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Not So Pretty in Pink: an Analysis of Woman in the Economy, 2020

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Introduction

This unit introduces students to the economics of gender inequality. The unit utilizes a series of interactive simulations and discussions designed with three instructional foci: increasing meaningful student-student discourse, using evidence to support claims, and using higher-order thinking strategies. The activities gauge students' tacit understandings of productivity, equity, and fairness, providing male students an entry point to better understand the female perspective. All activities are mapped to AP units so the unit aligns with the AP Microeconomics standards and sequencing.

This unit begins by examining how social revolutions driven by comparative advantage gave rise to gender inequality. It then examines the relationship between marriage and game theory. The bulk of this unit examines labor markets and the wage gap. Finally, the unit examines gender-biased laws that show how inefficient government regulation leads to greater social inefficiency.

Activities are designed for an 80-minute class with approximately 25 students. Lessons call for students to sit in small groups to facilitate discussion and collaboration. Students will need access to a computer and the internet to complete multiple activities.

As a word of warning, the activities are meant to help students learn to empathize with the disparity caused by gender inequality and may make some students uncomfortable. One activity is designed so students believe their grade is determined in a way that mirrors the wage gap. It may be helpful to give parents a heads up before completing the activity to let them know the experiment will not actually affect their grades disproportionally.

The essential questions of the unit are

1. What social inefficiencies naturally arise in American product and labor markets?
2. What role does the government play in correcting market failures?
3. How can society and the government change current legislature and policy to promote gender equality in the product and labor markets?

Background Research

Chapter 1: The Rise of Gender Inequality

Gender inequality refers to one gender, usually female, being valued less than another as demonstrated by laws and social norms. These laws often restrict civil liberties, such as one's ability to inherit or pass on money, own property, access education, participate in politics, marry, travel, or access specific labor markets. But what caused gender disparity to arise?

Four distinct social revolutions naturally occur, transitioning societies from hunter-gatherer to horticultural, agrarian, industrial, and finally post-industrial. The transition to horticultural or agrarian society caused a departure from egalitarianism as the role of males and females drastically changed.[1] Men and women no longer played equal roles in the production of food as men's physical strength gave them a comparative advantage in field work. Women turned to domestic work and childrearing. Additionally, because of agrarianism, societies developed surpluses of food, which led to the development of a hierarchical structure to control the surplus, and ultimately "higher levels of inequality."[2]

While gender inequality results, the transition to an agrarian society is a necessary step in societal development. Food surpluses allow humanity to focus on developing human capital instead of pursuing sustenance. Doing so transitions society from agrarian to industrial with a focus on the production of goods and eventually to post-industrial with a focus on services. While gender inequality persists with each of these societal revolutions, a marked decline in disparity occurs the further the society is removed from its agrarian roots.

Chapter 2: The Causes of Systemic Gender Disparity

In her book, *So You Want to Talk About Race*, Ijeoma Oluo claims race was used by white men to create an economic hierarchy to propagate privilege and advantage.[3] A similar claim can be made of gender. While gender disparity may have arisen naturally due to agrarianism, it's propagation in a post-industrial era is due to a wide variety of systemic forces, such as access to education and white collar work, gender division of labor, marriage, reproductive rights and motherhood, and psychology. Only by challenging these systemic constructs can women begin to make true progress toward equality of opportunity and equal pay.

The Gender Wage Gap

The gender wage gap is one of the clearest indicators of gender equality in a country, "because relative earnings often signify how individuals are valued socially and economically."[4] The gender wage gap refers to the differential between average male and female salaries and is calculated using the female-to-male earnings ratio. This ratio experienced a rapid decline beginning in the early 1980's, extending through 2000. Starting in the 2000's, however, the earnings ratio seems to plateau at just below 80%.[5]

The large gap before the 1980's, nearly 55%,[6] is largely explained due to disparities in human capital and work experience between male and female workers. Men were more likely to have an advanced education and had nearly 7 years more full time work experience than women. By 2010, however, women were more likely to have an advanced degree and had only 1.4 fewer years of full time experience.[7] Ignoring nursing and K-12 teaching (pink-collar professional jobs), women made significant gains in traditionally male-dominated fields,

nearly eliminating the female-to-male employment gap within these professions.[8] The gender wage gap greatly narrowed as a result of drastic improvements to female human capital over two decades. The plateau in the female-to-male earnings ratio suggests that the disparity in human capital was not the only cause of the wage gap. So why do women still earn 20% less than men?

Access to Education and White Collar Work

The women's labor force participation rate is best described as a U-shaped function of economic development, suggesting that an investment in both capital and human capital is one of the surest ways of improving gender equality. As women gain access to the labor force, they "gain freedoms in the polity, in the society, and in their own households."[9]

In areas of low economic development, women tend to participate in the labor force at quite high rates, usually as unpaid labor on family farms or in home workshop production (these women are counted in the labor force in these countries). As countries develop, however, labor often shifts to higher waged labor in large-scale agriculture and factories.[10]

The income effect describes how a change in a person's real income affects demand. With respect to the supply of labor, as real income rises, the quantity of labor supplied increases, but only to a certain point due to the substitution effect. The substitution effect describes that a relative price change in one good will increase the demand for a substitute good. In the labor market, a substitute for labor is leisure. While the income effect dominates the substitution effect at lower income levels, at a certain point the reverse occurs as the marginal benefit to leisure time outweighs the marginal cost of labor for additional income. Due to these effects, there is a consistent decline in women's labor force participation rates as countries begin to develop and labor moves away from small family enterprises to large-scale factory production. "While increasing income," technological advancements in agriculture and manufacturing "displace female workers through a reduction in female-specific tasks and an increase in machinery operated by men." [11]

Women's labor force participation rates often decline when labor markets progress to paid manual labor outside the home because of prevailing social stigmas: "Only a husband who is lazy, indolent, and entirely negligent of his family would allow his wife to do such labor."[12] This stigma appears to be unique to jobs involving manual labor as it doesn't appear to apply to white-collar work. The stigma also appears to be positively correlated with the income effect, explaining the decrease in the U-shaped function.

Conversely, as women drop from the labor force, there are increased opportunities for young girls to continue their education. The U-shaped function only begins its ascent once countries become sufficiently developed to allow girls to continue their education beyond primary schooling. When low levels of economic development exist, "education increases for males far more than for females."[13] In more developed countries, however, female education increases at a faster rate than male education, though there still remains about a 15 percent disparity between the education of males and females.[14] Access to higher education allows women to rejoin the labor force in non-stigmatized positions in the white-collar sector, since being educated gives women options and removes the social statement about the quality of her husband.[15]

Access to education and white-collar jobs is key to improving gender equality. "Both increases the substitution effect and decreases the income effect," thereby allowing the labor force participation rate to rise and giving women access to higher paying work.[16]

College Major

Although women now account for a larger percentage of advanced degrees, "women continue to lag in the STEM (science, technology, engineering, mathematics) fields, particularly in mathematically intensive fields."[17] Studies show the differential in high school mathematics scores between average male and female students is insignificant, and yet "there is continuing evidence of a gender difference at top performance levels, with males outnumbering females at the very high ranges of science and math tests."[18] This differential leads to a disproportionate number of males studying mathematically intense fields in college.

Marriage and Patriarchy

The concept of marriage today is drastically different than in the past. The term "marriage" was established in Middle English around 1250-1300 C.E., although the practice existed prior to this. During this time, marriage occurred not out of two people being in love, but rather out of economic and political necessity. Marriage was a way to combine two families' labor forces, wealth, power, and status. Marriage was cooperative, not exploitative.[19] Merging two families and their resources was a more efficient way to survive. Marriages were business deals and marriage contracts including dowries that served as an injection of land, labor, and capital. As civilization grew more complex, however, marriage became a way for elite families to hoard their wealth and establish a hierarchical system.[20] As with any hierarchy, power dynamics formed. It wasn't until the late eighteenth century in Europe and North America that the notion of marriage for love became an ideal. With this transformation also came a change in how people understood the gendered roles of marriage. In the nineteenth century, men assumed the roles of providers and women the roles of nurturers.

The protective theory of marriage is a relatively new construct, and yet is one of the most widespread myths as to the origin of marriage. The theory states that marriage creates a union in which the male protects the female from predators and rival males in exchange for "exclusive and frequent sex."[21] The theory of male dominance and female dependence, however, has been debunked by many theorists. In hunter-gatherer societies, women gatherers often contributed more food than male hunters. Additionally, females were often used in hunting strategies that required encircling large prey and chasing the prey off cliffs or into traps.[22] Women provided for their families at least as much as men, if not more. The division of labor allowed families and communities to be conservative while also taking risks. Women could gather guaranteed food for survival while men used new weapons to hunt for potential large game that would allow the community to flourish. Male and female roles were different, but they didn't empower one gender over another. It wasn't until agrarianism developed that the contribution of men and women changed, allowing men to rise within the newly established hierarchy.

This unequal distribution of power in marriage today stems from historically gender-biased laws established in a patriarchal society. Until after the Civil War, most states did not afford women property rights.[23] Property was passed down patrilineally, from father to son. A marriage contract required men to support their families, but loosely written laws didn't clearly specify to what level this support must occur. Consequently, women depended on the altruism of their husbands to provide more than the bare minimum subsistence. Although marriage and property laws have changed, men continue to benefit disproportionately from marriage due to continued systemic bias in the labor market and a continued unequal gender division of labor within the family structure.

In the game of marriage, the players share an objective—to minimize the threat of divorce while maximizing their own share of the wage surplus; that is, the excess wages after necessities like food and shelter are paid

for. The players, however, utilize different strategies based on their gender division of labor. In a traditional marriage in which the husband works and the wife stays at home, the husband might choose to supply gifts or vacations, provide a beautiful home for the wife to run, and provide a small share of his wage surplus. Meanwhile, the wife might be obedient, keep a tidy home, raise the children, and cook meals. The more she does to satisfy her husband, the more pull she has when attempting to lay claim to wage surpluses. Marriage thus mirrors "a noncooperative game where the patriarch has a first-mover advantage."[24] While he may choose to provide more than necessary to keep his wife a satisfied "employee," he is more likely to claim any surplus that exists.[25]

Marriage eradicates the competitive market for qualities one looks for in a partner. Because a partner understands their spouse's specific needs and is trained to meet these needs and because few other people are willing to co-parent a child from another marriage, "there is no comparable partner on the external 'marriage market' and so neither spouse is fully competing with other potential spouses their partner could leave them for."[26] As a result, couples are likely to stay in a marriage, even if the marriage is not great. The lack of competitiveness means the simple rules of supply and demand don't apply in marriage. Instead, marriage simulates a "bilateral monopoly" in which the rules of game theory hold.[27] Couples bargain over money, goods, and leisure. A player's bargaining power stems from a disparity in how much better off one spouse would be than the other in the case of a divorce. A woman's bargaining power is typically much lower in a traditional marriage due to the fact that the woman has less work experience and thus less earning potential outside the marriage.

Marriages with two earners play an altered version of this game since there is often an increased surplus and the division of wages and labor are different than in a traditional marriage. If the husband still holds a majority share of excess wages, there may be increased expectations that the wife also holds household and childcare responsibilities beyond that of the husband. Even among couples who believe in an equal division of household responsibilities often see women assume greater responsibilities for childrearing after the first birth.[28] The reverse, however, is not true when the wife holds a larger share of excess wages.

Statistical Discrimination and Motherhood

Perhaps one of the most significant causes of the gender wage gap revolves around "the traditional division of labor by gender in the family."[29] Statistically, women have "shorter and more discontinuous work lives" since they are more likely to take on larger familial responsibilities in the home.[30] They thus have less incentive to engage in professional development that will increase their human capital. Consequently, women often choose occupations that require less on-the-job training or allow for disruptions in labor force participation.

Statistical discrimination may occur when employers are uncertain about the productivity of a group due to real or perceived differences. Women often face statistical discrimination in the hiring or promotion process because of the perception that they are more likely to experience work-force interruptions due to pregnancy or familial responsibility.[31]

Others have attributed some workplace discrimination to women having higher quit rates than men. When type of job is accounted for and all else is held equal, women are no more likely to quit than men.[32] The reasons why men and women quit, however, differ greatly. While men and women are equally likely to quit a particular job, women are much more likely to do so for familial reasons and men for job-related reasons. The negative relationship between children and women's wages is often referred to as the "motherhood wage

penalty."[33]

The motherhood wage penalty incentivizes women to occupy lower waged jobs as the opportunity cost of motherhood is lower. Meanwhile, employers are less likely to invest in women of childbearing age out of fear she will quit, become less productive, or experience constraints on travel and work hours flexibility.[34] Men with children do not face this same discrimination. One study found that while women with children were often deemed less competent and offered lower starting salaries, men with children were viewed as committed and offered higher starting salaries. When resumes were sent out to actual firms, mothers were called back half as often as nonmothers while fathers were called back just as often as nonfathers.[35]

Occupation, Industry, and Firms

Occupational differences is the single largest contributor to the gender wage gap and when combined with industry differences, accounting for over half of the gender wage gap.[36] Locational factors like occupation determined a greater percentage (49 percent) of the gender wage gap in 2010 than they did in 1980 (27 percent).[37] In 1970, women were more often employed in administrative support roles and professional roles like teaching and nursing whereas men were more often employed in managerial roles, blue-collar work, or professional jobs like law, medicine, and engineering.[38] Traditionally female-dominated jobs are often referred to as pink-collar jobs. Segregation within occupational fields has declined dramatically (13.5 percentage points) since 1970 as more women enter managerial roles, law, medicine, and engineering. Yet, segregation levels are still quite high (51 percent) and pink-collar jobs still pay less than traditionally male occupations.[39]

Women's labor supply is more income inelastic than men's. The result: "firms that disproportionately employ women tend to be lower paying overall," thereby explaining why pink-collar jobs like teaching tend to pay less.[40]

Although women occupy a larger number of managerial roles than they used to, they still comprise a relatively small number of top-tier jobs within firms like executive officers, CEOs, board members, partners, or tenured professors. The phenomenon of discrimination from promotion is known as the glass ceiling. It is still unclear as to how much of the lack of female representation in the upper tiers of firms results from actual discrimination verses women still being relatively new entrants to these markets.[41]

One explanation for why women are promoted less frequently is the lack of internal investment in human capital with women by firms. Women lose opportunities for human capital investment due to being a "tied mover."[42] A tied mover refers to a person that earns less than their partner (usually the woman). It thus makes economic sense for the tied mover to relocate and switch jobs when their partner is relocated for work. Although tied moving nets a larger family income, it often occurs at the expense of the woman's job or opportunities for human capital investment. Like the motherhood wage penalty, being a tied mover incentivizes women to find jobs that are geographically flexible. Many STEM-related, high-paying jobs like engineers and physical scientists are geographically clustered, serving as another barrier to entry for married women.[43]

Gender-Biased Laws

While the laws in the United States have changed dramatically with the women's movement—giving women the right to vote, to own property, and to divorce—some laws still serve to exacerbate the gender bias, including laws that allow women to be disproportionately taxed and laws that restrict women's reproductive

rights.

The Tampon Tax is a tax on feminine hygiene products. This state sales tax stems from "a law [that] may appear to be neutral on its face, but [has] a disparate impact on one sex."[44] State sales taxes exist in 45 states and are often the states' largest revenue source. These taxes are imposed on most tangible items with the exception of food, medical supplies, and necessities.[45] Feminine hygiene products are classified as neither medical nor necessary in 38 of these states, causing women to pay sales taxes disproportionately to men.

Women also pay the Pink Tax, which is a premium on products that both men and women use, such as razors, deodorant, shampoo, children's toys, clothing, haircuts, and cars. On average, women pay about 7% more for products due to the Pink Tax, though the percentage varies by product category.[46] The tax has two sources. Firstly, antiquated gender-biased tariff laws make women's clothing and products more expensive to import than men's. Secondly, marketers spend significantly more to advertise directly to women, perhaps because "marketing research shows that [women] make 85 percent of all consumer purchases in the United States."[47]

Laws that restrict reproductive rights severely limit women's options in labor markets. Oral contraception (aka "the pill") was introduced in 1960.[48] The pill was the first form of female contraception and "transferred control of contraception, which had long resided with men, to women who bore the high physical and opportunity costs of childbearing."[49] When the pill was first introduced, laws restricted young girls' access without parental consent as late as 1976.[50]

The legal lowering of the age of medical consent facilitated women's entrance into the labor market. Women born around 1955 had early legal access to oral contraception. The percentage of these women that gave birth to their first child by age 22 was nearly 25 percent less than women born before 1940 who lacked early legal access.[51] This is significant since delaying the first birth allows "women to accumulate human capital," which provides the "largest benefits in terms of labor market outcomes."[52]

While access to birth control is no longer illegal, restrictions to legal access to abortion pose a similar threat to economic gender equality.

Psychological Attributes

Psychological attributes play a large role in the perpetuation of the wage gap. Men and women are raised under specific social norms that greatly impact how they are perceived by others and how they advocate for themselves. "Men are found to place a higher value on money, to have higher self-esteem, to be less risk averse, more competitive, self-confident and disagreeable, and to believe that they control their own fate...to a greater extent than women."[53] These trait differences alter how women and men negotiate salaries and the types of jobs they are willing to accept.

Women are less likely to negotiate a higher salary than men. One study showed that this differential disappears when jobs are advertised as having negotiable salaries.[54] In another experiment, participants analyzed interview tapes and transcripts. The study showed that participants were less willing to work with a woman that negotiated her salary than a man. Thus, if a woman doesn't negotiate her salary, a wage gap is likely to exist, but if she does negotiate her salary, she's less likely to be considered for a job.[55]

Multiple studies show that women are more averse to competition than men. This manifests in multiple ways. Not only are women less likely to select a competitive compensation scheme (one that doesn't reward

teamwork), but they are also less likely to compete for prestigious male-type jobs.[56] Women are, however, more likely to display competitiveness against other women, say for pink-collar jobs. One study showed that women in matriarchies (citing the Khasi in India) are more likely to choose a competitive environment than men.[57]

Women are statistically more risk averse than men. Consequently, they are less likely to enter professions that have variable earnings for themselves or professions where their performance could have a variable impact on a client.[58] Another study, however, showed that women in high-risk fields are no less risk averse than their male counterparts. Risk aversion thus accounts for lower pay due to occupational sorting, but not "within occupational earnings differences."[59]

Chapter 3: Moving Toward Equality

Moving toward equality is often a long, arduous journey. It requires being informed of the systemic factors that contribute to sustained disparity. It requires an understanding that not all women share a common experience and thereby understand that there is no one size fits all solution. It requires men and women to see value in each other and to divide employment and home responsibilities evenly. And it requires a change in our laws and our representatives in government to more accurately depict the diverse racial and gender make-up of our society.

Intersectionality

The female-to-male earnings ratio paints a clear picture of gender disparity in wages, but fails to paint a holistic picture of the problem. While the average woman earns approximately $0.80 for every dollar a man earns, the gap is much larger for some women than others. When examining the intersectionality of gender and race, it becomes clear that some women (and men) experience much larger gaps than others. The table below compares the earnings ratio of various intersectionalities with white males in 2018.[60]

Intersections	Earnings Ratio with White Males
Asian Female	93.5%
White Female	81.5%
Black Female	65.3%
Hispanic Female	61.6%
Asian Male	123.9%
Black Male	73.4%
Hispanic Male	71.9%

Intersectionality clearly provides an important distinction between the wage gap faced by white women and that faced by women of color.

The economic history of black women in the labor market in the United States diverges significantly from that of white women. If education was not a barrier to entry into the labor market, then they faced racial discrimination that denied them entry even into pink-collar jobs. It wasn't until the passage of Title VII of the 1964 Civil Rights Act that equal opportunity became law as "did parity…in hiring for pink collar occupations."[61]

Prior to the Civil War, black women could work in agriculture or domestic service. Manual labor did not carry

the same stigma as it did for white women due to America's history of slavery. When slavery was abolished, black women initially left the labor force, but quickly rejoined at incredibly high rates to support their families. The wage disparity between white and black men meant black families needed two wage earners to survive.[62]

Although access to labor unions, defense industries, and schools improved, black women still did not receive the same access to factory work as white women prior to World War I. Although a large number of black women found work in cigarette and cigar factories, 95 percent of black women still worked in the fields or in the home.[63] By 1910, white women received the opportunity to move into more clerical work and out of factories. But it wasn't until a few years later that a labor shortage caused by World War I allowed black women to move into the industrial jobs that white women were leaving.[64]

By 1930, 56 percent of native-born white women worked in white- or pink-collar jobs compared to just 5 percent of black women. Ninety percent of black women still worked in agriculture or domestic services.[65] Black women struggled to find jobs because they hadn't had much time since emancipation to demonstrate an ability to do skilled work, they had access to lesser educational facilities, and few black businesses and professional institutions existed.[66] Up until this point, the majority of black women employed in white- or pink-collar work were employed by businesses run by black men. World War II was a major turning point for black women as educated black women received the opportunity to work clerical jobs for the government. After the war, these women were permitted to keep these jobs, paving the way for other black women to move into similar positions.[67]

Come the mid-20th century, the Civil Rights movement began to desegregate schools. Black people began to see representation in politics and civil rights activities fought to eliminate unfair employment opportunities.[68] As housing and neighborhoods desegregated, however, white flight moved many jobs to the suburbs, creating significant structural unemployment for black people. Despite this movement, the number of black women in clerical and professional positions drastically increased, 200 percent and 50 percent, respectively.

The establishment of the Equal Employment Opportunity Commission and the passage of Title VII of the Civil Rights Act in 1964 forbade employers from discriminating on the basis of race, color, religion, sex, or national origin. By 1970, less than half of employed black women worked in service and the number of black professionals was slowly climbing.[69]

Although black women have made significant strides since the 1960s, the wage gap between women of color and white men is still significant. It's not enough to fight for women's rights alone. Although women of color benefit from improvements for white women, historically it's taken several years longer for women of color to catch up to white women in the labor market. While all women face a host of social and psychological barriers, women of color face those same barriers plus those established by race.

Childcare Funding

A myriad of government interventions have been experimented with across the globe to improve disparities along the intersectionality of income and gender. Ranging from the implementation of minimum wage laws, legislation around hiring practices, and childcare subsidies, regulations have always and continue to be highly controversial when it comes to effectiveness and feasibility.

Childcare subsidies are an effective way to improve the quality of life for families, but not all are efficient. Subsidies that fund parental childcare are biased toward two-parent homes. They also reinforce gender roles

setting back the women's movement. When childcare subsidies apply to working and nonworking women, they promote the idea that women should drop out of the labor force.[70] Providing subsidies only for paid childcare helps eliminate statistical discrimination.[71] When women return to work quickly after giving birth, "employers no longer assume that all women workers under 40 are in essence temporary workers."[72]

Efficient childcare for infants and toddlers can occur at a ratio of one adult to three or four children and for younger children at a ratio of one adult to seven to ten children.[73] Funding childcare organizations is economically more efficient than individual parents.

Two non-subsidy options include paid leave and un-earmarked cash benefits. While the government typically funds paid leave, relieving the financial burden from companies, it reinforces statistical discrimination, incentivizing companies to hire men who are less likely to take an extended paid leave. Un-earmarked childcare cash benefits provide money to families with children, often through tax rebates or credits, that families can use at their discretion. While these benefits, arguably, provide more freedom to families to decide how and for how long to provide care for their children, they disproportionately benefit men. Since the money is not earmarked specifically for childcare, families, especially low-income families, typically do not spend the entire sum on childcare-related products and services.[74] Because men traditionally earn higher wages, the decision on how to spend un-earmarked cash benefits also lies disproportionately with men despite the more active role of women in childcare. Consequently, subsidizing non-parental childcare is the most effective and efficient way for the government to support childcare and gender parity.

Finally, requiring companies to offer maternity and paternity leave inevitably results in increased levels of statistical discrimination because it places the burden of paying for a replacement worker on the firm. In Sweden, although the government encourages both men and women to take parental leave, the majority of extended paid leave falls on women.[75] To reduce statistical discrimination, the government must not only pay for maternity and paternity leave, but also fund replacement workers.

Matriarchy

Matriarchal societies, as compared to patriarchies, are "gender-egalitarian and consensus based societies."[76] Matriarchy does not mean "ruled by women" nor is a matriarchy the "mirror-image" of a patriarchy that depends on "enforcement structures, private ownership, colonial rule, and religious conversion."[77] Instead, matriarchies are based on more maternal values like conflict resolution, peace, and caretaking.[78]

China's last surviving matriarchy, the Mosuo, serves as an example of this modern day counterculture. The Mosuo are mother-centered and composed of matriclans made up of three generations of women and their brothers. The matriclans live in a clan-house run by the matriarch, though private ownership is not allowed. Matriclans maintain usage rights to the land they communally farm. The matriarch is responsible for ensuring that all goods are evenly distributed among the matriclan. Decisions for the household and village are shared using a consensus process that the matriarch facilitates. Men and women have an equal vote.[79]

Men and women of the Mosuo engage in loose relationships know as "visiting marriages."[80] Unlike traditional marriage, there is no social status, economic, or political benefit to visiting marriages. Men continue to live in their mother's home and, if permitted, may visit the female matriclan's house overnight as a guest. It is common for women to experience many visiting marriages over her lifetime, often one right after another. No negative stigma exists as with divorce. Additionally, women decide whether they want to have children and

with whom. Children are raised communally by the matriclan.

This form of matriarchy may not be a solution in the United States, but it provides many lessons. Mosuo girls face fewer social stigmas and typically grow up less risk-averse. Children are raised communally with a large family support system that doesn't restrict women's access to labor markets. Visiting marriages prevent the formation of unequal power dynamics. Finally, men and women share an equal vote in decision making. Perhaps the solution to gender inequality lies in changing our foundations by moving away from patriarchy.

Temporal Flexibility

Improving gender equality doesn't require government intervention, altering women's psychology, or requiring men to contribute more in the home, though all these things wouldn't hurt. The United States has witnessed a convergence "between men and women in labor force participation, paid hours of work, hours of work at home, life-time labor force experience, occupations, college majors, and education, where there has been an overtaking by females."[81] At this point, the wage gap is less explained by human capital differentials, but rather by women being temporally less flexible. Consequently, the surest way to close the remaining wage gap is to change labor markets to have more flexible time requirements and to stop rewarding individuals disproportionately who are able to work long hours or particular hours.[82]

Linear pay scales reward people proportionally with the number of hours they work whereas nonlinear pay scales are income elastic with respect to hours worked. Jobs with nonlinearities disproportionately benefit men who are less likely to serve as the primary childcare provider in a family. Where nonlinearities exist, the gender wage gap is greater.[83]

Many industries needlessly prioritize individuality and preference, which reduces the substitutability of labor and creates increasing opportunity costs for firms.[84] While patients may prefer a specific doctor, other doctors are capable of performing the same surgery. Men are incentivized to promote this structure in the workplace as increased individuality or preference makes them more valuable since lack of substitutability promotes nonlinearity.[85] For women who traditionally have larger familial responsibilities than men, lack of substitutability means greater pay disparity.

One way to promote substitutability is to reduce self-employment. Professions that have done so—dentists, pharmacists, veterinarians, lawyers, and optometrists—have seen "a reduction in the premium to long and unpredictable hours" along with a narrowing of the wage gap.[86] Newer industries like tech have been especially successful at reducing nonlinearities and promoting temporal flexibility and have nearly negligible wage gaps. Older industries must follow suit, as "gender equality is not a zero sum game in which women gain and men lose."[87]

Classroom Activities

Students will earn points in Activities 1-4 that they will use to "purchase" a test grade. Be sure to reiterate this to students as it will incentivize them to participate in each simulation as intended. It may be helpful to read Activity 5 first. It may also be motivating to tell students how many points they'll need to earn an A. Don't reveal that there are two different price menus yet.

Activity 1: Comparative Advantage

Sequencing and Objectives

This activity should be completed before studying comparative advantage. After the activity, students will be able to explain that not all resources are perfectly substitutable and that specialization maximizes productivity. Students will also be able to explain how comparative advantage led to the rise of gender disparity during the agrarian revolution.

Overview

The class will collect physical fitness data by measuring strength, speed, and stamina of male and female students. Be sure to announce the class before that students should dress appropriately and wear sneakers.

Directions

1. Divide the class into five groups of approximately five students. Try to ensure that each team has approximately the same number of male and female students.
2. Select 5 exercises: pushups, suicide sprints, squats, chin-ups, crunches, burpees, lunges. All teams must complete the same 5 exercises. I'd encourage you to collaborate with a physical education teacher. They'll be more than excited to help!
3. Each group must assign one person to each exercise. No person can do more than one exercise. If someone is physically unable to participate, allow them to record data. Encourage students to participate, reminding them that this is an economics experiment. Record who is assigned to each exercise.
4. Have students complete their exercises and record their reps. To save time, students can do this at home for homework.
5. Total each teams reps. The team with the most reps wins. The winning team will earn 100 points toward Activity 5. Other teams will earn 90, 80, 70, or 60 points, respectively. I'd recommend keeping a log of all the activities' results as they will be referenced in Activity 5.

Discussion Questions

After completing the exercises, return to the classroom and have students record the data for each exercise on the board. They should record the student's name and the number of reps completed. Ask groups to write down discussion questions based on their observations. Begin class discussion with the student generated questions. Below is a list of additional guiding questions. Depending on time, you can do large group discussions or think-pair-shares.

1. What observations can you make about the data? Do any gender patterns exist?
2. How did you decide what people to put with each exercise? Was it because that student loves that exercise?
3. How do you think the results would have differed if students were required to compete in their worst exercise instead of their best?
4. How would your choices have changed if students were allowed to do more than one exercise?
5. Are there any exercises that were exclusively (or primarily) completed by males or females? Why do you think this occurred?

Mini-Lesson

Teach a mini-lesson on opportunity cost and comparative advantage. Use the following example as a guide. Note that the following is an example of an *input* question. The numbers in the table represent how many people are required to either plow the field or complete domestic work.

	Men	Women
Plowing Fields	10	15
Domestic Work	5	5

AP-style free response question:

1. Calculate the opportunity cost for men to complete domestic work. [*A: 1/2 fields*]
2. Calculate the opportunity cost for women to plow fields. [*A: 3 domestic works*]
3. Who has a comparative advantage in plowing fields? Explain your answer. [*A: Men, because their opportunity cost = 2 domestic works whereas women's is 3*]
4. Assume technology improvements decrease the number of men required to plow fields to 5 and the number of women required to plow fields to 5. Who should specialize in plowing fields? Explain your answer. [*A: Neither, no one would have a comparative advantage because their opportunity costs would be the same=1 domestic work*]

Guiding questions for discussion on gender inequality:

1. How did the concept of comparative advantage promote gender roles during agrarian times?
2. What about the agrarian revolution facilitated gender specialization?
3. What types of work do people engage in during post-industrial times? In America?
4. Is gender specialization necessary in the post-industrial world? Why or why not?

Activity 2

Sequencing and Objectives

This activity should be completed before studying oligopoly and game theory. After the activity, students will be able to determine if a dominant strategy exists, how to find Nash equilibrium, and determine if a pareto improvement exists. Students will understand how multiple iterations of a game impacts strategies earlier and later in the game. Finally, students will be able to explain how marriage decisions mirror game theory strategies, discouraging women from working so men can maintain greater bargaining power within the relationship.

Overview

This activity is based on the game show "Friend or Foe?" and introduces students to decision making using game theory. Students will work in teams of two to answer AP-style multiple choice questions. Students will play 4 rounds with 5 questions each. Each correct answer is worth 20 points. At the end of each round, teams must decide how to split the points they just earned. Students will be allowed to talk to one another during rounds 1 and 3, but not allowed during rounds 2 and 4. You can use any topics you've taught prior to this as source material for review questions. I'd recommend pulling questions from past exams or from the College Board question bank.

Directions

1. Make decisions cards that say "Friend" or "Foe." Each student will need one set of these cards.
2. Divide students into teams of two. Teams must sit together so they can collaboratively answer questions. Remind students that they will use these points during Activity 5 to "buy" their grade.
3. At the end of each round, display the round's payoff matrix, seen below. The values in the matrix represent what percentage of the team's points that student will receive. Note that the percentages in each cell do not necessarily add to 100%. Give teams 3 minutes to analyze the payoff matrix and make a decision. Students may discuss their strategies with one another during rounds 1 and 3, but are prohibited from collaborating during rounds 2 and 4. [There is a dominant strategy for both players to choose *Foe* in matrix 1 and a dominant strategy for player 1 is to choose *Friend*, while player 2 chooses *Foe* in matrix 2.]
4. After 3 minutes, separate the team members and ask them to secretly choose *Friend* or *Foe*. Collect their decision cards. Be sure their names are on the backs.
5. Reveal each team's decisions before proceeding to the next round. This is necessary as it will affect trust in future rounds. Record how many points each player receives.
6. Complete three more rounds. Remember students are not allowed to collaborate in rounds 2 and 4.

Payoff Matrix Rounds 1-2	Player 2	
	Friend	Foe
Player 1 Friend	75, 75	40, 100
Player 1 Foe	100, 40	50, 50

Payoff Matrix Rounds 3-4	Player 2	
	Friend	Foe
Player 1 Friend	80, 20	30, 30
Player 1 Foe	0, 0	20, 80

Discussion Questions

After completing the four rounds, ask students to reflect on the following questions in their teams. Ask teams to develop 1-2 additional questions they would like to ask a specific team or the class as a whole based on their observations from the game. Give teams 5 minutes to discuss and then open discussion to the entire class.

1. How did you decide what to do? Is it solely based on trust?
2. How did the two different payoff matrices affect your strategy?
3. Did you and your partner act rationally? Did you always select a strategy that would maximize your benefit? Why or why not? If you chose to act irrationally with regards to points, what were you valuing more than points?
4. Consider matrix 2. Assume two players decide to reward one player each round so benefit is maximized (both choose *Friend* in one round and both choose *Foe* in the other round). In doing so, both players get 80% of the points in one round and 20% of the points in the other round. Does it matter who benefits first? Explain.
5. If you're going to betray your partner, when is the best time and why? Why not at other times?

Mini-Lesson

Teach a mini-lesson on oligopoly and game theory. Start with the classic *Prisoner's Dilemma* to review the concepts of dominant strategy, Nash equilibrium, and pareto improvement. Then, use the "Battle of the Sexes" game as an extension. The first value in each cell represents the husband's utility while the second represents the wife's.

Scenario 1		Wife	
		Football	Opera
Husband	Football	3, 2	2, 1
	Opera	0, 0	1, 3

Scenario 2		Wife	
		Football	Opera
Husband	Football	3, 2	2, 1
	Opera	0, 0	4, 3

In these scenarios, a husband and wife must decide whether to watch a football game or go to the opera. The husband favors football over opera and the wife favors opera over football. Each benefits from doing their preferred activity alone. In Scenario 2, the wife tells her husband that if he chooses to go to the opera with her, she will make it up to him later, increasing his utility from 1 to 4.

AP-style free response question:

1. Consider Scenario 1.
    a. If the husband chooses football, what will the wife choose?
    b. Identify the Nash equilibrium or equilibria actions for this game.
2. Consider Scenario 2.
    a. Does the husband have a dominant strategy? Explain.
    b. Identify the Nash equilibrium or equilibria actions for this game.

Gender Inequality Prompts

Have students work in small groups to discuss Prompt 1. Have groups share their ideas and address any misconceptions or concerns before sharing the second prompt. If time permits, have students discuss in groups and then have groups share their ideas with the class. Alternatively, these prompts are very conceptual and would serve as a good thought exercise for homework. If used as homework, discuss students thoughts the next class.

Prompt 1

Economically a family is better off when both parents work. Their net income is higher and both the husband and wife can continue investing in human capital, further raising potential future income. Yet, Elissa Braunstein and Nancy Folbre suggest that husbands often encourage their wives to stay at home to take care of children because doing so increases their share of the wage surplus. Although the pie is smaller, the husband receives a larger slice.

Examine the partially completed payoff matrix below. Identify possible values for the blank cell that would result in a Nash equilibrium in which the husband works full-time and the wife works part-time and takes care

of the children. [*Sample Answer: 55, 45*]

		Wife	
		Work Full-Time	Work Part-Time with Childcare
Husband	Work Full-Time	60, 40	
	Work Part-Time with Childcare	40, 60	50, 50

Prompt 2

Stephanie Coontz refutes the validity of the protective theory of marriage. This theory supports the notion of men as the provider and women as the caregivers and is the foundation for the "traditional" 1970's view of marriage. Use your completed payoff matrix to explain why it is economically irrational for husbands to encourage their wives to stay at home to take care of the children.

[*Sample Answer: There is always an economic incentive for wives to choose to work. In order for a wife to choose to work part-time, the husband must increase her share to the wage surplus above that of when she works (45% instead of 40%). This is economically irrational since the family income would be less and the husband's share of the wage surplus would also be less. As Braunstein and Folbre suggest, if acting rationally, the husband would only choose to encourage his wife to not work full-time if doing so increased his share of the wage surplus. Therefore, any husband who does so is acting irrationally.*]

Activity 3

Sequencing and Objectives

This activity should be completed after studying government intervention to market failure. The purpose of this activity is to gauge students' tacit understanding of statistical discrimination in hiring practices. After the activity, students will be able to define statistical discrimination and will be able to identify efficient forms of government intervention that correct for market failure caused by statistical discrimination.

Overview

Students will answer a series of 5 prompts. Each prompt asks students to take on the role of a hiring manager and consider how gradually decreasing work hours impacts their hiring decisions. Afterward, the class will analyze the data to determine if the class shows statistical discrimination against hiring women.

Directions

1. Create a Google Form with the five prompts listed below. Set a 2-minute timer for each prompt. The point of this timed survey is to gauge students' innate reactions without giving them much time to consider the underlying implications of their responses.
2. Have students complete the Google Form on their own. This can be done for homework to save time.
3. Project each prompt one at a time on the board. Give students 5 minutes to discuss each prompt with

their tables and to come to consensus about an answer. Display the following discussion questions on the board in addition to the prompt.
   a. Who are you more likely to hire and why?
   b. What are the pros and cons of taking government-sponsored action from a production standpoint? Consider what you know about production and productivity.
4. While students are discussing the prompts, access the student responses online and be prepared to project the results on the board after the discussion ends. Once prepped, circulate the room to listen to student discussion so you can create talking points or prep questions to push the students' thinking.
5. After students are done discussing each prompt, have groups share their final decisions with the class. Record these decisions on a piece of chart paper. The class will examine these results at the end of the discussion.
6. Everyone earns 100 points toward Activity 5 for participating in the survey.

Prompt 1

1. To what extent do you think that race plays a role in hiring practices?
2. To what extent do you think that gender plays a role in hiring practices?

Prompt 2

You are the hiring manager of a company that makes widgets. Your employees work from 9 am to 5 pm with a paid 30-minute lunch break. Any additional breaks or time off is unpaid. Research shows that people are happier, healthier, and more productive when they get an hour break so the government decides to subsidize people who take 60-minute lunch breaks by providing them with a tax credit.

Assume that these two applicants are completely identical except in their choice of how long of a break they plan to take for lunch. On a scale of 1 to 10, with 1 being least likely and 10 being most likely, how likely are you to hire the following people?

1. Carlos who plans to take a 30-minute lunch break
2. Lisa who plans to take a 60-minute lunch break

Prompt 3

You are the hiring manager of a company that makes gizmos. Your employees work from 9 am to 5 pm and sign up biweekly to work five chosen days a week. Any additional days off are unpaid. Research shows that people are happier, healthier, and more productive when they work fewer hours so the government decides to subsidize people who work four days a week by providing them with a tax credit.

Assume that these two applicants are completely identical except in their choice of how many days a week they plan to work. On a scale of 1 to 10, with 1 being least likely and 10 being most likely, how likely are you to hire the following people?

1. Lavon who plans to work 5 days a week
2. Linny who plans to work 4 days a week

Prompt 4

You are the hiring manager of a company that makes whatsits. Your employees work from 9 am to 5 pm. Any

additional days off are unpaid. Research shows that people are happier, healthier, and more productive when they receive maternity/paternity leave so the government decides to subsidize people who take maternity/paternity leave by providing them with a tax credit.

Assume that these two applicants are completely identical except in their choice whether they plan to take maternity or paternity leave. On a scale of 1 to 10, with 1 being least likely and 10 being most likely, how likely are you to hire the following people?

1. Brian
2. Maria

Prompt 5

You are the hiring manager of a company that makes whoseits. Your employees work from 9 am to 5 pm. Any additional days off are unpaid. Research shows that people are happier, healthier, and more productive when they receive maternity/paternity leave so the government decides to subsidize people who take maternity/paternity leave by providing them with a tax credit.

Assume that these three applicants are completely identical except in their choices of whether to take maternity or paternity leave and for how long. On a scale of 1 to 10, with 1 being least likely and 10 being most likely, how likely are you to hire the following people?

1. Lianne who plans to take an extended maternity leave (two years)
2. Lisbeth who plans to take a shorter maternity leave (six months)
3. Elio who doesn't plan to take paternity leave

Reveal Data and Class Discussion

Project the results of the individual responses on the board and have the group responses on chart paper displayed nearby. Below is a list of possible guiding questions. Use these questions plus any that you may have written down while listening to the students' discussions to facilitate a discussion on statistical discrimination in hiring practices and ultimately to propose the prompt, "What can the government do to promote gender parity in the labor market?" Refer back to the content sections on temporal flexibility and childcare funding.

1. Were student responses drastically different from one prompt to the next?
2. How did individual responses differ when students were given more time to think about and discuss the implications?
3. Did students lean more heavily toward hiring Brian than Maria in Prompt 3?
4. What are the implications of maternity/paternity leave for a company?
5. What does it mean about hiring practices that students were more likely to hire Elio in prompt 4?
6. Does requiring companies to provide maternity and paternity leave help improve gender parity? Why or why not?

Activity 4

Sequencing and Objectives

This activity should be completed after studying government intervention to market failure but before

studying inequality. The purpose of this activity is to illustrate the effects of the Pink Tax. After the activity, students will be able to explain that some laws are gender-biased and promote income inequality.

Overview

This activity is based on a game from the TV show *The Price Is Right* where contestants must guess the prices of various objects. Students will all be given the same basket of products to price with the exception of color. This experiment will determine if males underprice female-oriented products and if females overprice male-oriented products.

Directions

1. Create two digital baskets of goods: a blue basket and a pink basket. Each basket should consist of disposable razors, deodorant, pens, a children's bicycle helmet, a pair of jeans, a shirt, cologne, and a posture support brace. Images and prices for each of these products can be found online.[88]
2. Divide the males into two equal groups (Groups A and B) and the females into two equal groups (Groups C and D).
3. Groups A and C will price the blue basket. Groups B and D will price the pink basket. Groups A and D will serve as control groups. I hypothesize male students will have an easier time guessing the price of male versions of the goods while female students are more likely to correctly guess the price of female versions of the goods. Additionally, male students will underprice female versions and female students will overprice male versions due to their familiarity with the prices of their own-gendered versions of products.
4. Calculate the average price differential per student. Students with an average differential of 25% or less will receive 100 points. Everyone else will receive 50 points.

Discussion Prompts

Once the data has been collected, share the data on the board. Share the results of each control and experimental group. Have students discuss their observations in groups. Below are sample discussion prompts to guide student discussion.

1. What group was most likely to accurately price a good? Why?
2. What group was most likely to underprice a good? Why?
3. What group was most likely to overprice a good? Why?
4. What's the difference between the male and female versions of these products? What explains the price differential?
5. What are the implications of this price difference between the blue and pink baskets?

Give groups 5 minutes to discuss the results before opening the discussion to the full class. Ask students to share their observations before introducing students to the idea of the Pink Tax. This can be a great discussion starter for the idea of the government's role in the economy and the promotion of gender equality.

Activity 5

Sequencing and Objectives

This activity should be completed after Activities 1-4. The purpose of this activity is to expose students to the realities of the wage gap. After the activity, students will be able to explain the wage gap and its implications

on income inequality.

Overview

Students will tally their points from Activities 1-4 and purchase a grade for the unit using their designated price menu. This exercise is meant to be highly unfair so as to highlight the injustices of the wage gap. It is also meant to help male students better empathize with the plight of their female peers.

Directions

1. Create eight different index cards labeled as follows. Make however many sets are necessary so every student will get one. Do not include the explanation on the card.

Front of Card	Back of Card	Explanation
A	123.9%	Asian Male
B	100%	White Male
C	93.5%	Asian Female
D	81.5%	White Female
E	73.4%	Black Male
F	71.9%	Hispanic Male
G	65.3%	Black Female
H	61.6%	Hispanic Female

2. Ask students to draw and keep one of the cards out of a bag.
3. Reveal that you've been recording points for each of the activities students have participated in.
4. Distribute a score report to each student with their team points for each activity.

		Activity 1		Activity 2		Activity 3		Activity 4		
Student Name	% from Card	Team Pts	Student Pts	Team Pts	Student Pts	Team Pts	Student Pts	Team Pts	Student Pts	Total
Quan	73.4%									

5. Reveal that student points are based on the percentage from the card they just drew. Ask students to calculate their total points.
6. Divide the board in three.
7. On the left, order the students' names based on team points, from highest to lowest.
8. In the center, order the students' names based on individual points, from highest to lowest.
9. Display the following two grade menus on the board and explain that students will receive a test grade based on how many points they were able to earn from the various activities.

Price Menu for Letters A-D   Price Menu for Letters E-H

A: 600+	A: 625+
B: 500-599	B: 525-624
C: 400-499	C: 425-524
D: 300-399	D: 325-424
F: 0-299	F: 0-324

10. On the right side of the board, order the students' names based on test grade, from highest to lowest.
11. Ask students to examine the data on the board. Ask if they have any questions or concerns about their grade and then watch the students explode with anger. Give students a couple minutes to complain and shout about injustice.
12. When a sufficient amount of time has passed, ask students to look back at their salary cards. Reveal the race and gender represented by each card and identify that the percentage represents the average earnings of that worker as compared to a white man.
13. Use the think-pair-share model to have students reflect on this simulation.
    a. Give students a couple minutes to collect their thoughts.
    b. Have students share their thoughts with those at their table
    c. Have groups share out their thoughts.

Guiding Questions for Group and Class Discussion

1. What are their thoughts on this process?
2. Was it fair? What exactly was unfair about it? Why is it unfair?
3. Were any of the percentages surprising? Why or why not?
4. Why do these wage differentials exist?
5. What did the two grade menus represent?
6. What can be done to improve wage equality?

Mini-Lesson

Reveal that students will not actually receive a test grade based on this unjust system. Facilitate a discussion on the economic implications of intersectionality and use it as a launching off point to talk about income inequality in the United States. When talking about the Gini Coefficient and the Lorenz Curve in Unit 6, return to this conversation on the intersectionality of race and gender. Refer back to the content section for relevant information to include in this mini-lesson.

Activity 6

The culminating project for this unit asks students to consider all that they've learned about economics and about gender disparity. Ask students to research the following.

1. How the government intervenes (or how it could intervene) to diminish gender inequality in America
2. How individuals can intervene to diminish gender inequality
3. What community organizations exist that fight for gender equality

Students will earn an actual quiz grade for completing one of the following tasks. In both, students should discuss the systemic causes of the wage gap and what can be done to fix it.

1. Write a letter to your state senator presenting your findings and advocating for political support of

specific organizations that promote economic gender equality.

2. Draft a proposal for how students at your school can get involved (e.g. volunteering at female-driven community organizations, organizing rallies, organizing fundraisers, etc.) to promote economic gender equality.

Appendix: Implementing AP Standards

The standards in this unit are pulled directly from the AP Microeconomics Course Description. There are skill standards and content standards. Below is a list of the skill standards achieved in this unit.

1.D Describe the similarities, differences, and limitations of economic concepts, principles, or models.

2.A Using economic concepts, principles, or models, explain how a specific economic outcome occurs or what action should be taken in order to achieve a specific economic outcome.

2.B Using economic concepts, principles, or models, explain how a specific economic outcome occurs when there are multiple contributing variables or what multiple actions should be taken in order to achieve a specific economic outcome.

2.C Interpret a specific economic outcome using quantitative data or calculations.

Below is a list of content standards that come directly from the AP Microeconomics Course Description. Each of these standards is achieved through the six activities described in the unit. MKT standards refer to standards about scarcity and markets. PRD standards refer to standards about production choices and behavior. POL standards refer to market inefficiency and public policy.

MKT-1.B Define how resource allocation is influenced by the economic system adopted by society.

MKT-2.A

1. Define absolute advantage and comparative advantage.
2. Determine (using data from PPCs or tables as appropriate) absolute and comparative advantage.

POL-1.A

1. Define forms of government price and quantity intervention.
2. Explain (using graphs where appropriate) how government policies alter consumer and producer behaviors that influence incentives and therefore affect outcomes.

PRD-3.C

1. Define (using tables as appropriate) key terms, strategies, and concepts relating to oligopolies and simple games.
2. Explain (using tables as appropriate) strategies and equilibria in simple games and the connections to theoretical behaviors in various oligopoly market and non-market settings.
3. Calculate (using tables as appropriate) the incentive sufficient to alter a player's dominant strategy.

PRD-4.A

1. Define (using graphs where appropriate) key terms and concepts relating to factor markets.
2. Explain (using graphs where appropriate) the relationship between factors of production, firms, and factor prices.

PRD-4.C

1. Define (using graphs as appropriate) the characteristics of perfectly competitive factor markets.
2. Explain (using graphs where appropriate) the profit-maximizing behavior of firms buying labor (with other inputs fixed) in perfectly competitive markets.

POL-2.Aa Define social efficiency.

POL-2.B Explain (using graphs where appropriate) how private incentives can lead to actions by rational agents that are socially undesirable (inefficient) market outcomes.

POL-2.Ca. Explain equilibrium allocations in imperfect markets relative to efficient allocations (using graphs where appropriate) and why these markets are inefficient.

POL-4.A

1. Define government policy interventions in imperfect markets.
2. Explain (using graphs where appropriate) how government policies can alter market outcomes in perfectly and imperfectly competitive markets.
3. Calculate (using data from a graph or table as appropriate) changes in market outcomes resulting from government policies in perfectly competitive and imperfectly competitive markets.

POL-5.B Explain sources of income and wealth inequality.

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