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Multiple Dimensions of Gender (Dis)Parity: A County-Scale Analysis of Occupational Attainment in USA, 2019

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Abstract: Gender economic parity comprises an integral part of one of the United Nation's 17 goals toward attaining sustainable economic development. Women have historically been confined to feminine occupations associated with lower pay, which that have negatively impacted their economic well-being. This paper examines gendered dimensions of occupational (dis)parity across the US counties of USA, and their relationships-association with educational attainment. Drawing on five years' American Community Survey estimates (2015-2019) data from the National Historical Geographic Information System, I conduct multi-step analysis through descriptive statistical analysis of occupation-based location quotients and education, followed by an in-depth share analysis of gender-based 26 sub-categories of occupations. Thereafter, the bivariate correlations analysis provides insights into the multiple dimensions of gendered inequalities. Women's largest engagements still include sales/office (28.66%), service (21.15%), and education/legal/community-service/arts/media (15.03%)—accounting toward 65% of all employed women in the nationUS. Women majoring in science/engineering and related disciplines are still the lowest, which manifests into their alarmingly lower representations in sciences/engineering and related occupations. This suggests—echoing a critical need for strategic policy-based interventions to advance women in STEM education. This analysis, however, also suggests greater occupational parity for women with Masters/above education who share almost similar levels of associations-types of relationships with major categories of occupations, even though the coefficients load are more favorable higher for males in managerial occupations-jobs.

Keywords: Gender economic disparity; United Nations; Sustainable economic development; Gendered dimensions; American Community Survey; Location quotients; Share analysis; Bivariate eCorrelations analysis; Science/engineering; STEM education.

1. Introduction

Gender remains a significant part of a household, familyfamily, and society at large, and yet the scholarship on measuring multiple dimensions of gendered inequalities have remained rather shallow. While economic geography literature has generally attempted to provide a global and regional overview of gendered dimensions into occupation, industry, employment, and the like, very little has been done to dig deeper into the microscopic measures of disparities across occupation-types at finer scales of geography [1]. The reasons for relatively less focus on detailed and fine-scale analysis of gendered dimensions of inequalities has been due a lack of specificity in analyzing and understanding the spatial variations for of gender economy, lack of wholesome high-qualityhigh-quality data at one source, and the difficulties and time-consumingtime-consuming task of glean-ing gender-based data from a variety of scattered sources that make it tedious and unap-pealing to many feminist scholars and social scientists [2].

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This research ~~conducts broad-scale and microscale-analyzes~~ disparity in gendered dimensions of occupations across the counties of USA ~~to capture the regional and sub-regional nuanced variations into these patterns~~. In doing so, this paper likens these occupational variations with gendered dimensions of educational attainments to holistically situate these patterns from the Human Capital Theory perspective – using educational attainments as a proxy for human capital. In this paper, I use the 2015-2019 five years estimates data from the American Community Survey provided by the NHGIS (~~National Historical Geographic Information System~~) of the Minnesota Population Center. I use the county scale data ~~(reasons for choosing county as a scale of analysis are detailed in the research design section)~~ across USA to compute and map the location quotients for major types of occupations to gain insights into the gendered dimensions of (dis)parities. Additional statistical investigative methods are used to draw detailed share analysis and relational contexts of gender-based patterns for the 26 sub-categories of occupations in the ~~whole nation US~~.

2. Brief Overview of Gendered Economic Inequalities

2.1. Post-Fordism and the Origin of Gender Disparity

The history of economic inequalities has complicated overlaps with changing economy and industry structure ~~in the US~~, dating back to the World War II era. Though the 1947-to-1975 was usually known as the most prosperous times in the American history, especially for economic prosperity and redistribution, the scenario changed dramatically since the 1970s – the *post-Fordist* era – and the demise of the middle-class has continued till date, with bottom 20 percent of the nation's population seeing their income grow far slower compared to those in the top 5 percent [3]. Scholars have indicated that the post-Fordist society has been responsible for creating an increasingly ~~uneven and~~ less egalitarian social relationships that have been unfavorable to minorities and women, and single women with children [4-7]. The post-Fordist economy has bifurcated deep trenches between very high-paying jobs that require considerable investment in education and human capital as against those in low-paying jobs that require ~~few to no~~ lower skills, a large majority of which are performed by minorities and women [1,8-10]. Thus, while the fruits of post-Fordism were and still are being enjoyed by the skilled, educated and ~~overall-the~~ smarter and talented lots in the larger society, those with ~~lower~~ ~~esser~~ educational attainments have been left behind, and these have indeed created enormous differences in individuals' earning potentials [11-14].

Post-Fordism has also impacted poverty and unemployment that have ~~aggravated~~ ~~exacerbated gender and~~ ethnic ~~and gender~~ inequalities of various types, and in particular women and minorities have been hit the most, especially after the decline in major state-supported welfare-activities that adversely affected women, ~~children~~ ~~children~~, and ~~the~~ people of color [4-7]. Indeed, research has also indicated that despite adequate educational attainment and technical skills, women across the globe have continued to face occupational discrimination across industries [15,16]. Women have ~~always~~ economically ~~always~~ contributed to the larger society through paid and unpaid works [17]. ~~Now, even though~~ women have ~~indeed~~ started reaping benefits of their ~~improved skills~~ ~~-development~~ and educational attainments ~~through gradually by~~ increasing their participation in male-dominated industries, more progress is required to attain gender equity and parity across non-traditional industries so that economic parity can be achieved [2].

2.2. Global and Local Perspectives on Gendered Economic Inequalities

Gender differences across occupations and their restricted participation as paid labor in industries has drawn international attention from economists and social scientists in recent times [17-19]. Women continue to be severely underrepresented at almost every

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level in corporate America, even though their educational attainments have increased significantly over three decades, and despite women's improved shares in post-high school and collegiate-level education over those of men, their participation in some of the traditionally masculine occupations and industries have not changed proportionately [20,21].

Research suggests that women's under/over-representation in specific industries occur also due to the formal and informal nature of work and their activity spaces — which assign differential monetary values to the activities based on their activity spaces — public versus private [1,15–17,16,20,21]. This occurs because most activities performed by women are completed inside domestic spaces, i.e., in the private spaces, inside the boundaries of their household, which makes them invisible and undervalued [1,17,20–23]. As such, women's activities performed inside the boundaries of their homes largely get undervalued — resonating largely with the dark side of reproductive and caring activities conducted by women.

Differences across available occupational and employment opportunities also impact the overall income and wellbeing of women (and minorities of sorts) [24–30]. It is a well known fact that in general the service sectors of economy are the lowest paid whereas knowledge-based occupations pay much higher, and women have had historical underrepresentation in these sectors [1,2,8]. Glynn (2018) suggests that by making work hours more flexible, one can make workers more interchangeable that will help narrow the economic benefits derived out of the rigid work schedule. This will allow women, especially those with kids and other 'for-care' dependents at home to work fuller hours based on their flexible timeschedule. Kliff's journalism, however, seemingly places greater emphasis on increasing women's participation on specific knowledge-based (or creative, in Florida's jargon) professions rather than just focusing on the flexible work hours [27,28]. In many ways, these scholars suggested multi-dimension-layered approaches to narrowing income and wealth gaps across gender.

The United Nations has indicated that women's restricted participation across various industries/occupations have contributed to their restricted economic empowerment which pose serious threats to creating a sustainable and egalitarian society [19,31–35,32]. By having restricted opportunities for women, the system This restricts their access and control over productive resources, knowledge about jobs-based advertisements and professional networks, work environments and cultures, and control over their own times and decision-making processes in primarily male-dominated industries [31–35]. It is also important to recognize that education, skill development and re-skilling over the life course to keep pace with rapid technological and digital transformations and advancements affecting the jobs are critical for women's overall economic health and social wellbeing as these get affected directly and indirectly from their income-generation opportunities and participation in the formal labor market [19,32]. Such differences in opportunities not only impact women's immediate economic wellbeing, but it also affects generations to come as the cycles of deprivation continue [10–13,15,16,30–35].

Sadly, though, scholars have also noted that globally, about 2.7 billion women have far lesser choices of jobs compared to men due to cultural, political, and social reasons. Out of 189 economies, 104 countries still prevent women from working in specific types of jobs; in 59 countries there are no laws to protect women against sexual harassment, and in 18 countries, husbands can still legally prevent their wives from working [19,32]. These indeed illustrate the enormously unfavorable power-dynamics that are in fact political and social manifestations of undue economic disadvantage of women that has continued since long.

2.3. Contextualizing Spatiality in Gendered Economy

Regarding spatial distribution of industries/occupations, various scholars have attributed to the differential levels of human capital resources ~~and/or lack of~~ skill presence across space. Geography plays important roles in innovation processes, and inherently location shapes the ~~culture of innovations~~ that vary across gender [25]. This is based on Cook ~~&and~~ Gerson's report of the extremely low number of patents from women across STEM disciplines, including the low level of Ph.D. attainment by women in STEM disciplines and the challenges faced by them in scientific innovations [25]. The Silicon Valley and the Wall Street have heavily skewed male workforce whereas women's under-representation across other regions is very low [1,2]. Living and working in these areas influence and shape women's perceptions of their own work and creativity since their occupations and activities get shaped by the limitations posted by the complex interactions between space/place, ~~cultureculture~~, and history [363].

In their critique of Richard Florida's creative class thesis, the authors describe the ways in which the new economy is essentially a repackaged version of the old economy that is quite segregated based on gender, race/ethnicity and class [374]. Labor-market practices such as social networking that requires extensive hours of socializing beyond the workplace to find work – have increasingly become an integral part of the new economy [374]. Such increase in flexibility and informality of work erodes work and life balance, and with longer work hours, either expected or implied, also ~~create-comes~~ greater chances of exacerbating gender inequalities. In many societies that are still strung on patriarchal values, many women may find themselves in more precarious and vulnerable situations in the new world contextualized by a new/creative economy [374]. Thus, there is important role of place and space in creating and sustaining multiple dimensions of inequalities — be it income, education, housing, crime, ~~poverty-poverty~~, or any other dimension of inequality [385]. The authors, thus help us understand how space, spatiality and culture interact with gender (or race, class, nationality, sexuality, and the like) that becomes a foundation of U.S. socioeconomic inequality.

Yet another dimension of gender-based inequality can also be the role of authority at workplace – a topic heavily researched by sociologists in exploring workplaces [396]. There are numerous factors that impact authority at workplaces that can be experienced differently by people of different gender, ~~and-races~~, ~~nationalities, and the like~~ [1,39Coe et al; Smith, 2002]. Women often have less authority than men and other minorities (race, class, sexuality, nationality, etc.) compared to white males, ~~and these elements often do not pose frictions in which keeps of~~ re-producing cycles of inequalities through generations [1,35,3740].

2.3. Theoretical Framing of Gendered Economic Inequalities

Regarding differential levels of gendered (or racialized) under/over-representations across industry/occupations, ~~scholars~~ have largely used the Human Capital Theory (HCT), the Neoclassical Economic Theory (NET), the Labor Market Segmentation Theory (LMST), or the Feminist Political Ecology (FEP) to explain the empirical, political economy, and ~~the socially constructed~~ ~~edion~~ processes of ~~creating~~ differentiation. The HCT attributes gender-based (or race-based) concentrations in specific industries and occupations/jobs to the labor-supply aspects within the labor market. It is by choice that men or women choose specific jobs based on their overall educational backgrounds and skills that ultimately qualify them for specific occupations/industries, and that the labor market is not to blame for the uneven gendered clustering across industries [1,2,3841].

The NET, on the other hand, attributes pure economic motives of men versus women as the drivers of specific jobs and opportunities, and that the preferences, prejudice, discrimination, expectations, hopes, insecurities, etc. are exogenous to the labor markets. The NET, thus, completely ignores the complex ways in which the overall socio-economic or

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historical contexts of gender/population groups might impact their occupational choices. Geographer Anne Bonds, however, has warned against the economic determinism of some of these theories in explaining gendered (or racial/ethnic) dimensions of economic inequalities [39,42]. She says that by grounding race in economic relations in a way that obscures the connections between processes of racialization and economic practices, one can mask the nuances that go underneath the elements of power dynamics that have historical, ~~cultural~~^{cultural}, and spatial contexts. In real world, the overall socio-economic, cultural, ~~historical~~^{historical}, and political contexts of people shape their overall experiences and attainment of skills and networks, that eventually determine the opportunities available to them.

The LMST, however, rejects the simplistic ~~and~~-linear relationship between gendered/labor market outcomes with their educational skills or experiences; ~~instead~~^{instead}, it argues that the labor market has its own succinct set of rules and socially constructed political economy that are unique to each industry/institution-types which make it possible to socially construct and manifest varying degrees of differentiation and discrimination in the labor market to continue and (re)produce [12]. The LMST, thus, comes ~~to being~~^{the}-closest to critically linking the social construction and subtle discrimination in labor market with the political economy ideologies captured by the Feminist Political Ecologists' take on explaining the gendered dimensions ~~to of~~ discrimination and differentiation. Gender, thus, intersects with major variables such as race/ethnicity, religion, caste, nationality, and the societal power dynamics that produce varying levels of labor participation across industries [43–47,45]. When such differences persist in the larger society, it is almost impossible to fully attain the 17 goals of sustainable economic development – as laid out in the UNDP's Envision-2030 goals that are critical to attaining gender parity and a just society [32,33,37].

To sum up, based on this overview of empirical and theoretical ~~contexts explaining work focused on~~ gender disparity in economic opportunities, I argue that if the neoclassical economic theory were to hold its ground, why would one notice over-concentration of specific gender (or races/ethnicities) in specific types of occupations/~~and~~-industries? How might women's assumed roles and responsibilities ~~in-at~~ home impact their fuller participation ~~in-toward~~ educational attainments and ~~subsequently~~ job opportunities? How might lack of information sharing about specific labor market opportunities and formal and informal professional networks impact gendered opportunities? While all these require a long series of analytical inquiries, in this paper, I explain one aspect of contemporary gender-based occupational variation across the counties of USA, using a multi-scalar approach to occupation types – ~~something that has not been an aspect not yet addressed adequately done~~ in economic geography scholarship. ~~yet~~. In doing so, I examine the level of differences in micro-scale occupation-types-by-gender for all major occupations in USA for which data is available at the ~~National Historical Geographic Information System (NHGIS)~~ [48]. I also ~~use-conduct~~ visual analysis of these patterns, followed by bivariate correlations between human capital ~~skills, resources,~~ proxied by educational attainments and occupation types for both genders.

3. Research Design

This analysis focuses on the 3,142 counties of USA, excluding Puerto Rico but including Alaska and Hawaii Islands. Counties are used as the scale of analysis to gain local as well as regional/sub-regional scale visual and empirical spatial perspectives on the gendered dimensions of occupational inequalities, and how might they reflect varying levels of ~~accumulation of human capital~~ accumulation, resources, I use counties as the scale of analysis for this work because of my focus on the whole country rather than a single metro or a group of metropolises where inter-metro or an intra-metro analysis would have been

a preferred scale. Given this paper’s focus on gendered dimensions of occupational and educational inequalities, prior work suggests that women, in general, are affected by similar factors manifested due to structural, institutional, historical, and cultural nuances when they live in geographically similar areas/sub-regions [1,2,36]. By using counties as a scale to assess educational and occupational patterns, I also contextualize and normalize the status of education and occupation across counties as each county is governed by its own distinct sets of rules and policies that affect each county’s men and women almost similarly, until and unless those who are outliers in terms of wealth or political power. Having done significant amount of intra-urban/inter-urban research in geography and social-sciences, I have found that the census-tracts – usually a proxy for neighborhoods – has been used for fine-scale analysis. In some cases, scholars have also adopted more finer scales of geography – a “micro-neighborhood” – which they define as a cluster of eleven households together – giving them the benefit of a finer than a census-tract analysis [49]. There are other works that have used still finer scales of data – block-group data in computing statistics to examine diversity at the tract-scale, thence proving a very fine scale of intra-urban analyses [50,51]. Thus, while there are potential advantages of using finer scales of data to analyze finer scales of geographies, scholars have also warned us of the disadvantages of using fine-scale data. Given that most data are prepared and made available through estimates, while finer scales of data are very useful in answering pressing questions concerning intra-urban patterns of inequalities/patterns, one should also be aware of the very high levels of errors, uncertainties, and missing values as one goes further down into finer scales of geographies [52–53].

Finally, regarding the use of counties as the scale of analysis in this research, it is well known that a large body of regional science and economic geography research primarily focus on counties, states, countries, and economic subregions/regions or continents as scales of analyses, especially when dealing with regional or sub-regional economic inequalities or the like [1,2,8]. In a recent work on an unrelated topic concerning women, for example, the scholars used data on the availability of abortion-clinics for three years 2000, 2011, and 2014 – to examine the spatial disparities in commute-distance to access the nearest abortion clinics by states and by counties [54]. The scholars chose this large of a geographic entity to adjust for privacy and sensitivity of abortion as an ‘act’ as well as to obtain an idea on the difficulties pertaining to accessing abortion clinics. Hence, the counties and states became their scale of analysis. Likewise, scholars often use larger geographies to conduct analysis on sensitive issues, such as crime, drugs, prostitution, HIV/AIDSs, and the like, to mask and protect the confidentiality of target population due to high risks involved [55]. When research on the pandemic of Covid-19 started, almost every quantitative research presenting and mapping the infection rates analyzed at the scale of countries, states or counties (when considering infections in USA, see the cited source link), rather than cities, tracts, or blocks – largely to protect the confidentiality of the population, given the sensitivity of Covid-19 and potential victimization of infected population [56]. Because of many such issues discussed here, and the fact that county-scale analyses were quite capable of providing me with an overview of regional and sub-regional perspectives on occupation and education, I chose counties as these captured the local-specific nuanced differences better than states, while also masking the tract-scale sensitivity.

In terms of variables analyzed in this paper, I use educational attainment as a proxy for human capital resources/skills whereas occupational categories and subcategories by gender also comprise the dependent variables. I use five years’ (2015–2019) American Community Survey (ACS) estimates data from the 2015–2019 data estimates provided by the Minnesota NHGIS to conduct descriptive analyses of occupational types, followed by the computations of Location Quotients (LQ) by macro and micro-scalar occupations by

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gender for all the counties of USA [46,57]. Thereafter I conduct descriptive statistics of the computed values of the location quotients by gender for five major categories of occupation. This is followed by a detailed share analysis of the 26 sub-categories of occupations by gender. Thereafter Later I conduct the Pearson’s bivariate correlations analysis to examine the degrees of association between human capital variables proxied by educational attainments and the five major categories of occupations for which LQ values are already computed. This helps analyze the strength and direction of association between the two, and if at all the Human Capital theory might help explain the over/under-representation of gender in various types of occupations. To compute LQ values for this analysis, I follow these specifications [57]. A generic equation for location quotient (LQ_i) for an occupation i in a county can be:

$$LQ_i = ((e_i / e) / ((E_i / E))) \tag{1}$$

where, e_i is the employment in occupation i in the local region/county; e is the total employment in the specific occupation in the country; E_i is the employment of the gender (male/female) in occupation i at the national level, and E is the total employment at a national level by adding total employment in all five major occupations categories taken together in the country.

Later, I also use ArcGIS to map the computed LQ values for five major categories of occupations by gender for a quick visual snapshot of its spatial variation, even though I don’t delve much deeper into its descriptive or causal analysis due to word limitation restrictions for this paper (I hope to publish detailed causal analytical work in (and my forthcoming submissions), papers that detail these processes).

4. Analysis and Findings

The total population covered in this analysis of 3,142 US counties in 2019 (excluding Puerto Rico) is 324,697,795. Non-Hispanic Whites comprise the largest share (60.70%) of all racial/ethnic groups, followed by Hispanics (18.01%), Blacks (12.31%) and Asians (5.62%). Compared to Census 2000, ACS 2015-2019 shows enormous growth in the shares of Hispanics (12.55% to 18.01%) and Asians (3.72% to 5.62%), significant decline for Whites from (69.13% to 60.70%) during 2000-2019, although African Americans maintained consistency at approximately 12% percent of the total population (Table not included).

4.1. Gendered Inequalities in Educational Attainment

Table 1(A) shows descriptive statistics explaining highlighting gendered disparity in overall levels of educational attainments for major categories of education whereas Table 1.B illustrates these patterns across major fields of specialization by gender.

Table 1. Educational Attainment and Bachelor’s (Major) by Gender, 25 Years and Older (Share)

A.Educational Attainments	Males							Females						
	Mean	Min	Max	35	50	65	Me	Min	Ma	35	50	65		
Total Population	0.49	0.41	0.72	0.48	0.49	0.49	0.5	0.28	0.59	0.51	0.51	0.52		
No Schooling	0.01	0.00	0.06	0.00	0.01	0.01	0.0	0.00	0.09	0.00	0.00	0.01		
No High-School	0.07	0.00	0.34	0.05	0.06	0.07	0.0	0.00	0.39	0.04	0.05	0.06		
High-School Diploma	0.18	0.02	0.44	0.16	0.18	0.20	0.1	0.03	0.27	0.15	0.16	0.18		
Some College/ Associate	0.14	0.04	0.28	0.13	0.14	0.15	0.1	0.01	0.32	0.16	0.17	0.18		
Bachelors Degree	0.07	0.00	0.25	0.05	0.06	0.07	0.0	0.00	0.20	0.06	0.07	0.08		
Masters Degree	0.02	0.00	0.15	0.02	0.02	0.03	0.0	0.00	0.14	0.03	0.03	0.04		
Professional Degree	0.01	0.00	0.06	0.00	0.01	0.01	0.0	0.00	0.04	0.00	0.00	0.01		
Doctorate	0.01	0.00	0.14	0.00	0.00	0.01	0.0	0.00	0.04	0.00	0.00	0.00		
Masters/Above	0.04	0.00	0.25	0.02	0.03	0.04	0.0	0.00	0.20	0.03	0.04	0.04		

B.Major-BS Degree	Males							Females				
Sc./Engineering,	0.18	0.00	0.57	0.17	0.18	0.20	0.1	0.00	0.55	0.10	0.11	0.12
Sc./Eng., Rld-field	0.03	0.00	0.17	0.02	0.03	0.03	0.0	0.00	0.27	0.07	0.08	0.09
Business	0.10	0.00	0.31	0.08	0.10	0.11	0.0	0.00	0.43	0.07	0.08	0.09
Education	0.06	0.00	0.46	0.04	0.05	0.06	0.1	0.00	0.48	0.14	0.16	0.18
Arts/Humanities/Others	0.09	0.00	0.75	0.08	0.09	0.10	0.1	0.00	0.43	0.10	0.11	0.12

Note. Shaded cells show higher shares compared to the other gender

On an average, the median levels of educational attainments in all categories (no High School diploma, High School diploma, Some college/Associate degree, Bachelor's, Master's, Professional or Doctoral degrees) is relatively higher for females compared to males; same holds true across the 65th percentile values for all educational levels – with females faring relatively better than males. However, the maximum values are better for males across most educational categories, except Some college/Associates where women are slightly better off (0.324 for females versus 0.282 for males).

Also Most interesting to note is the significant variation across genders for majors/field of study during their Bachelor's degree – with males faring better than females in the disciplines of science/ & engineering and business (see median values in Table 1.B) whereas females do better off in science/ & engineering related fields, and significantly better in education and arts/humanities/other majors. Despite equal or higher levels of educational attainment, women's participation in major occupations that are better paid than others are far lower compared to males (explained below in sub-sections 4-2 through 4.4). Sadly, despite almost equitable levels of educational attainments across categories, the level to which these skills do not translate into occupational attainments (and the consequential loss of income/monetary gains) for females is concerning. This largely speaks of the nuanced influence of culture and historical political economy in creating gendered disparities – a finding well illustrated in another mixed-methods qualitative work [36]. This poses an important question that needs further detailed investigation at national level.

4.2. Descriptive Statistical Analysis of Location Quotients by Gender by Occupation, 2019

A quick overview of the descriptive statistics of computed values of location quotients (LQs) for both genders across five major categories of occupations in 2019 illustrate interesting dynamics about the US labor markets (Table 2). These are evident from the median and maximum values of for LQs for males in specific occupations such as Management are: 0.357 vs (Max-1.055 for males); in natural resources, construction, and maintenance: (LQ median and maximum values of 1.302 vs. and 5.19, and respectively), in the sector of production, transportation, and material moving are (LQ's median and maximum values of 0.997 vs. and 4.806 respectively); for females, though, though, the median and maximum values of LQs occur for service-occupations (0.6007 vs. 1.696) and, sales/office (0.63547 vs 1.344) respectively, and even in management, the median value for females is 0.459, slightly higher than those for males. –

Table 2. Descriptive Statistics for Location Quotient Values by Occupation by Gender, 2019

LQ-2019, Males	Mean	Range	Min.	Max	35th	50th	65th
Management, Business, Science, & Arts	0.375	0.971	0.084	1.055	0.321	0.357	0.397
Service	0.405	1.270	0.000	1.270	0.354	0.394	0.434
Sales & Office	0.299	0.685	0.000	0.685	0.271	0.300	0.330
Nat-Resources, Construc. & Maintenance	1.347	5.191	0.000	5.191	1.148	1.302	1.465
Product-Transport & Material Moving	0.991	4.807	0.000	4.807	0.847	0.992	1.120
LQ-2019, Females	Mean	Range	Min.	Max	35th	50th	65th
Management, Business, Science, & Arts	0.464	0.898	0.000	0.898	0.432	0.459	0.487

Service	0.609	1.696	0.000	1.696	0.558	0.601	0.644
Sales & Office	0.634	0.992	0.142	1.134	0.604	0.635	0.664
Nat-Resources, Construc. & Maintenance	0.074	1.325	0.000	1.325	0.040	0.055	0.071
Product-Transport & Material Moving	0.289	1.075	0.000	1.075	0.206	0.256	0.319

Note. Shaded cells represent the occupation by gender that are far greater than the opposite sex

These values are far greater than those observed for males in the same occupations. The most interesting aspect of the LQ values is the enormously high/maximum-values for the LQ maximum-values of 5.19 and 4.81 for males in the occupations pertaining to natural resources, construction and maintenance and production/transportation and material moving as compared to what females' LQs obtain (Table 2). These occupations, by historically and culturally contexts, are considered 'masculine'. In service and sales/office occupations though, the over-representation of females persist – occupations that have traditionally been perceived as feminine, with LQ values maximizing at 1.696 and 1.134 for females against 1.270 and 0.687 for males. These speak of the unique dynamism of gendered over/under-representation in specific occupations that are manifestations of historical, cultural and regional/sub-regional contexts. These occupations especially offer lower/lower remuneration compared to others, which largely explains female over-representation along with the implied relative lower economic potential/wellbeing. Such observations have been found by researchers earlier too wherein female occupations were associated with lower wages/earnings [1,26,30].

In management, business, sciences and arts occupation though, even though the median and maximum values of LQ for females are slightly higher than males, the difference is insignificant; this could be masking the situation wherein several types of jobs within this larger category of management, business, sciences and arts occupations might be employing women that are relatively at the levels of clericals/and basic administrative positions, associated with paying far lower wages rather than the typical masculine big corporate-level well-paid managerial-level positions – resonating with prior research [26,30]. This analysis also necessitates fine-scale and more granular further investigations into occupations, with a more detailed analysis of jobs and occupation-types. As such, the ACS data used here provides data information on about 26 different occupation subcategories of occupation within the five major occupation-types discussed above, and I have attempted to provide a detailed share analysis into gendered dimensions of occupational disparity across the country for these 26 sub-categories for better understanding into the contemporary status of women's occupation in USA (see sub-section 4.3). However, even for major occupational categories, this analysis speaks volumes about gender-based divisions of labor and lack of female participation in occupations that have traditionally been male-dominated whereas women are still over-representation in the feminine activities/occupations associated with that have lower pay scales. These trends of masculine versus feminine disparity in occupational representation is well illustrated in the descriptive statistical overview by gender across the whole country.

4.3. A National Overview of Gender Disparity in Occupation-Types in 2019

Table 3 illustrates share analysis of detailed categories of occupation types and the numbers of males versus females employed in each category and sub-categories of occupations. Given that this paper focuses on critically analyzing the multiple dimensions of gendered economic inequalities, by gender, this detailed sub-occupation-based employment numbers and shares held by gender along the 26 sub-categories of occupations provide an interesting overview for of men and women both. As noted in Table 3, shaded occupations are the five major categories of occupations for which major occupation-based location quotients have been computed and they are discussed below in the following section. Each of these occupation-types comprise of further occupational-subcategories, and these are detailed in the table in 26 sub-categories of occupations. Accordingly, the shares of women in each occupational-category have been computed for within-gender and nation-wide variations. This analysis provides an interesting detailed insight

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into the employment patterns and their variations by gender. Women comprise 47.49% of the total employed (154,842,185) civilians nationwide (16 years/above) out of 154,842,185, whereas men comprise 52.51% of the total.

Concerning the shares of male versus female in each occupation-type nationally, it is obvious that women are represented in large shares (I use above 10 percent as a cut-off) in management/business/science/and arts occupations (20.26%), followed by sales/and office (13.61%), followed by service occupations (10.05%). While the nationwide figure for management-type occupational employment may sound very optimistic, when breaking this major category by its various sub-occupation-types, it is clear that in a large number of many occupations that are clubbed together in this category, women's share is far less than 5% (see Table 3). Their nationwide shares in specific occupation-types is quiet alarming, with management at 4.13%, business/and financial at 2.9%, computer/and mathematical at 0.82%, architecture/and engineering at 0.3%, and life/physical/and social-science at 0.45% only.

Education/legal/legal-community-service/arts/and media occupation category fares slightly better, comprising 7.14% of national share. However, it is no surprise that women are overly represented in sales/and service occupations that are largely associated with lower wages. When analyzing the differential shares of occupations among the same gender, it is interesting that in 2019, women's share is still the largest in sales/office occupations (28.66%), followed by service (21.15%), and education/legal/community-service/arts/media (15.03%) – occupations historically categorized as feminine activities. Without doubt, then, the largely defined masculine occupations are still occupied by male dominated, as is obvious from Table 32, with management/business/science/and arts occupations comprising 18.26%, followed by production/transportation/and material-moving occupations that comprise 10.10% of the nationwide share. These figures become much more masculine when data suggests that 34.77% of all employed civilian males are employed in management/business/science/and arts occupations, with management occupations taking away a large 11.59 % of all civilian males; next major employment for males (out of all males nationwide) include production/transportation/and material-moving (19.24%), followed by natural-resources/construction/and maintenance occupations (16.04%), sales/and office occupations (15.27%) and service occupations (14.68%).

Further insights into each occupation types illustrate detailed patterns to sub categories of occupations. When examining the occupations where females exceed males nationwide, the occupations that come out as the greatest winners are sales & office (8,661,218), followed by education/legal/community service/arts/media (5,162,023), followed by healthcare practitioners/technical (4,710,762), and service (3,618,935).

Table 3. Detailed Employment Shares by Categories of Occupations by Gender, Nationwide and Among-Gender, 2019 (Employed Civilians, 16 Years/Older)

Occupation Categories with Sub-categories (Employment, 2019)	Employed		Shr, Occup-Types		Nationwide Shr, Occup-Types		ML-FL Difference
	ML	FL	ML	FL	ML	FL	
Total Civilians Empld. (16 Yrs/Older)	81305624	73536561	NA	NA	0.525	0.475	7769063
Managemnt, Business, Science & Arts Occup.	28273415	31373868	0.348	0.427	0.183	0.203	-3100453
Management, business, and financial	13225992	10881370	0.163	0.148	0.085	0.070	2344622
Management occupations	9422247	6388548	0.116	0.087	0.061	0.041	3033699
Busines & financial operations	3803745	4492822	0.047	0.061	0.025	0.029	-689077
Computer, engineering, and science	6848123	2420403	0.084	0.033	0.044	0.016	4427720
Computer and mathematical occupations	3577083	1264236	0.044	0.017	0.023	0.008	2312847

Architecture and engineering occupations	2486105	460457	0.031	0.006	0.016	0.003	2025648
Life, physical, and social science occup.	784935	695710	0.010	0.010	0.005	0.005	89225
Education, legal, community service, arts, media	5889127	11051160	0.072	0.150	0.038	0.071	-5162033
Community and social service	924974	1783615	0.011	0.024	0.006	0.012	-858641
Legal	832889	884521	0.010	0.012	0.005	0.006	-51632
Educational instruction, and library occupations	2527118	6855907	0.031	0.093	0.016	0.044	-4328789
Arts, design, entertainment, sportss, media	1604146	1527117	0.020	0.021	0.010	0.010	77029
Healthcare practitioners and technical	2310173	7020935	0.028	0.096	0.015	0.045	-4710762
Diagns, treating practitioners, & other technical	1621423	4694524	0.020	0.064	0.011	0.030	-3073101
Health technologists and technicians	688750	2326411	0.009	0.032	0.004	0.015	-1637661
Service Occupations	11935283	15554218	0.147	0.212	0.077	0.101	-3618935
Service: Healthcare support	731643	4326576	0.009	0.059	0.005	0.028	-3594933
Service: Protective service	2556473	744216	0.031	0.010	0.017	0.005	1812257
Protective -Firefighting prevention, & other	1363410	453308	0.017	0.006	0.009	0.003	910102
Protective-Law enforcement workers,	1193063	290908	0.015	0.004	0.008	0.002	902155
Serv: Food preparation, serving related	4081422	4793042	0.050	0.065	0.026	0.031	-711620
Serv.: Building, grounds cleaning, mainmtn.	3507727	2394209	0.043	0.033	0.023	0.016	1113518
Serv: Personal care and service occup.	1058018	3296175	0.013	0.045	0.007	0.021	-2238157
Sales and Office Occupations	12415204	21076422	0.153	0.287	0.080	0.136	-8661218
Sale-Sales and related occup.	7903646	7913737	0.097	0.108	0.051	0.051	-10091
Sale-Office and administrative support	4511558	13162685	0.056	0.179	0.029	0.085	-8651127
Natural resources, construction, maintenance	13039229	674567	0.160	0.009	0.084	0.004	12364662
Farming, fishing, and forestry occupations	801561	245548	0.010	0.003	0.005	0.002	556013
Construction and extraction occupations	7645657	246227	0.094	0.003	0.049	0.002	7399430
Installation, maintenance, and repair	4592011	182792	0.057	0.003	0.030	0.001	4409219
Production, transportation, & material moving	15642493	4857486	0.192	0.066	0.101	0.031	10785007
Production occupations	6317243	2544573	0.078	0.035	0.041	0.016	3772670
Transportation occupations	5038937	841180	0.062	0.011	0.033	0.005	4197757
Material moving occupations	4286313	1471733	0.053	0.020	0.028	0.010	2814580
Total Employed in All Occupation Categories,	154,842,185						

Note: Shaded Categories are five major categories of occupations, *bolded and italics* are sub-categories in each major category; Bolded and Italics numbers are occupations with female share less than 5%, and shaded boxes represent occupations where females occupy more than 10% of total employment nationally.

Further insights into each occupation types illustrate detailed patterns for sub-categories of occupations. When examining the occupations where females exceed males nationwide, the greatest winners are sales/office (-8,661,218), followed by education/legal/community-service/arts/media (-5,162,033), followed by healthcare-practitioners/technical (-4,710,762), and service (-3,618,935). This introspection further suggests provides insights into the feminization of gendered activities that have traditionally been occupied by women, and their eventual economic impacts on women due to their lower financial gains through wages and salaries [1,26]. While it would be an interesting task to conduct a timeseries analysis of these patterns, it is no doubt that the broader pattern of women's employment in largely speaking service/tertiary sectors of economy remain relatively strong. Sadly, women's engagement in sciences/engineering and related occupations types remain alarmingly low – echoing the fact that there needs to be policy-based interventions to advance women in STEM education in this country. These patterns also highlight the major types of occupations women are attracted to, either voluntarily or involuntarily, and how some of these might some of these relate with long-held traditional, societal, and cultural inertias of beliefs that prohibit women from taking different

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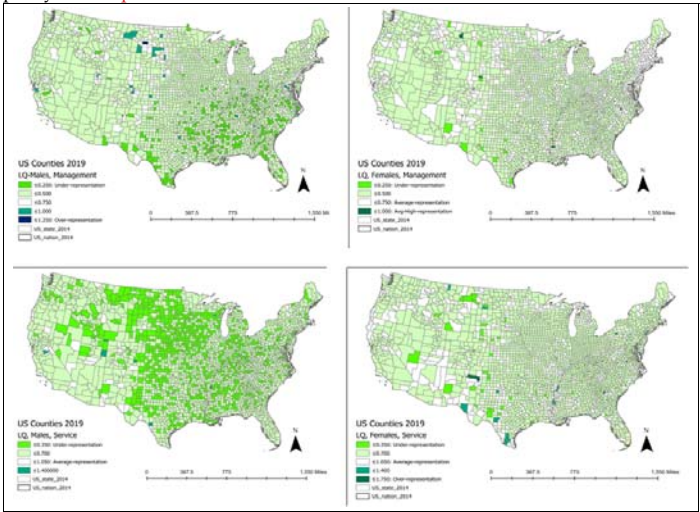
pathways toward self-improvement, either through ~~investing~~ *improving-in* their educational attainment, ~~or~~ through majoring in professional/~~and~~ science disciplines, ~~and-or by~~ *through* pursuing ~~ance~~ *ance* of higher education such as Masters, doctorates or professional degrees that could ~~enable them and~~ make them *relatively* more productive *and competi-* *tive* and equip them with better negotiation power in a *presumably fair labor market*.

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4.4. Spatial Patterns of Gendered Occupation in US Counties, 2019

While a fuller explanation into the spatial distribution patters and processes of occupational representations by gender could be an interesting study in itself, especially when one is interested in digging deeper into its relational aspects with space/place, sub-~~regions~~ *based regions-based* demography, socio-economic status, culture, history, and its contextual political economy, Figure 1 does provide a quick overview of spatiality *aspects* of the gendered dimensions of occupational patterns in 2019. As expected, some of the most masculine occupations have very high values of location quotients (over-representations) that are region-specific, whereas females generally represent an average distribution pattern across the whole country, especially in blue-collar occupations.

In natural resources, construction, etc., females are severely under-represented throughout the nation whereas males have quite interesting spatial patterns with the most over-representing counties obtaining LQ values of 5.19 (dark green colors). In service occupations, males exhibit a wide variety of spatial pattern, ranging from a minimum of 0.35 to a maximum of 1.4; females, on the other hand, go as high as 1.75 in ~~this sectorservice~~ *this sectorservice*, and some of those counties are along the southwest borders in Texas. Females ~~are repre-~~ *are repre-* ~~sented in production is~~ *sented in production is* severely under-represented *in production in* almost all over the country. In management, ~~related occupation~~ *related occupation*, however, females ~~again~~ *again* illustrate below average to severe under-representation. This broad overview suggests that perhaps a micro-scale analysis of occupational *al* sub-categories could be more meaningful to dissect into nuanced causes *across regions and sub-regions*. However, due to word restrictions for this paper, I limit myself to a simplistic visual presentation of ~~mapped~~ *mapped* gendered spatial disparity *in occupations across US counties*.



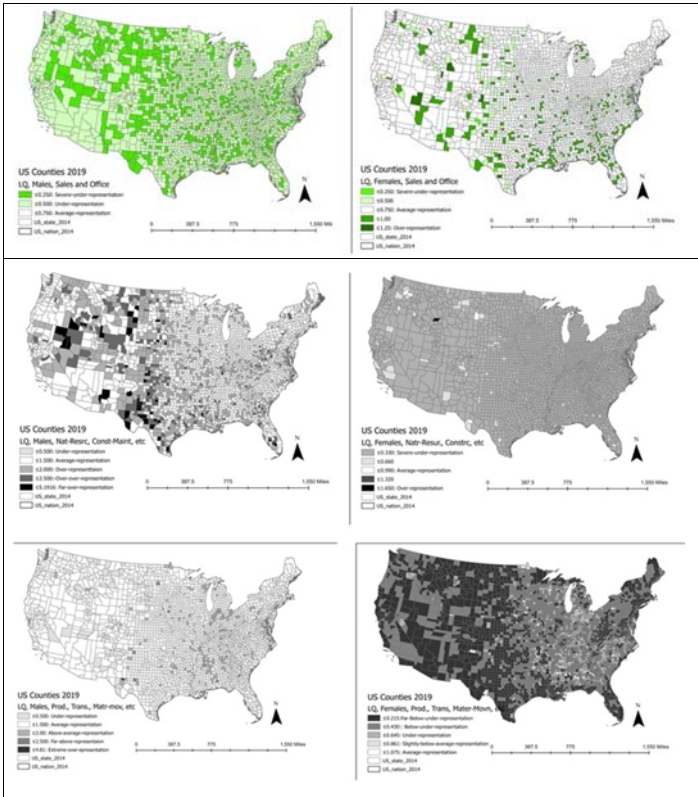


Figure 1. Location Quotient maps for five categories of occupations by gender, 2019

4.5. Relational Contexts to Educational Attainment and Gendered Occupations

Finally, to obtain an insight into the role of gendered nature of human capital skills into occupational engagement by gender, a Pearson’s bivariate correlations analysis suggests major patterns (Table 4). For both genders, in general, those with lower educational

Table 4. Bivariate Correlations between Location Quotients-by-Major Occupations by Educational Attainments by Gender (25 Years/above)

Educational Attainment, (Share)	Location Quotients by Occupation-Types									
	LQ- Mng.	LQ- Ser	LQ- SI	LQ- Nat	LQ- Prd	LQ- Mng.	LQ- Ser	LQ- SI	LQ- Nat	LQ- Prd
	Males (ML)					Females (FL)				
ML, Total,	-0.028	.130**	-.166**	.245**	0.010	-.150**	.045*	-.149**	.069**	-.118**
ML, No-School	-.282**	.076**	-0.022	.161**	.180**	-.247**	.040*	-0.009	.151**	.145**
ML, No-HS-Dip	-.535**	.110**	-.246**	.351**	.333**	-.409**	.197**	0.002	.110**	.224**
ML, HS-Dip	-.581**	-.086**	-.381**	.337**	.528**	-.417**	.169**	.044*	0.024	.295**
ML, Sm-	.175**	-0.021	0.006	.107**	-.140**	-0.033	-0.007	-0.028	.081**	-.192**
ML, BS-Degree	.770**	0.034	.401**	-.409**	-.599**	.542**	-.261**	-.097**	-.084**	-.386**
ML, MS-Degree	.681**	.109**	.365**	-.472**	-.546**	.577**	-.230**	-.099**	-.150**	-.313**
ML- Prof.-	.562**	.113**	.322**	-.431**	-.475**	.514**	-.170**	-.074**	-.123**	-.261**

ML-Doctoral	.490"	.114"	.206"	-.375"	-.390"	.439"	-.123"	-.100"	-.103"	-.217"
ML, MS/Abv	.692"	.125"	.361"	-.498"	-.560"	.601"	-.218"	-.106"	-.151"	-.317"
FL, Total	0.028	-.130"	.166"	-.245"	-0.010	.150"	-.045"	.149"	-.069"	.118"
FL, No-School	-.205"	.077"	0.014	.098"	.120"	-.202"	.048"	-0.014	.166"	.117"
FL, No-HS-Dip	-.505"	.081"	-.176"	.307"	.323"	-.431"	.186"	0.016	.106"	.274"
FL, HS-Dip	-.574"	-.166"	-.232"	.221"	.557"	-.428"	.116"	.152"	-0.016	.385"
FL, Sm-	0.017	-.096"	-.038"	0.022	-0.016	-.048"	.059"	.111"	.063"	-0.029
FL, BS-Degree	.745"	-0.016	.367"	-.412"	-.589"	.606"	-.242"	-.091"	-.097"	-.390"
FL, MS-Degree	.566"	.119"	.335"	-.510"	-.490"	.668"	-.224"	-.076"	-.176"	-.267"
FL- Prof.-Degree	.472"	.112"	.293"	-.425"	-.410"	.539"	-.204"	-.085"	-.128"	-.184"
FL-Doctoral	.500"	.096"	.246"	-.412"	-.414"	.520"	-.146"	-.114"	-.104"	-.218"
FL, MS/Abv	.593"	.126"	.345"	-.528"	-.510"	.684"	-.229"	-.091"	-.172"	-.269"
Male/Female Ratios in Bachelor's Degree Major Field across various categories by age groups										
BS-Total,	.329"	.097"	.139"	-0.004	-.275"	-.063"	-.058"	-.037"	.054"	-.159"
SC/ENG, 25-64	.065"	-.148"	-.109"	.146"	.036"	-.116"	0.019	-.072"	.053"	-0.014
SC/ENG > 65	-.048"	-.091"	-.116"	.121"	.105"	-.132"	0.001	0.006	0.027	.049"
SC/ENG/Rld-	.055"	0.029	0.016	.040"	-.051"	-.041"	0.013	-.055"	0.016	-0.030
SC/ENG /Rld-	-.050"	0.034	-0.003	.066"	0.015	-.071"	0.026	-0.005	0.003	0.011
BSN, 25-64	0.017	0.019	0.030	.062"	-0.024	-0.026	-.065"	0.006	-0.002	-0.035
BSN, > 65	-.041"	-.043"	-0.017	0.017	.087"	-.041"	-.045"	-0.006	-0.001	.052"
EDU, 25-64	.066"	-0.013	-.048"	.043"	-.037"	-.065"	.089"	-.082"	0.012	-0.009
EDU, > 65	-.049"	.037"	-.107"	.099"	.041"	-.083"	0.030	-0.011	0.033	-0.023
Art/Hm/Ot, 25-	-.041"	.054"	-.092"	.081"	.041"	-.130"	0.029	0.008	0.020	0.024
Art/Hm/Ot, > 65	-.089"	-0.021	-.039"	.086"	.084"	-.095"	0.009	0.005	-0.008	.047"

Notes: LQ-Mng: LQ-Mnt/Bus/Sc/Arts: LQ-Management, Business, Science & Arts; LQ-Ser: LQ-Service; LQ-Sl: LQ-Sales/Office; LQ-Nat: LQ-Nat.Res.Const/Mnts (Natural Resr., Const., & Maintenance); LQ-Prd: LQ-Prod./Trans.MatMvg (Production, Transportation and Material Moving)
Education acronyms: SC./ENG= Science and Engineering Major; SC/ENG/Rld-Fld = Science & Engineering related field; BSN = Business; EDU = Education, Art/Hm/Ot = Arts, Humanities and Others.

For both genders, in general, those with lower educational attainments (with high school diplomas, no high school diplomas and/or no schooling at all) have negative association with LQs in management related jobs-occupations and strong positive association with natural/construction occupations, though the levels are far greater for males than females in these very masculine occupations. The same categories of educational attainment show up much stronger for service occupations for both genders – indicating strong role of lower human capital skills-based employment in low-waged jobs. However, the coefficients do not indicate any gender-based disparities differences in these educational categories – implying greater parity across genders in lesser educated population.

As educational attainments increase, males do far better in managerial occupations compared to females even with some college/associate degrees – indicating some type of educational premium disadvantage for females. With Bachelors' degree, both genders have similar relationships with various occupations (positive with managerial occupations and negative relationship with blue-collar occupations – natural resources, production/construction, etc.), although the coefficients are far stronger for males than females. In sales occupations, however, males have stronger positive association as against compared to females who have negative association. At the broader category of Master's/-and above, males and females both have similar types of association across almost all five occupation-types, even though coefficients are higher for males in management (0.692* vs. 0.601*). Females, however, have negative association with service and, sales – both tertiary occupations, and in natural resources –(a blue-collar) occupations when they have achieved

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higher education. This reaffirms the idea that with improvement of human capital skills, development, gender disparity and nature of occupational patterns will change with time. Thus, women with Masters/above education have negative r-values with sales & services -- traditionally perceived as the feminine -- suggesting change and progress in the desired direction toward achieving greater occupational parity. Here, higher education seems to have premium pay off for females.

A quick overview of the correlations coefficients for major fields of Bachelor's degree, however, provides a rather dark side of societal reality. Females have significant and by negative associations across all occupations, except service, especially when one looks at those related with science/~~engineering~~engineering and related disciplines. This suggests that there is either a lack of females specializing in these fields of education, or alternatively, that despite the degree, women prefer to, or are unable to attain success in these four types of occupations. The real cause needs further exploration, which is beyond the scope of this analysis. Likewise, those specializing with education or arts/humanities, etc. seemingly have negative association with managerial occupations for females, and but positive with service sectors. Males seemingly have positive associations with managerial and other masculine occupations, though the age ing-factors do come into play, with r-values becoming negative for those aged >65.

5. Conclusions and Policy Implications

This detailed analysis of gendered dimensions to occupational disparity illustrates various ways in which females face relative disadvantage compared to males in almost all major occupation types. Regardless of educational attainments, women are unable to acquire the expected levels of participation in occupations that have classically-traditionally been perceived as masculine, and this inherently contributes to lower earnings potentials for females compared to their male counterparts -- a concern already established by prior research [26-30]. Even though we are in 2021, this analysis suggests that by in 2019, women's largest shares of employments we are still limited to sales/~~to~~ office, followed by service, and education/legal/community-service/arts/media -- occupations that have historically been perceived as the feminine activities. Without doubt, then, the largely defined masculine occupations are still male dominated, occupied by males. These patterns also suggest feminization of specific occupations~~activities~~ that have traditionally been performed by women for ages, and their consequential limitations toward lack of financial gains. However, in some cases, females do seem to reap premiums of higher education -- as was obvious for those with Master/above degrees.

This analysis also suggests that for those with lower levels of educational attainments, there is not much variation in occupation-types -- and that with males and females are generally engaged in the age-old traditional masculine versus feminine activities. However, one would assume that educational attainment must provide premiums in terms of economic and occupational equity and parity. This analysis, howeversomehow, providessuggests declining premiums for educational attainments, except in some specific types of education. With gain in education, males seemingly do relatively better in managerial occupations that are traditionally associated with higher pay structure, and this holds especially true with for those with some college/associate degree, with males reaping far higher premiums against females.

Interestingly, this analysis also finds that the educational category where the gain in occupational patterns stays the most equitable is those with Bachelor's degree. In this category (Bachelor's), -- of educational attainment, both genders have similar types of association -- positive for both genders with managerial occupations and negative for both genders with most blue-collar occupations (natural resources and, production/construction), , etc., -- although the coefficients are higher for males than females -- again reflecting that

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the benefits of educational attainments are reaped better by males than females, even though females too are gaining parity in the right direction, but that and hence females do suffer from an educational premium comparative disadvantage – with females gaining relatively less, compared to men.

Women still have far lower representation in science/engineering and related educational attainments, which could be contributory factors toward occupational disparity. Sadly, women’s engagement in sciences, engineering and related occupation types remain alarmingly low – echoing a critical need for policy-based interventions to advance STEM education in this country. Women are forced to, either voluntarily or involuntarily engage in occupations that are traditionally deemed fit for them by long-held cultural beliefs and inertias that prohibit women from taking different pathways toward self-improvement – either through improving their educational attainment, through majoring in professional/science disciplines, and by pursuance of higher education such as Masters, doctorates or professional degrees that could enable them and make them relatively more productive.

–This analysis, however, also shows some rays of hope and progress. On the brighter side, for those with Master’s/above education, ~~males~~males –and females both exhibited similar types of association across almost all five major occupation types, even though the coefficients loaded much higher for males in managerial occupation compared to females. For females with Master’s/above education, their association with service/sales and natural resources (primarily blue collar and low paying service occupations) were negative.

Women have far lower representation in science/engineering and related educational attainments, which could be contributory factors toward occupational disparity. Sadly, women’s engagement in science/engineering and related occupation-types remain alarmingly low – echoing a critical need for policy-based interventions to promote women in STEM education in this country. Women are forced, either voluntarily or involuntarily, to engage in occupations that are traditionally deemed fit for them by long-held cultural beliefs and patriarchally created inertias that prohibit women from taking different pathways toward self-improvement – either through improving their educational attainment, through majoring in professional/science disciplines, and/or by pursuing higher education such as Masters, doctorates or professional degrees that could enable them command better and more equitable occupational opportunities.

Finally, ~~this analysis reaffirms theconcludes -idea~~ that with higher education and skills development, the nature of labor market engagement ~~in occupation types~~ will change which will eventually create gender economic parity. This must comprise an important strategy for policy makers so that education and skill development of women, including focused interventions for women in STEM disciplines ~~could~~ could be enforced. By increasing women’s education and human capital skills, one could contribute toward their economic empowerment which will create a more inclusive, just and economically sustainable society and greater gender parity [26,4–30,33]. As the saying goes, “You educate a man, you educate an individual; you educate a woman, you educate an entire generation.” This must become the mantra for attaining gender economic parity in the US and in other parts of the world. This is the only way toward attaining the goals of sustainable economic development, as laid out in the United Nation’s 17 goals of sustainable development [33].

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