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## **New Directions in Workforce Development**

## **Do They Lead to Gains For Women?**

*Susan R. Crandall and Surabhi Jain*

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*In order to achieve gender equality, it is critical to resurrect women's interests as a driving force in the formulation of workforce development policies and programs. Current workforce strategies are centered on helping economically disadvantaged individuals gain employment in high-demand industries that offer opportunities to earn family-sustaining wages. Yet many of these high-growth industries consist of male-dominated occupations, which provide lower earnings and advancement potential for women. Because women continue to be channeled into lower-paying fields, demand-driven workforce policies may result in lower earnings for women. To address gender biases, increased emphasis should be placed on selecting jobs that lead to economic self-sufficiency, helping women access male-dominated jobs, building career ladders for traditionally female-dominated fields, investing in math and science preparation for women, and closing the gender wage gap.*

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**S**ince the early 1990s, shrinking federal funding for education and training, juxtaposed with increasing needs for higher-level job skills, compelled states to make a shift toward new, market-driven approaches to workforce development. These programs, which attempt to provide skills training for economically disadvantaged individuals while simultaneously making states more economically competitive, have been shown to significantly increase earnings for participants.<sup>1</sup> But inherent biases in the labor market and employment system may preclude low-income women from reaping the full benefits of these market-based innovations.

The purpose of this paper is to examine the ways in which the labor market system — and as a result the workforce development system — is biased against women and to recommend ways to address these biases. First, we review the need to focus on women's poverty and the gender wage gap in the context of workforce development. Next, we examine the new market-driven workforce strategies developed by states in response to

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economic pressures and federal funding cuts. Subsequently, we analyze the potential impact on women's earnings and advancement opportunities of investing in targeted industries. To address these gender disparities, we recommend conducting a gender audit of investments in workforce programs with an eye toward economic self-sufficiency. We also propose a renewed emphasis on women's entry and advancement in traditionally male-dominated jobs, as well as expanding career ladders for traditionally female-dominated jobs. Increased investment in math and science education for adult women is critical to the success of these strategies. Finally, we call for increased attention to the gender wage gap as part of workforce initiatives.

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#### **POVERTY AND THE GENDER WAGE GAP**

While poverty impacts both men and women, women are faring worse than men. During the 1990s, one-third of female headed families, compared with one-fifth of male headed families, had incomes below poverty.<sup>2</sup> According to Wider Opportunities for Women, 60 percent of all low-wage working families, 5.5 million households, are headed by women. The number of single mothers has increased dramatically over the last decade: from 7.7 million in 1994 to 13.6 million in 2003. Almost half of the 13.6 million women, 47 percent, have incomes below 150 percent of the Federal Poverty Level. In addition to single mothers, there are 7.3 million displaced homemakers (women whose primary role had been homemaking who lost their main source of income due to divorce or widowhood) under the age of sixty-five, 58 percent of whom are classified as poor or near poor.<sup>3</sup>

The reason that women are disproportionately impoverished is explained, to a large extent, by the gender wage gap. In 2003, a woman on average earned only 76 cents for every dollar that a man earned.<sup>4</sup> The situation is far worse for nonwhite women: African-American women earn only 70 cents for every dollar an average man earns, while Hispanic women earn only 58 cents to the average male dollar. Not only are women paid less for the same job as men, but they also tend to be concentrated in lower paying occupations. Men, on the other hand, are significantly more likely to be employed in higher paying occupations. For example, men are nine times as likely as women to be employed in precision production, craft, and repair occupations and nearly four times as likely to be in protective services occupations.<sup>5</sup> Occupational segregation has been cited as one of the primary factors contributing to the wage gap, and hence to women's poverty and low earnings.<sup>6</sup> Unfortunately, changes in federal policy have only served to weaken women's chances of gaining the education and training they need to succeed in the workforce.

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### **SHIFTS IN THE ECONOMIC AND POLICY ENVIRONMENT**

Since the 1990s, U.S. federal policies and funding streams supporting the education and training of economically disadvantaged individuals have been eliminated or severely reduced, including those specifically targeting women. An overhaul of the welfare system took place with the passage of welfare reform. The Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996 established the Temporary Aid to Needy Families, or TANF, which provided states with block grants and allowed them significant discretion in their distribution. In 1998, the Workforce Investment Act (WIA), which replaced the Job Partnership Training Act (JPTA), established One Stop Career Centers. Unlike their predecessors, these two influential policies limited investments in education and training and placed a much stronger emphasis on immediate job placement. Not long thereafter, policies that had previously supported women's training and advancement into higher paying male-dominated jobs were eliminated or significantly reduced, including the Perkins Vocational Education Act of 1998, the Nontraditional Employment for Women Act (NEW), and the Women in Apprenticeship and Nontraditional Occupations Act (WANTO).<sup>7</sup>

While federal policy was slashing investment in postsecondary training and education, a confluence of economic and social trends suggested that more, not less, investment in training and education was required. As manufacturing jobs disappeared overseas, remaining domestic jobs became technologically complex, requiring significantly higher levels of skills.<sup>8</sup> The number of jobs requiring at least an associates or vocational degree is increasing<sup>9</sup> at a time when high school completion rates have plummeted, with only 42 percent of the total workforce twenty-five years and older holding a high school degree.<sup>10</sup> At the same time, demographic trends indicate that the fastest growth in the workforce is amongst those with the greatest economic disadvantages: nonwhites, immigrants, and individuals from low-income families. Female members of these groups are at the greatest disadvantage, since they are less likely than males to possess necessary skills and education and more likely to work in low-level jobs dominated by females.<sup>11</sup>

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### **DEMAND-DRIVEN APPROACHES**

The need to attract and retain an industrial base while faced with severe skill shortages forced states to take workforce matters into their own hands in order to remain competitive.<sup>12</sup> States created new ways to invest in training and development by forging a stronger connection between economic and workforce development. Recognizing that immediate job placement over education and skills training does not fully serve needs of employ-

ees or companies, states and innovative non-profits focused on labor market “demand-driven” industry-based training. These demand-driven approaches simultaneously serve the needs of industry and of the economically disadvantaged, with the goal of increasing economic vitality by targeting priority industries and providing training opportunities for low-skilled employees to advance into higher paying, more highly skilled jobs.

Demand-driven workforce initiatives take several forms, the most common of which are labor market intermediaries, who serve as brokers between the needs of workers and employers. Some initiatives target a specific industry and typically involve a collaboration of partners, including community-based organizations (CBOs), community colleges, unions, and employers.<sup>13</sup> These initiatives, called sectoral initiatives, attempt to make systemic changes in the labor market of the target industry, thus improving outcomes for business and, at the same time, increasing opportunities for low-income employees.<sup>14</sup> Systems changes include making improvements not just for program participants, but also for incumbent employees across the industry. These change strategies vary depending on the project, but they may include advocating for public policy change, increasing access to training opportunities, and partnering with businesses and unions to alter recruiting, promotion, and compensation practices. One sectoral change strategy that has garnered increasing attention is the creation of career ladders, which consist of “a series of connected education and training programs and support services that enable individuals to secure employment within a specific industry or occupational sector, and to advance over time to successively higher levels of education and employment in that sector.”<sup>15</sup>

While most demand-driven programs have included women in their training efforts, there has not been an attempt to explore the impact of demand-driven policies on women’s earnings. Given the realities of occupational segregation and the gender wage gap, a strict demand-driven approach may inadvertently be biased against women. In the following section, we explore the potential deleterious impact of occupational segregation on women’s earnings and discuss the implications for demand-driven workforce development policies.

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#### **INDUSTRY SELECTION AND WOMEN’S EARNINGS**

Since these new workforce strategies are predicated on industry-based solutions, it is important to pay attention to the potential differences in employment outcomes by industry and gender. Researchers have suggested that certain industries are more likely than others to provide employment for low-income women that would, ostensibly, allow them to achieve economic self-sufficiency.<sup>16</sup> These studies revealed that for single mothers

without a college degree, manufacturing, health services, financial and business services, and construction/transportation appear to provide above-average earning possibilities at the entry level compared to other industries.

Several of these industries, however, have drawbacks that may limit the earnings and advancement potential for most low-income women without significant intervention. These drawbacks are examined by Graham and Hotchkiss, who developed the Equal Opportunity Index to explore gender-based differences for three critical human resources practices: hiring, compensation, and promotion.<sup>17</sup> The index includes six measures representing areas of potential differential treatment of men and women in the workplace, including equal pay, occupational segregation, the proportion of women in top management (that is, the glass ceiling component), the percentage of women hired for occupations compared to their availability in the labor market (the hiring component), and related discrimination (race and ethnicity). The authors analyzed population industry data across six industries over a period of eleven years (1989–2000). The results of their analysis showed that three of the industries identified as providing good opportunities for low-income women are primarily male-dominated: 30 percent of manufacturing/production employees are female, 16 percent of transportation employees are women, and 4 percent of construction employees are women.<sup>18</sup> Graham and Hotchkiss's analyses also showed that these three industries have below average opportunities for advancement for women.<sup>19</sup> While these industries do, in fact, provide higher starting wages, there are institutional barriers that prevent successful outcomes for women, such as on-the-job training, access to tools and equipment, and higher-level task assignments.<sup>20</sup> Without significant attempts to alter the hiring and promotion practices inherent in these industries, workforce initiatives targeted toward construction, transportation, or manufacturing industries are unlikely to yield long-term positive impacts for most women.

In support of these findings, Graham and Hotchkiss reported that financial services and the service sector, including healthcare, offer the best advancement opportunities overall for women. The financial industry, however, has the highest wage differential between men and women compared to the other five industries studied. In addition, Graham and Hotchkiss note that their study does not take into account overall wage differences across industries.<sup>21</sup> While the service industry, which is predominantly female, offers more equitable pay and more opportunities for advancement, overall it is also the lowest paying of the five industries investigated. Thus, workforce strategies aimed at the service sector should be carefully evaluated based on the potential for family-sustaining wages.

Of course, a large and growing percentage of the service sector is the healthcare industry, which provides many well-paying opportunities for

women. In fact, many successful sectoral interventions have taken place in the healthcare sector, including nursing initiatives. But the attention garnered by these successful healthcare initiatives can be misleading, since the vast majority of sectoral initiatives are focused on industries that traditionally employ men. A survey of sector practitioners found that the four industries most frequently targeted are healthcare (sixty-one programs), information technology (fifty-three programs), manufacturing (forty-seven), and construction (thirty-five).<sup>22</sup> Of these 196 programs, more than two-thirds of them (69 percent) target male-dominated occupations.

Many sectoral initiatives that target male-dominated industries successfully move women into high-wage jobs. For example, Focus Hope, an initiative in Detroit that has trained and placed women into metalworking and machining jobs, provides an on-site childcare center. Wider Opportunities for Women is developing a sectoral initiative aimed at police and security work that includes a component to uncover and root out systemic bias in the system. But female participation requirements and gender wage parity are not standard goals for statewide workforce development efforts. Unless policymakers and program designers undertake a major effort to bring women into these traditionally male-dominated industries, the lion's share of the financial outcomes of demand-driven strategies will accrue to men and not women. As the following analysis suggests, high-wage, high-demand jobs are trending toward male-dominated occupations that have barriers to access and advancement for women.

In the fall of 2005, Jobs for the Future (JFF) released a report that identified six growing occupations nationally for low-income workers.<sup>23</sup> The six main occupations identified were nursing (including registered nurses and licensed practical nurses), customer service representatives, computer support specialists, commercial heavy truck driving, automotive and truck technician, and the building trades (including plumbers, carpenters, and electricians). These six occupational categories were chosen by JFF based on their earning potential (jobs pay an average of at least \$25,000 per year); educational requirements (jobs should require a two-year training or degree or less); and the availability of total jobs in that occupational group (the cutoff used was 20,000 net openings nationally per year). Four out of these six occupational clusters are heavily male-dominated.

To explore the impact of occupational segregation on sectoral initiatives, we constructed a hypothetical situation where a total of 20,000 men and women will be trained in each of the six occupational clusters (that is, a total of 120,000 men and women will receive training). The situational analysis assumes that the actual number of men and women being trained in any particular occupation depends on the current gender composition for that occupation. For example, only 1 percent of automotive and truck

**Projected Earnings for High-Demand Jobs**

Jobs	% of women	Total women trained	Total men trained	Wages (mean annual)	Annual earnings for all trained women	Annual earnings for all trained men
<b>Nurses</b>		<b>18,570.00</b>	<b>1,430.00</b>			
RN	92.30	9,230.00	770.00	\$55,680.00	\$ 513,926,400.00	\$ 42,873,600.00
LPN	93.40	9,340.00	660.00	\$35,580.00	\$ 332,317,200.00	\$ 23,482,800.00
<b>Customer Service Representatives</b>	68.70	13,740.00	6,260.00	\$29,350.00	\$ 403,269,000.00	\$ 183,731,000.00
<b>Computer Support Specialists</b>	33.20	6,640.00	13,360.00	\$43,660.00	\$ 289,902,400.00	\$ 583,297,600.00
<b>Commercial Drivers of Heavy Vehicles **</b>	4.50	900.00	19,100.00	\$34,920.00	\$ 31,428,000.00	\$ 666,972,000.00
<b>Automotive &amp; Truck Technicians *</b>	1.00	200.00	19,800.00	\$39,400.00	\$ 7,880,000.00	\$ 780,120,000.00
<b>Building Trades</b>		<b>380.00</b>	<b>19,620.00</b>			
Plumbers	1.20	80.00	6,586.67	\$44,510.00	\$ 3,560,800.00	\$ 293,172,533.33
Carpenters	1.90	126.67	6,540.00	\$38,250.00	\$ 4,845,000.00	\$ 250,155,000.00
Electricians	2.60	173.33	6,493.33	\$45,200.00	\$ 7,834,666.67	\$ 293,498,666.67
<b>Total:</b>		<b>40,430.00</b>	<b>79,570.00</b>		<b>\$1,594,963,466.67</b>	<b>\$ 3,117,303,200.00</b>

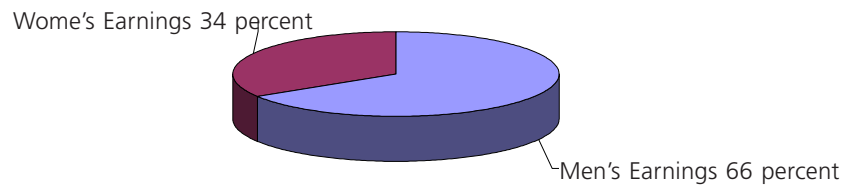
Source: Bureau of Labor Statistics, Household Survey Data for 2005



technicians are women. Therefore, for our analysis, we consider that only 1 percent or 200 women (of the 20,000 men and women in total) will be trained in this job, and the remainder of the 19,800 trainees would be men.

Next, we examine the mean annual wages that are typically paid in these jobs. These wages reflect current national mean annual salaries as reported by the Bureau of Labor Statistics. Columns 6 and 7 of the table represent the total annual earnings for all trained women and men, respectively, in a particular job. So again taking the example of automotive and truck technicians, we see that the 200 trained women technicians will make a total of \$7,880,000 in one year as compared to the 19,800 men who will make a total of \$780,120,000 in that one year. Note that within-occupation salary differential is not accounted for in this analysis, which would make the earnings disparity even greater.

### **Lifetime Earnings**



As we can see from the total numbers trained, almost twice as many men (79,570) as women (40,430) would receive training in the six high-demand occupations analyzed. Looking at the six occupational clusters together, the annual earnings difference is even starker. The pie chart included here represents the total annual earnings of men and women. As we can see, women receive only 34 percent (\$1.6 billion) of the total annual earnings as compared to men's 64 percent, or \$3.5 billion. This difference is again due to the relatively small number of women being trained in male-dominated occupations that pay higher than women-dominated occupations.

Obviously, the pie may not be sliced in the way indicated above. The overall demand within an industry, political considerations, employer willingness to play, and the amount of outreach toward women will influence how the pie divides. But without attention to industry selection and programmatic intervention, a bigger slice of the earnings pie could go to men.

An evaluation of the Aspen Institute's Sectoral Employment Development Learning Project (SEDLP) reveals the importance of closely examining occupations by exploring gender outcomes.<sup>24</sup> Evaluators conducted a three-year longitudinal study of 371 participants across six sectoral initiatives.

The industries included the carpentry trades, metalworking, precision machining, the garment industry, healthcare, and office services. The results showed a striking 31 percent overall increase in the participants' average hourly wage. Average earnings rose from \$12,295 at baseline to \$17,363 one year after training and \$21,216 two years after training. Moreover, nearly 80 percent of the jobs provided access to health insurance.

While these results are impressive, a closer examination of the data reveals stark wage disparities in gender outcomes in earnings. Examining the six programs together, women in fact experienced a greater average increase in wages per hour (\$3.74 per hour) than their male counterparts (\$2.44 per hour). But the *average wage of women in the study after two years of participation in these sectoral interventions was \$11.06, which is even lower than the average starting wage of male participants — \$11.26*. Even after two years of successful education and training and the resulting wage gains, the average female participant was still earning less than the average male participant who had yet to do his first hour of training.

Although several of the sectoral programs included in the study (such as Project QUEST in San Antonio and Cooperative Home Healthcare Associates in New York City) rightfully serve as best-practice models for sectoral interventions, their individual achievements do not offset the larger issue: women tend to work in lower paying industries, and the gender wage gap means that women who wish to escape from poverty have a longer road ahead. While this study does not take into account differences in human capital (that is, gender differences in skills and experience), nor is it representative of all sectoral initiatives, it does strongly suggest that all demand-driven initiatives are not equal, especially when it comes to gender.

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## **RECOMMENDATIONS**

As the previous analyses revealed, there are myriad biases in the employment system that may impact the ultimate outcomes for women in demand-driven workforce initiatives. To address these biases, the first step is to ensure that the selection of occupations for workforce initiatives will lead to economically self-sufficient jobs for women. For jobs in male-dominated industries, it is important to provide funding and opportunities for women to enter and succeed in these occupations. Since women are traditionally clustered in low-paying female-dominated jobs, a complementary emphasis on building career ladders for these occupations should also be considered. Regardless of the gender make-up of jobs, increased investment in math and science education is critical. Finally, workforce policymakers intent on helping all individuals achieve self-sufficiency should pay increasing attention to the gender wage gap.

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**GENDER AUDIT: MEASURING SELF-SUFFICIENCY**

Given the numbers of women in poverty and the reality of occupational segregation, state policymakers need to incorporate gender as a key value when making investment and implementation decisions. Gender disparities should be recognized during initial planning efforts, when states select industries for their economic and workforce investments. Following the initial identification of high-demand, high-wage jobs, an analysis employing the methodology outlined above (using state- or regional-level data) should be performed to determine the projected impact on women's participation in, and long-term earnings from, industry-based workforce initiatives.

Pitched against earnings and advancement potential must be a standard of self-sufficiency. If workforce programs are designed to lift individuals out of poverty, an accurate measure of self-sufficiency must be employed to determine whether investments will pay off for low-income individuals in the long run. The Family Economic Self-Sufficiency Standard (FESS), developed by Wider Opportunities for Women, defines the amount of income necessary to meet basic needs without public subsidies.<sup>25</sup> Now available for 35 states, the FESS includes specific breakdowns by family type and geographic region. Where the FESS is not available, a family budget calculator produced by the Economic Policy Institute may be used. This calculator is not as specific as the FESS for family types and regions, but it does provide a rough starting point from which to determine whether specific occupations provide opportunities for family-sustaining wages.

In addition to a state's or region's economic development goals, many successful demand-driven workforce strategies have goals other than economic self-sufficiency, such as job creation or improving the quality of jobs.<sup>26</sup> While these goals are praiseworthy, these types of initiatives must be distinguished from those that are designed to lead to self-sufficiency. This is especially important because women are more likely to be in lower paying occupations and industries, making self-sufficiency a distant goal. If new workforce initiatives are designed to increase economic opportunities for those in poverty, using a consistent standard as a point of comparison will help equalize the playing field for all low-income individuals.

In addition to measuring the impact of investments on women's earnings against an established standard, it is useful to understand the full implications of women's participation in particular industries. The Equal Employment Opportunity Index discussed in detail earlier serves as a starting point to identify employment barriers and to pinpoint specific areas for employer-based systemic change strategies.<sup>27</sup> For example, industries such as the trades and transportation are likely to have barriers to entry and advancement potential, whereas more traditional fields in the service sector and retail trades have lower starting salaries. Of course, barriers specific to a

local industry or regional infrastructure should then be further identified and examined.

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**MALE-DOMINATED INDUSTRIES**

As seen in the analysis above, a great number of the high-demand, high-wage jobs are in male-dominated fields, including the trades, transportation, and uniformed services. In 2002, a coalition led by Wider Opportunities for Women created a new agenda to increase women's participation and overall success in these occupations.<sup>28</sup> As part of the agenda, they recommend working with business, labor, and community-based organizations to implement programs to recruit, train, and advance women. They also stressed the need for the public workforce system to educate staff about how to serve women seeking these jobs, since gender-biased career expectations is one of the major impediments to entry into male-dominated fields.<sup>29</sup> The coalition also suggested using the media to educate women and the general public about the benefits of jobs in the trades and uniformed services. As Kerka revealed, depicting women in recruiting materials, websites, brochures, videos, and curriculum has a significant and positive impact on women's choosing to pursue these occupations.<sup>30</sup>

Another key recommendation was restoring federal policies that support efforts to encourage women to gain entry to male-dominated fields, safeguarding existing legislation and policies, and assuring full compliance with current laws. For example, the Workforce Investment Act (WIA) should be amended to require states to detail their plans for training staff to provide unbiased career counseling and to promote nontraditional careers to female participants. In addition, funding for the Nontraditional Training for Women Act (NEW) and the Women in Apprenticeships and Nontraditional Occupations Act (WANTO) should be restored. The coalition also supported reauthorization of the Perkins Vocational and Technical Act, which provides funding for technical education. State-level workforce initiatives could then tap into these funding streams when designing and implementing sectoral programs in male-dominated industries.

Programs that help women gain access to male-dominated jobs have a proven track record: women who resided in areas where WANTO and NEW programs were funded were up to 47 percent more likely to obtain employment in higher paying technical jobs.<sup>31</sup> In spite of the demonstrable success of these policies and many sectoral programs (for example, Focus Hope, the Wisconsin Regional Training Partnership), efforts to move more women into these fields have yet to take center stage in the current workforce development policy arena. Reductions in federal funding, combined with the repeal of affirmative action policies, have meant that women are still underrepresented in jobs in the trades and uniformed services. If

demand-driven workforce development initiatives are to prove successful for all low-income individuals, renewed emphasis must be placed on increasing women's chances of success in fields dominated by men.

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#### **CAREER LADDERS ARE ESSENTIAL**

While career ladders are important for all occupations and industries, they are particularly crucial for female-dominated occupations. This is because women-dominated occupations typically start out with lower wages and have fewer opportunities for advancement than male-dominated occupations.<sup>32</sup> This is in sharp contrast to the many male-dominated professions such as the trades (electrical and carpentry) that have a long tradition of apprenticeship programs, where participants receive supervised on-the-job training combined with classroom instruction, all while being paid on an increasing wage scale. High-paying jobs within the uniformed services, such as police officers, also have well entrenched career tracks, with increasing pay levels corresponding to promotional opportunities.<sup>33</sup>

As Fitzgerald points out, career ladders for female-dominated jobs typically fall into three categories: (1) increasing the pay and professionalism of existing jobs; (2) creating tiers within occupations, and (3) full career ladder programs.<sup>34</sup> To date only the third strategy has resulted in jobs with family-sustaining wages. This is because most of these occupations, such as childcare worker, teaching assistant, and home health aide, are extremely low paying and offer no path for advancement, and “look less like a career ladder that a low-wage worker might climb than a series of sealed off compartments.”<sup>35</sup> While there have been several career ladder programs that have successfully improved working conditions and increased wages for low-paying female jobs, such as Cooperative Home Care Associates (for home health aides) in New York City and the T.E.A.C.H. program in North Carolina (for childcare workers), the top rung of the ladder still does not provide family sustaining wages. These outcomes are not a reflection of the quality of these programs, but rather of the long road out of poverty for these low-paying occupations.

The third strategy, creating full career ladder programs, has been implemented with success in the healthcare industry. The Community College of Denver prepares Certified Nursing Assistants (CNAs) to become Licensed Practical Nurse (LPNs). Since the inception of the program in 2002, 77 percent of participants have either earned their LPN diploma or are still enrolled in the program.<sup>36</sup> Successful programs in the healthcare sector adhere to a common set of best practices that serve as a guide for workforce practitioners.<sup>37</sup> Elements key to success include offering pre-college classes in anatomy and physiology, offering courses in the evenings and on the weekends, and providing career counseling and other support

services to help students meet the multiple demands they face while balancing work, school, and family. Strong partnerships among workforce intermediaries, community colleges, unions, and employers are also essential. Nursing career ladders are most successful when they are implemented in more empowered, and less hierarchical, organizations.

The best route to self-sufficiency for women may be to replicate the achievements of nursing career ladders in other high-paying, high-demand occupations that are open to women. Jobs in healthcare are a logical extension. Jobs, such as radiological technician and respiratory therapist, are currently in high demand in many states and are hospitable to women. Additional industries that may be good targets for the development of career ladders include the legal profession (legal secretaries and paralegals) and oral health (dental assistants and dental hygienists). Workforce practitioners need to work closely with employers to ensure that structures are created with appropriate wage levels and advancement opportunities.

It should be noted that, in some cases, the labor market demand in these fields may not be as high as it is in some male-dominated occupations. Certainly, the demand for nursing is astronomical; however it is not realistic to expect all low-wage women to become nurses, nor could current educational programs handle the onslaught of thousands of new students. Investing in additional female-dominated fields balances a purely demand-driven strategy with the need to provide good job opportunities for all.

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#### **MATH AND SCIENCE ARE KEY**

The increasing complexity of jobs means that the majority of high-demand, high-wage jobs, regardless of whether they are traditionally male- or female-dominated, require significant math and science skills. While the last decade has seen an increasing emphasis on programs for women (known as STEM) that teach science, technology, engineering, and math, the majority of these programs are aimed at girls and young women preparing for a four-year degree in fields such as engineering and biology.<sup>38</sup> A consistent and consolidated strategy is needed to move more *low-income adult* women into jobs that require less than a four-year degree.

Research has shown that pre-technical training programs provide hands-on experience, relieve math anxiety, allow women to develop support groups, and expose them to role models which make it more likely for them to pursue technical careers.<sup>39</sup> Efforts to create gender equitable classrooms also increase the success and retention rates of female students.<sup>40</sup> Community college programs that focus on technical preparation should be expanded to support women's entry into high-wage jobs. For example, the El Paso Community College in Texas established the Women in Technology

program and more than doubled its female enrollment in technical fields after ten years.<sup>41</sup>

The 2006 reauthorization of the Perkins Vocational and Technical Act provides an opportunity for workforce practitioners to obtain funding to support technical training. While the new law does not include the gender equity set-aside included in the 1998 version, single parents and displaced homemakers are included among the “special populations.” The new law does require secondary and postsecondary institutions to prepare special populations for high-wage, high-demand jobs that lead to economic self-sufficiency. Thus, the new legislation not only provides a funding stream for technical training but also an opportunity for advocates to influence the selection of high-demand, high-wage jobs to target for educational investment, and to ensure that specialized programming and support services are available for adult women seeking to upgrade their skills in these fields.

#### **REDUCE THE WAGE GAP**

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Since the wage gap is at the heart of the reason for the disproportionate number of women in poverty, workforce practitioners should place stronger emphasis on this as part of a systems change strategy. While occupational segregation is the primary driver of the wage gap, discrimination in hiring, promotion, and compensation practices also contributes to the disparity.<sup>42</sup> The gender wage gap is an entrenched problem, and at first glance it may seem that workforce policymakers can — or should — do little to close the gap. Nonetheless, there are several concrete steps that can be taken to make strides towards closing the pay gap.

As discussed above, a key strategy to reduce occupational segregation is improving access to and advancement potential in jobs in the trades and uniformed services. However, emphasis should be on making sure that men and women are paid the same wages, regardless of the gender composition of the job. For example, in the high-wage, high-demand jobs noted above, female nurses earn 91 cents for every dollar male nurses earn, and women earn 73 cents to the male dollar for truck driving occupations. This difference means that a typical female nurse would earn \$4,524 less than her male counterpart, and a female truck driver would earn \$8,372 less than her male counterpart, on an annual basis. Clearly, these differences are significant for anyone trying to support a family.

Targeting unionized industries and occupations for demand-driven intervention is also likely to lead to better earnings outcomes for women. In fact, many workforce interventions that significantly increased earnings for women were developed in partnership with unions, such as the Wisconsin Regional Training Partnership and the 1199c Training and Upgrading Fund in Philadelphia. Research has shown that union membership raises women’s



weekly wages by 38.2 percent and men's by 26 percent.<sup>43</sup> Unionization also raises the wages of low earners relatively more than the wages of high earners, and also raises the wages of women of color relatively more than the wages of non-Hispanic white women.<sup>44</sup> Thus although unionization has fallen over the last two decades, workforce interventions in unionized workplaces are especially important for narrowing the gender pay gap and increasing earnings for women.

Teaching women how to negotiate salaries and raises is another strategy for closing the wage gap. Starting salaries are especially important, since they form the base for future raises and bonuses, and small differences can result in large disparities over time.<sup>45</sup> Although studies have shown that men are significantly more likely to negotiate their starting salaries,<sup>46</sup> research has also shown that training for negotiation strategies can improve women's abilities to set higher expectations and negotiate higher salaries.<sup>47</sup> These techniques should be incorporated into job readiness programs commonly offered through one-stop career centers and nonprofit organizations.

As Murphy points out,<sup>48</sup> no one is holding companies accountable for fair treatment. Workforce practitioners can make a small but meaningful dent in this problem by monitoring the placement wages of males and female participants in their programs and reporting any differentials to companies. For career ladder programs, it is important to ensure that the wage ranges developed for each job level do not inadvertently discriminate against women. Of course, these stipulations for equality must be built into the initial memorandum of agreement and enforced, as companies may later be reluctant to release employment data. While these requirements increase the time and complexity of monitoring, the payoff for women's wages is substantial. An excellent resource for this information is [www.wageproject.org](http://www.wageproject.org), which contains an extensive database of jobs and the salary differentials between men and women, broken down on a regional level.

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## **FINAL THOUGHTS**

As we have seen by the success of workforce initiatives over the last decade, market-driven initiatives can have very powerful outcomes for individuals, including women. In fact, the new market-driven models are an improvement over traditional occupational and job readiness training programs. A number of workforce initiatives aimed at both female-dominated (nursing) and nontraditional (manufacturing) fields have helped more women make progress on their path out of poverty. But as the analyses above reveal, biases are embedded throughout the system at the macro (labor market), educational, industry, and firm levels. In order for women to reap the full effect of market-driven initiatives, these biases need to be acknowledged and addressed at the state policy level.



Fortunately, with the innovation in state policies has come new thinking about how to change workforce systems. Specifically, the systems change component of sectoral initiatives emphasizes making changes to the system that will positively affect employees beyond the direct benefits to initial program participants. Systems change may include influencing (1) the way firms recruit, pay, and promote employees; (2) access and availability of quality training opportunities; and (3) public policy related to the sectoral labor market.<sup>49</sup> Using these categories, workforce practitioners and policymakers can take innovation to its next level by exploring using the systems change methodology to make changes that will improve outcomes for women. Recent agenda-setting papers by Wider Opportunities for Women and WomenWork<sup>50</sup> are a useful starting point for ways to influence the system at firm, education and training, and policy levels.

Policymakers must determine the extent to which economic self-sufficiency for all low-income individuals is a priority for workforce initiatives. The strategies recommended above — increasing focus on self-sufficiency, helping women enter and advance in nontraditional fields, building career ladders for female-dominated professions, investing in math and science education, and closing the gender wage gap — are indeed a tall order. Demand-driven strategies are extraordinarily challenging, and workforce policymakers may not choose to put women's self-sufficiency as a high priority. Placing greater emphasis on this goal, however, will ensure that more women reap the full benefit of market-based workforce interventions.

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