a shared, communal setting. See Gretchen Spreitzer, Peter Bacevice, & Lyndon Garrett, *Why People Thrive in Coworking Spaces*, HARVARD BUSINESS REVIEW (Sept. 2015), <https://hbr.org/2015/05/why-people-thrive-in-coworking-spaces>.

6. See LULAC Queens, *Inventors, Entrepreneurs, Manufacturers: How to "Make" it in America*, LEAGUE OF UNITED LATIN AMERICAN CITIZENS (June 18, 2014), <http://lulacqueens.org/inventors-entrepreneurs-manufacturers-how-to-make-it-in-america/>.

7. See *Wall Street Breakfast: Square, Match Group Ready For Market Debut*, SEEKING ALPHA (Nov. 19, 2015, 6:51 AM), <http://seekingalpha.com/article/3698096-wall-street-breakfast-square-match-group-ready->

### B. Federal, State, and Local Policies and Initiatives

Almost all United States economic development policies incentivize dominant industries (energy, aerospace, bio-tech) and speed up development by funding research, implementing training programs, relaxing regulatory standards, and modifying trade policies. But after recognizing that the American economy is largely dependent on entrepreneurs more so than traditional manufacturing, the federal and state government have shifted additional resources towards incentivizing and developing these entrepreneurial ecosystems. The maker movement is very much a part of this shift.

#### 1. Federal Policies and Initiatives

From a policy perspective, former President Barack Obama was an early adopter of the maker movement. Recognizing “America has always been a nation of tinkerers, inventors, and entrepreneurs[,]” the President has been a champion of the maker movement since 2014.<sup>8</sup>

President Obama and the White House believed “the rise of the maker movement represents a huge opportunity for the United States. Nationwide, new [information and] tools for democratized production are boosting innovation and entrepreneurship in manufacturing in the same way that the Internet and cloud computing have lowered the barriers to entry for digital startups . . . .”<sup>9</sup> This opportunity along with the convergence of forces are “creating the foundation for new products and processes that can help to . . . [reposition] American manufacturing.”<sup>10</sup> The White House also recognized that these tools, resources, makerspaces, and coordinated organized events “are inspiring a new generation of entrepreneurs, empowering Makers to launch manufacturing [and other creative] startups in the same way that Steve Wozniak and Steve Jobs developed and marketed the first Apple Computer while participating in the Homebrew Computer Club.”<sup>11</sup>

The maker movement is a retreat from the mass-produced, commoditized consumer products of the 1970s to a very local, organic means of production. On June 16, 2016, President Obama encouraged Americans to celebrate the maker movement on a local level by proclaiming June 17-23, 2016, as a National Week of Making.<sup>12</sup> In his proclamation, President Obama called upon Americans to observe this week with “programs, ceremonies, celebrations, and activities that encourage a new generation of makers and manufacturers to share

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market-debut.

8. Jay Carney, *Press Briefing*, Office of the Press Secretary, THE WHITE HOUSE (June 6, 2014, 1:20 PM), <https://www.whitehouse.gov/the-press-office/2014/06/18/press-briefing-press-secretary-jay-carney-6182014>.

9. *Id.*

10. *Id.*

11. *Fact Sheet: President Obama to Host First-Ever White House Maker Faire*, Office of the Press Secretary, THE WHITE HOUSE (June 18, 2014), <https://www.whitehouse.gov/the-press-office/2014/06/18/fact-sheet-president-obama-host-first-ever-white-house-maker-faire> [hereinafter *Fact Sheet*].

12. President Barack Obama, *Presidential Proclamation – National Week of Making, 2016*, THE WHITE HOUSE (June 16, 2016), <https://www.whitehouse.gov/the-press-office/2016/06/16/presidential-proclamation-national-week-making-2016>.

their talents, solutions, and skills.”<sup>13</sup> In his proclamation, President Obama outlined the maker movement and discussed the existing impact of the movement as well as its future potential:

The same American spirit of innovation and entrepreneurship that has steered our Nation through the industrial and digital revolutions—and led our people to explore the depths of the oceans and the distant planets in our solar system—has enabled us to reimagine our world through new ideas and discoveries. Since our earliest days, makers, artists, and inventors have driven our economy and transformed how we live by taking risks, collaborating, and drawing on their talents and imaginations to make our Nation more dynamic and interconnected. During National Week of Making, we recommit to sparking the creative confidence of all Americans and to giving them the skills, mentors, and resources they need to harness their passion and tackle some of our planet’s greatest challenges.

Today, Americans of all ages have the ability to connect and showcase their creativity through a growing maker movement. Technologies like 3D printing and desktop machine tools are rapidly lowering the costs of production; additional sources of capital such as crowdfunding are reducing barriers to getting started; and the democratization of technology is empowering more makers, helping to boost entrepreneurship and stimulate American manufacturing. Over the last 6 years, we have added over 800,000 manufacturing jobs and introduced next-generation manufacturing hubs. Just as the personal computer and the Internet transformed our Nation over the last several decades, these new opportunities can inspire the next generation of students, innovators, and entrepreneurs to carry forward our legacy of ingenuity.

In 2014, I launched the Nation of Makers initiative to ensure more Americans of all ages and backgrounds have greater opportunities to design, build, and manufacture. My Administration is taking steps to foster “maker mindsets” by promoting skills like creative problem-solving, and to support the development of collaborative maker spaces so aspiring makers and manufacturers can turn their bold ideas into realities. I am proud that so many people across our country have already joined in this effort. Mayors have hosted maker roundtables and town halls; Federal agencies have worked with schools, libraries, recreation centers, and museums to create maker

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13. *Id.*

spaces, curricula, and tools to help students learn the design process; and private businesses and other local collaborators have empowered individuals with the entrepreneurial resources and skills they need to launch companies and sell their products.

Together we must continue to expand opportunity for generations to come by working to eliminate the digital divide and reduce existing skill and confidence gaps. We must prepare young people for the jobs of the future by equipping them with the analytical skills needed to solve problems and the computer science and hardware development skills required to power our innovation economy. It is critical that we support the types of hands-on science, technology, engineering, and math (STEM) learning experiences—in both formal and informal environments—that students encounter through making, which can help unlock their full potential and ignite their enthusiasm for the careers of tomorrow. That is why we are prioritizing investment in STEM teaching and active learning, expanding access to rigorous STEM courses like computer science, encouraging more opportunities in communities of greatest need, and working to get underrepresented students, including women and minorities, involved to increase diversity in STEM fields.

Across our country, Americans are attending all types of maker events and workshops—from studios in small towns to the streets of our Nation’s capital—to share their incredible inventions and ideas with others and to inspire all of us to join in the creative process. As we celebrate the power of American ingenuity, I invite communities to build on this progress by encouraging citizens to be creators and by working together to ensure that spaces for making are available anywhere Americans live, work, play, and learn. This week, let us turn today’s sketches and dreams into tomorrow’s “Made in America” labels, and let us embrace the audacious spirit of human curiosity that is embedded in our DNA.<sup>14</sup>

This Presidential proclamation not only ushered in the National Week of Making but also served as the starting point for three new White House Administration initiatives. The first aimed to help Makers launch new businesses and create jobs.<sup>15</sup> The effort involved over thirteen federal agencies and companies, including Etsy, Kickstarter, Indiegogo, and Local Motors.<sup>16</sup> These agencies and companies would offer Makers a suite of support services,

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14. *Id.*

15. *Fact Sheet, supra* note 11.

16. *Id.*

including expanded access to start-up grants; strong relationships with American manufacturers and retailers; and business mentoring and training.<sup>17</sup>

The second initiative aimed to dramatically expand the number of students presented with the opportunity to become Makers.<sup>18</sup> To accomplish this goal, the initiative enlisted the Department of Education, five other agencies, over 150 colleges and universities, more than 130 libraries, and major companies like Intel, Autodesk, Disney, Lego, 3D Systems, and MAKE.<sup>19</sup> These entities pledged to create more makerspaces, enlist more educators in teaching Making, and launch other programs that give students the tools and mentors necessary to bring their ideas to life.<sup>20</sup>

The third and final initiative challenged Makers to tackle some of the nation's most pressing problems.<sup>21</sup> From developing new tools to aid in patient care to expanding frontiers in space, the initiative challenged Makers here and abroad to develop low-cost technologies that can improve the livelihoods of the world's most vulnerable people.<sup>22</sup>

## 2. State Policies and Initiatives

President Obama's commitment to entrepreneurship and the maker movement spread throughout the United States. State and local governments are partnering with private-sector organizations to create entrepreneurial and maker ecosystems within their respective communities. And although each region and local community has unique strengths and characteristics, the maker movement is increasingly becoming a meaningful part of those communities while developing economic initiatives. Cities such as Detroit, Pittsburgh, and Philadelphia are trying to leverage the maker movement to reuse historic manufacturing assets "by incorporating innovative new technologies into existing factories."<sup>23</sup> Other communities are simply trying to tap into "the transition away from generic, mass-produced, made-in-China merchandise and back to local industry . . . ."<sup>24</sup>

### C. Two Examples of Local Maker Initiatives

#### 1. Oakland, California

By 2014, the maker movement had arrived in Oakland, California, thanks to the efforts of groups like the Oakland Makers.<sup>25</sup> The movement was co-founded

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17. *Id.*

18. *Id.*

19. *Id.*

20. *Id.*

21. *Id.*

22. *Id.*

23. Rainwater, *supra* note 4.

24. *Id.*

25. *Maker Mayors Action Report How Cities are Fueling the Maker Movement Across the USA: 100 Mayors Dedicated to Building a Nation of Makers*, MANUFACTURING ALLIANCE OF COMMUNITIES (June/July 2014), [Maker\\_Mayor\\_Action\\_Report\\_July\\_28\\_2014.pdf](#).



by the City of Oakland.<sup>26</sup> The Oakland Makers hosted events such as Maker Roundtables to compliment annual events like the East Bay Mini Maker Faire, which brought over 5,000 participants to Oakland in a single weekend day.<sup>27</sup>

In addition to bringing attention to Makers, the City worked to better attract and accommodate them.<sup>28</sup> The City collaborated with new makerspaces and hardware accelerators to support marketing, building, attracting tenants, and permitting guidance.<sup>29</sup> The City supported the maker movement by investing in a Senior Business Development Specialist.<sup>30</sup> The Specialist's goal was "to conform and adjust regulations and definitions of land use activities within the Planning Code (Custom-Light Manufacturing) to reflect [the] nuances and lighter impacts of advanced manufacturing processes."<sup>31</sup> The Specialist's regulations and definitions allowed for the growth of manufacturing and production regardless of whether the flex space was in an industrial area or traditional office area.<sup>32</sup> Despite these changes, the City maintained its support of preserving industrial protection zones so that such facilities and land were available to artists and Maker businesses.<sup>33</sup>

To build on these efforts, Oakland took measures to develop the next generation of Makers.<sup>34</sup> The Oakland Makers established an Education & Equity Committee, which focused on inclusion and reaching out to diverse communities in the area.<sup>35</sup> "The Crucible, a nationally known industrial arts education center [and] a core member of Oakland Makers[, ]offer[ed] over \$100,000 in maker technology education scholarships to Oakland youth, particularly those within its West Oakland neighborhood."<sup>36</sup> The Castlemont High School in East Oakland began supporting its sustainability academy with maker education provided by a Maker instructor associated with Laney Community College.<sup>37</sup> Additionally, the STEM Academy at McClymonds High School in West Oakland developed opportunities for their student to connect with local Makers in order to learn more about careers in manufacturing and businesses involved in the maker movement.<sup>38</sup>

In another attempt to grow the maker movement, Oakland reached out to neighbors to create the East Bay Maker Movement.<sup>39</sup> This effort aimed to give businesses access supply chains, network, share business practices, connect to industrial manufactures and fabricators, and obtain new resources.<sup>40</sup> In hopes of

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26. *Id.* at 16.

27. *Id.*

28. *Id.*

29. *Id.*

30. *Id.*

31. *Id.*

32. *Id.*

33. *Id.*

34. *Id.*

35. *Id.*

36. *Id.*

37. *Id.*

38. *Id.*

39. *Id.*

40. *Id.*

spearheading a regional strategy, Oakland has mapped its supply chain between manufacturers and makers, an effort that should strengthen the supply chain and thus increase both jobs and the economy of East Bay.<sup>41</sup>

In an attempt to continue the growth of the Maker Movement, the City of Oakland has pledged to “support the development of the Oakland Makers organization into an independent 501(c)(3) with a full-time executive director and expanded capacity.”<sup>42</sup> Additionally, the City plans to expand and create additional makerspaces, for example, “by expanding the CTE FabLab at Laney College into a state-of-the-art digital technology hub for students in the fields of welding, machining, carpentry, and industrial repair.”<sup>43</sup> To expand community access, the CTE FabLab will connect with other educational institutions.<sup>44</sup>

The City also wants to support private makerspaces.<sup>45</sup> This effort will “include[] cooperative maker spaces that can utilize shared business development, insurance, patent support, tech transfer, legal, and other shared services [in order] to reduce costs to individual entrepreneurs and small businesses.”<sup>46</sup> One of the City’s projects will specifically support the food sector, as the City will provide a “new cooperative cold storage facility [that will allow] food and beverage entrepreneurs [to] benefit from short-term storage in what can otherwise be expensive and space-consuming facilities.”<sup>47</sup>

Oakland is determined to create these opportunities, but it also wants to ensure those opportunities are available to all.<sup>48</sup> The City has pledged to provide low-income neighborhoods with information about the potential of manufacturing, specifically targeting “elementary schools, community colleges, and technical education programs for children in need.”<sup>49</sup>

## 2. Holyoke, Massachusetts

Holyoke, Massachusetts, has primarily focused its efforts on transforming its downtown—an area home to former industrial buildings—into a makerspace.<sup>50</sup> The City of Holyoke leveraged public and private partnerships to foster makerspaces in the downtown area and thus “support the area’s burgeoning creative economy.”<sup>51</sup> Additionally, the City “appointed a Creative Economy Coordinator to oversee the initiatives to fortify its maker economy.”<sup>52</sup>

The Gateway City Arts is a co-working space that allows artists to work in Holyoke’s Arts and Innovation District.<sup>53</sup> “Gateway City Arts aims to provide

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41. *Id.*

42. *Id.*

43. *Id.*

44. *Id.*

45. *Id.* at 17.

46. *Id.*

47. *Id.*

48. *Id.*

49. *Id.*

50. *Id.* at 13.

51. *Id.*

52. *Id.*

53. *Id.*

space and infrastructure for both creating and teaching the arts[, and i]ts facilities include an all-purpose art studio, woodshop, dance studio, meeting space, personal and communal workspaces, and event and performance spaces.”<sup>54</sup> Holyoke also offers the Brick Coworkshop, located in an old industrial building.<sup>55</sup>

In September 2013, the Massachusetts Cultural Council awarded Holyoke \$75,000 with which to grow its creative economy, specifically to “help[] people develop skills in the arts, media, design, crafts, and other areas that could lead to entrepreneurship or employment in creative industries.”<sup>56</sup> This grant birthed the “ARTery,” a partnership that will “aggregate resources to provide space, tools, and instruction to help creative entrepreneurs succeed and make a living through their work.”<sup>57</sup>

### 3. Mississippi Policies and Initiatives

Mississippi has embraced the maker movement to some extent. For example, on June 2, 2014, the Bagley College of Engineering at Mississippi State University, through Interim Dean and Professor Jason M. Keith, sent a letter to President Obama requesting to participate in the first White-House-sponsored Maker Faire.<sup>58</sup> In the request letter, Dean Keith highlighted that the Bagley College of Engineering embraces the core concepts of the maker education mission: “creat[ing] more opportunities for students to develop confidence, creativity, and interest in STEM learning by making or creating to realize ideas.”<sup>59</sup> Engineering students at Mississippi State University have the opportunity to participate in countless maker-oriented activities, including the following competitions: the Department of Energy EcoCAR challenge, Formula SAE Series, and the AUVSI Student Unmanned Aircraft Systems.<sup>60</sup>

Mississippi State University’s effort to embrace the maker movement should be lauded, because the potential impact of the maker movement on Mississippi’s economy is limitless. Mississippi, like so many other parts of the United States, is experiencing a renaissance of cottage manufacturing.<sup>61</sup> This hyper-local phenomenon is being fed by consumer desire to have a closer connection to the producer of a particular good or service. This is especially true of the food and beverage industries.

Mississippi is also known for its creativity, thanks to the countless world-renowned artists, writers, and innovators the state has produced. And while Mississippi recently celebrated its creative economy, it failed to generate any

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54. *Id.*

55. *Id.*

56. *Id.* at 14.

57. *Id.*

58. *Building a Nation of Makers: Universities and Colleges Pledge to Expand Opportunities to Make*, Executive Office of the President, THE WHITE HOUSE (June 2014) 56 [building\\_a\\_nation\\_of\\_makers.pdf](http://www.whitehouse.gov/the-press-office/2014/06/02/building-a-nation-of-makers).

59. *Id.* at 56.

60. *Id.* at 56.

61. See *cottage industry*, MERRIAM-WEBSTER <http://www.merriam-webster.com/dictionary/cottage%20industry> (cottage manufacturing is a form of a cottage industry, an industry characterized by small size and informal structure).

impactful policy that would incentivize job creation and investment in that creative economy. The maker movement provides Mississippi with the chance to make up for that missed opportunity.

Mississippi's policymakers should consider the following as suggestions for how to start a conversation about the maker movement and how the movement can find a home in Mississippi:

Convene a meeting of existing organizations that already possess a mission fit with the maker movement, such as the Mississippi Development Authority, the Mississippi Manufacturers Association, and Innovate Mississippi.

Locate a makerspace in downtown Jackson, an area in dire need of an economic identity, so as to capture a density that does not exist in other parts of Central Mississippi.

Establish a Mississippi Maker Faire as a means for Mississippians to showcase goods that are already being produced and expose these entrepreneurs to other like-minded people.

Develop maker movement and makerspace best practices that can be scaled up or down to meet and address the needs of other Mississippi communities.

Push the maker movement into Mississippi's classrooms. Our children are some of the most creative individuals in our communities. Experiential learning is the new norm, and the maker movement provides a tremendous platform for children to learn and grow.

Create networking opportunities for makers and demystify the movement. There is a tremendous amount of value in shared experience and collaborative undertakings. The maker movement provides a unique opportunity to bring people together in a relevant way.

### III. CONCLUSION

Over the last two decades, intangibles have driven the world economy. Technology has enabled digital hyper-connectivity to catalyze an exponential degree of growth, one that makes the industrial revolution seem pedestrian. But as is the case in any market, one extreme inevitably results in a correction. Here, the correction is a retreat to the physical—the maker movement.

The maker movement creates not only an impactful means to reposition manufacturing in the United States but also a very tangible means for communities throughout the United States to supplement and redefine their economies. Mississippians are predisposed to harness this creativity for the

economic wellbeing and sustainability of our State. The maker movement provides Mississippi with such an opportunity.