HLE_Chap17_Gender_Kainuma.md

Chapter 17 New Perspectives on Gender

Handbook of Labor Economics, Volume 4B
By *Marianne Bertrand*

Short Summary

This paper reviews the literature on gender difference and its implication to labour economics mainly in 2000s, focusing on *psychological* and *behavioural* aspects.
It consists of two large sections: **Gender Differences in Psychological Attitudes** and **Gender Identity**. Besides, **Women's well-being** is discussed briefly.
Section 2 focuses primarily on laboratory-based evidence regarding gender differences in: risk preferences, attitudes towards competition, the strength of other-regarding preferences (e.g. altruism), and attitudes towards negotiation. Section 3 pays attention to gender identity norm.
Key questions throughout this paper is **what are the possible factors that explain gender differences in labour market outcome?**

Motivation and Observation

- Have observed a declining but persistent **gender gap in labour market outcomes** (e.g. labour force participation, occupational choice, earnings)

Sources of these gender gap

In Altonji and Blank (1999, HLE)

1. Differences in **human capital accumulation**
   - pre-labour market entry (e.g. differences in the type of education women receive)
   - post-labour market entry (e.g. differences in accumulated experience)
2. **Discrimination** (taste-based or statistical)
   - possibly being more pronounced in some occupations

In 2000s

1. Differences in **psychological attributes and preferenes** between men and women
   - Observed differences in:
     - **risk** preferences (section 2.1)
     - attitudes towards **competition** (section 2.2)
     - the strength of other-regarding preferences (i.e. **social preferences**) (section 2.3)
   - attitudes towards **negotiation** (section 2.4)
     - Only a few have shown the empirical relevance of these factors so far, though
   - Source of the differences?
     - **nurture** (social/environmental influence)
     - **nature** (i.e. biological reason)
2. Existence of social norms about *what is appropriate for men and what is for women to do*
   - Imported from social psychology literature on how an individual's social identity can influence behaviours and choices in markets
   - Implications for occupational sorting, labour force participation, and intra-household allocation of work.
     - Possible key drives of social norms: socialisation and child-rearing practices

A declining trend of women's self-reported life satisfaction

- Both in absolute and relative to men's
- Alternative measure of their well-being?

Section 2. Gender Differences in Psychological Attributes

1. Risk Attitudes/Preference

Relevance of risk preference to labour market outcome

- Empirically have shown that individuals with higher risk aversion tend to choose occupations with more stable but smaller average earnings (Bonin et al., 2017)

Question: any systematic differences in risk preferences between men and women

- Review articles: Croson and Gneezy (2009) and Eckel and Grossman (2008a)
- Mostly experimental studies in laboratory
  - Gender comparison in risky gambles choice/valuation, both with hypothetical choices and real stakes
  - Subject sample in most cases: collge students
- These two review papers' conclusion: published experimental findings are broadly consistent with **women being more risk averse than men**
- Higher risk aversion amongst women is also observed in **more general population**
  - Dohnmen et al. (2011, Forthcoming-a) employs a large representative survey of the German population with a complementary experiment on a representative subsample
    - Survey asks self-assessed willingness to take risk and experiment validates this
  - Finds that:
    - the subjective assessment of risk attitude seems a reliable measure of risk preference
    - gender has a quntitatively significant effect on self-assessed risk preference
    - gender hap in risk-taking varies over the life cycle
      - Men: steady decine with age
      - Women: rapid decline from the late ttens to age thirty, flattening between thirty and mid-fifties, and a further drop afterwards
- Systematic gender difference in risk aversion in a few field studies, with more pronounced OVB concerns
  - Financial domain
    - More allocation of the defined contribution pension to low-risk assets amongst a large US firm employees
    - Lower proportions of risky assets holding by single women
    - Gender difference in finalcial knowledge partly drives the difference in risk-taking
  - Other domain
    - domain-specific risk attitudes?
    - Lower average willingness to take risk amongst women in five domains: driving, financial matters, sports and leisure, health, and career
    - Largest gap in driving and financial matters
    - Smallest gap in career

Any gender difference in overconfidence?

- Often offered as an explanation for the gender gap in risk-taking
- Men particularly exhibits overconfidence in their relative ability
- Overconfidence amongst financial investors (Barber and Odean, 2001)
  - Theoretically, an overconfident agent trades stock too mcuh
  - Empirically shows that men trade 45% more than women, resulting in negative impacts on the relative return of their portfolio

---

2. Attitudes Towards Competition

Relevance of competition preference to labour market outcomes

- Highly competitive settings in many high-profile, high-earning ocupations
  - in which winner are disproportionately rewarded
  - Women are said to be relatively underrepresented in those occupations

Empitical (experimental) Researches

- A few experimental papers find that
  - Women may systematically under-perform relative to men in competitive environments
  - Simply women may not prefer such environments

Gneezy et al. (2003)

Studies how men and women perform under different competitive environments

- Setting:
  - Groups of six students at the most compepetive tech university in Israel (three female and male each)
  - Task: Solve mazes individually
  - Two compensation schemes
    a. a piece rate scheme
      - Pay a fixed prize for each maze

    b. a tournament scheme
      - Pay a prize for only the student who solves the highest number of mazes

    c. a random tournament scheme
      - Choose the tournament winner at random
      - Implemented to rule out the possibility of a difference in risk aversion
- Result:
  i. Piece rate: No gender difference in performance
  ii. Mixed-sex tournament: Men strongly increase their performance but women do not

        - About 40% difference
    iii. Random tournament: No different performance level with a piece rate case and no gender difference in performance
    iv. Single-sex tournament: No gender differenec in performance

Niederle and Vesterlund (2007)

Studies the compensation choices men and women make in a mixed-sex environment

- Setting:
    - Task: Solve a series of additions (multiple rounds)
        - Inform participants about their own (absolute) performance but not relative one
    - Compensational scheme
        - First two rounds: Either a piece rate setting or a tournament scheme
        - Third round~: Participants choose either one they prefer in that round
- Result:
    i. No gender difference in performance in the first two rounds
    ii. Gender difference in compensational scheme choice
        - 3/4 of men but 1/4 of women choose the tournament
    iii. Women in the top performance quartile in the first rounds are less likely to choose the tournament than men in the lowest qurtile
- Potential Explanation for *why women stay away from a winner-take-all environment?*
    - Gender difference in overconfidence (overestimation of one's own performance rank)
        - Explains some but not all
    - Gender differences in risk preference and in aversion to negative feedback
        - No much explanatory power
    - Residual gender differene -> **competition aversion**

Niederle and Versterlund (2008): a compelementary paper
Studies the costs and benefits of **affirmative action** in a competitive environment which too few women but too many men enter

- Setting:
    - Implement a quota-like affirmative action policy
        - Tournament winners will be at least as many women as men
- Result:
    - A substantial increase in the share of women wiiling to participate in tournaments under the quota
    - Cost of affirmative action (<- the average ability of the tournament winners) is not as high as predicted without entry decision change
        - because this enhance the entry of high ability women
- Explanation
    - Competition becomes more gender-specific
    - Female competition aversion is lessened in gender-specific competition

Open Questions for Future Research

1. Importance of the **gender composition** of the group in which one competes against
    - Mixed results for the gender composition effect on gender difference in performance
    - Gneezy and Rustichini (2004)
        - Fourth-graders' short distance race
        - No gender gap in performance when running alone
        - Gender gap in the competitive setting (boys outpace girls)
        - Gender gap is more pronounced in the signle-sex races
            - Girls speed decreases only when paired with other girls
    - Gupta et al. (2003)
        - Similar setting to Niederle and Vesterlund (2007)
        - Participants choose a payment scheme AFTER informed whether they are paired with a man or a woman
        - No gender difference in the choice by gender of a paired person
2. Competitive aversion as an **independent factor** like risk aversion and overconfidence
    - Gupta et al. (2005)
        - Risk aversion matters substantially in explaining women's compensation choices
    - Dohmen and Falk (2011, forthcoming)
        - Participants choose either of a fixed pay scheme and three variable payment schemes: piece rate, tournament, and revenue sharing
        - Gender gap in choosing the variable schemes
        - Small and statistically weak gap after controlling for gender differences in risk attitudes
3. **Robustness** of the results to higher stakes as well as to repetition and learning
    - Antonovics et al. (2009)
        - Field data from The Weakest Link (a television game show)
        - No difference in female performance by gender of one's opponent in the field
        - Difference in female performance (i.e. women perform worse) in the laboratory with typical lab stake ($20)
        - No difference in female performance with higher stake ($50 or more)

        - With $50 or more stake, women perform better when they face men than face women (opposite for with $20)
    - Vandegrift and Yavas (2009)
        - Not much explanatory power of gender for tournament scheme entry decision when
            - individual repeatedly face the same task and compensation choices
            - they can learn their actual relative ability

---

3. Social Preferences

- Argued that women are more socially minded than men
    - e.g. stronger redistributive preference

Experimental Studies

- Three types pf experiments are used:

    i. Public good experiments
    ii. Ultimatum experiments
    iii. Disctator experiments

- A difficulty in interpreting and comparing the results of many of the public good and ultimatum experiments
    - Some include *financial risk* while others do not
        - Risk aversion can drive results
    - Some involve choices with *the judgement of others* while other do not
        - Possible gender difference in caring about others' judgement to one's behaviour
- Significant gender difference in social orientation in the experimental studies that possibly rule out risk and anonymity issues
    - Dictatorship experiemnts: less confounded
    - Results in dictatorship experiments are consistent with women giving away more than men

Field Studies

- Have observed that higher level of **altruism** and stronger preferences for redistribution amongst women
- Indirect evidence from observed gender differenecs in political orientation
    - Women are more left-leaning than men today
    - Political gender gap has changed over time
    - Trend may be related to an increase in divorce risk and decline in marriage
        - Economic, rather than pure psychological, explanation is more plausible
- Direct evidence:
    - Funk and Gathmann (2009)
        - Setting:
            - Exploits time-variation in the adoption of female suffrage across Swiss cantons
            - Studies voting behaviour on a broad range of policies
        - Result:
            - Female voting has a substantial impact on the composition of spending
            - Stronger support for redistributive policies and public health spending
            - But not on the total government spending size
    - Alesina and Giuliano (2009)
        - Uses survey data
        - Finds that women are more pro-redistribution than men
            - even after controlling political ideology

---

4. Attitudes towards negotiation

- Negotiation: a competition over resource distribution
- Meta-analyses in late 1990s point out the importance of *situational or contextual factors* for gender differences in negotiation
    - Gender difference is highly dependent on the context

Bowles et al. (2005)

- Whether subjects are told negotiations for themselves or for others matter for gender gap in negotiation outcomes
    - Women's performance improves when negotiationg for others
    - No difference for men
    - Interpretation:
        - Entitlement literature: women may feel less deserving
        - More backlash expectations amongst women
        - More feeling of obligation towards others for women
- *Situational ambiguity* matters
    - Difference in information provision about a good agreement

- Women performs worse with less information

Small et al (2007)

- Examines any gender difference in initiating negotiation
- Setting:
  - Lab experiment that subjects are paid to *the lowest amount possible* after a word game
  - Analyse whether participants ask for higher payment from the experimenter
- Result:
  - Women ask less often than men
  - No gender gap when framed as an opportunity to *ask* rather than *negotiate*
- Interpretation:
  - Women may be more intimidated by the *negotiation* language
  - *Negotiation* might be viewed as inconsistent with the norms of politeness (c.f. politeness theory)

Bowels et al. (2007)

- Examines any gender difference in initiating negotiation
- Setting and Result:
  i. Subjects evaluate male and female candidates that did or did not negotiate for their compensation, in written and video-based.
     - Women that initiate negotiation receive systematically worse evaluation
     - Male evaluators report being more willing to work with women who accepted than with who attempted to negotiation, regardless of women's perceived ability
     - No such pattern for female evaluators
  ii. Subjects are asked to take the candidate's perspective
     - Female subjects are less likely to negotiate in the presence of a male evaluator
     - No such pattern for female evluator
       - Gender of the evaluator: a key driver of the gender gap
       - Cannot fully explained by: nervousness, the anticipation of backlash, the strength of the participants' gender identity

---

5. Empirical Implication for Labour Market Outcomes

Manning and Saidi (2010)

- Setting:
  - British Workplace Employees Relations Survey (1998~2004)
    - Information on the use of performance at the occupation-level within establishments
- Result:
  - Fewer women are in those occupations and establishments that use variable pay, BUT quantitatively small
  - **No significant effect** of the gender mix in a job on the responsiveness to performance pay

Field Evidence on the Impact of Competitive Pressures on Male and Female Performance

- Paserman (2007)
  - Setting:
    - Tennis players' reaction to competitive pressures in Grand Slam tournaments
      - Only single-sex environment
  - Result:
    - Women are more likely than men to commit unfroced errors at critical points
    - Women's first serves become more conservative at critical points
- Laby (2008b)
  - Setting:
    - High school teachers' performance in an academic subject-specfic rank-order tournament
      - Rewarded according to the relative performance of their classes on a test at the same school
  - Result:
    - No evidence that female teachers do worse under the tournament schme
    - No evidence that female teachers' performance relates to the gender mix of the comparison group
  - Differences from lab experiments
    - Time frame under which the task has to be performed
      - 15 mins of maze solving vs months of teaching
    - Experience with the task at hand
    - Tpes of men who become teachers might be a very selected group
    - What is directly measured is kids' performance rather than the teacher's input
- Ors et al. (2008)
  - Setting:
    - Performance in the competitive entry exam to the Haute Ecole de Commerce (HEC) in France
      - Admission rate: about 10%
    - Compare it with the performance in...
      - National high school exam (with less competitive and less stressful)

        - First year of courses at HEC for the admitted students
    - Result:
        - Women perform more poorly than men on the stressful and competitive entry exam
        - Performance distribution for men has much fatter tails
        - BUT the performance of women first-order-stochastically dominates that of men in other two situations
            - Consistent with lab evidence

Field Evidence on Negotiation Aversion of Women

- A few studies have shown that **women are less likely to initiate negotiations**
- Babcock and Laschever (2003)
    - Studies graduating professional school students
    - Finds that 7% of female students and 57% of male tried to negotiate their initial compensation offers
- Babcock et al. (2006)
    - Female are less likely than men to initiate negotiation amongst working adults as well as amongst MBA students on their job offer
    - No gender difference in negotiated starting salaries in low-ambiguity industries
    - Gender gap in high-ambiguity industries
- Greig (2008)
    - Studies investment bankers at a major US investment bank
    - Finds that
        - Women report a lower propernsity to negotiate on behalf of themselves
        - A correlation exists between one's negotiaton propensity and one's rate of advancement and seniority
        - No significant correlation between negotiation propensity and performance
        - Gender gap in negotiation may be a reason of female under-representation at senior levels
- Blackaby et al. (2005)
    - Studies promotion and pay patterns by gender in the UK academic labour market for economists
    - Finds that
        - Gender gaps in promotions and in in the number of outside offers after controlling productivity
        - A corrlation between number of outside offers and earnings for men, but not for women
- Fortin (2008)
    - Studies the role of greed and altruism in explaining gender wage gap
    - Ues longitudianl data to capture psychological characteristics in a pre-market environment
    - Finds that
        - Women score higher on the factors that predict financially less attrative labour market outcomes
            - e.g. more altruistic
        - Gender gaps in those factors have shrunk, particularly in ambition and leadership
- Manning and Swaffield (2008)
    - Studies the importance of psychological factors in explaining the gender wage gap in early-career wage growth in the UK
        - proxies for the psycholoical factos prior to labour market entry
    - Finds that a set of psychological factors matters to the gender gap BUT much less than human capital facors

---

6. Other Personal Traits

Big FIve model

1. Extroversion
2. Agreeableness
3. Conscientiousness
4. Neuroticism
5. Openness to experience

- Gender diffrences are documented
    - **Women are more agreeable and more neurtic than men** in psychology literature

Mueller and Plug (2006)

- Studies the effects of personality traits on earning by gender
- Gender differences in the Big Five personality traits
    - Higher **agreebaleness**, **neuroticism**, extoversion and openness
- Gender differences in the return to personality traits
    - Positive returns to openness for both men and women
    - Positive returns to being not agreeable for men
    - Positive returns to being conscientious for women
    - Only 3~4% of the gender gap in earnings is explained by gender differences in *mean personality traits* and in *returns to those personality traits*.
    - **Antagonism** (not agreeable) is a key driver of this gender gap by Oaxaca-type decomposition

- Personality traits matter to earnings heterogeneity as much as cognitive ability does but much less than other factors like education

Niederle and Yestrumskas (2008)

- Studies female lower desire to seek challenges through experiments
- Finds that
  - Women avoid higher difficuty levels on a task even without gender differences in ability and beliefs in own ability
  - Gender differences in risk aversion and confidence can fully explain this gender gap
  - Suggests that this might be related to women's under-representation in high profile occupations

Borghans et al. (2005)

- Focuses on *interpersonal skills*, arguing that technological and organisational changes have induced an increase in the demand for interpersonal skills
- Shows that the importance of people tasks increased rapidly between the late 1970s and the early 1990s
  - This shift in demand might be beneficial to women
  - Occupations in which people tasks are more important employ more women
  - Possible contribution to the decline in the gender wage gap in the same period

Gender difference in Behavioural Problems

- Gender differences in the incidence of behavioural problems betweem boys and girls in school age, but **Why**?
  - Hypotheses:
    a. Women are better than men at delaying gratification
      - Small but significant difference

    b. Women experience puberty and mauntation earlier
      - Kindergarten' emphasis on didactic knowledge moving from experiential knowledge might have a detrimental effect on boys though this development difference
      - BUT no strong evidence for the hypothesis that starting kindergarten at an early age is detrimental to boys
- Gender differences in the behavioural problems matter for the gender gap in college attendance
  - Non-cognitive behavioural factors can explain most of the female advantage in college enrollment

Personality Traits and Preference Parameters

- Gender difference in emotional or affective reaction to risk (Croson and Gneezy,2009)
  - Indeed, women experience more stress, fear or dread in situations with risk or possible negative outcomes
- Women underestimate large probabilities of gains more strongly (Fehr-Duda et al., 2006)
  - May be linked to risk aversion
  - Other studies have shown that women also overestimate the probability of negative outcomes
- Personality traits predict risk avertion (Borghans et al., 2009)
  - Less agreeable, more neurotic and more ambitious is associated with lower levels of risk aversion
  - BUT controlling for these psychological traints does NOT explain much of the gender gap in risk aversion

---

7. Where Gender Differences Come From?

- **Biological differences** matters
  - e.g. menstrual cycle -> disadvantage for women
- Medical progress has reduced the gender gap in education and labour force participation?
  - technology has reduced the influence of the biological differences
  - Availability of **oral contraceptives** increased the likelihood of college-educated women choosing furtuher investment in log-duration professional education (Goldin and Katz, 2002)
  - **Legal access to the pill** for young unmarried women increased their labour force participation (Bailey, 2006)
  - Medical improvements in **maternal health** and the introduction of **infanct formula** increased the labour force participation of married women of child-bearing age
- Gender difference in preferences and personality traits -> biological roots (*nature*) or environmental influence (*nurture*)?
  - Their relative importance has important policy implications
    - If *nurture* is stronger, educational reform might work
    - If *nature* is stronger, affirmative action policy or further medical and pahrmaceutical advancements would be relied on

Nurture

Non-Congnitive Skills

- Gneezy et al. (2008)
  - Compares two societies to see if women behave differently or not
  - Two societies:
    a. Maasai in Tanzania
      - Patriarchal society... "*women are said to be less important than cattle*"

    b. Khasi in Northeastt India
      - Matrilineal with inheritance and clan membership following a female lineage

            - Women: household head and make all important economic decisions
        - Conducts experiments measuring **competition** aversion
        - Result:
            - Same gender patterns as in the West in Maasai
            - Exactly oposite pattern in Khasi
            - Against *nature* view with caution
                - Evolutionary explanation is still possible
- Booth and Nolen (2009a)
    - Studies **risk** aversion in a sample of English 15-yer-olds
    - Shows risk aversion depends on their attendance to a sigle-sex to mixed-gender school
- Booth and Nolen (2009b)
    - Studies **competition** aversion in the same sample
    - Shows girls from single-sex schools behave more like boys
        - No differences within boys by school type
    - Less concern to evolutionary distance but still selection concern

Cognitive Skills

- **Spatial ability** (Hoffman et al., 2010)
    - Correlated with engineering course success and decision to major in physical sciences
    - Compare two societies as above
    - Shows men outperforms women in a partilineal society (the Karbi) but not such gap in geographically and ehinically close matrilineal society in Northeast India (the Khasi)
- **Role model effects**
    - Assignment to a same-sex teacher improves both the children's performance (girls and boys) and the teacher's perception of the student's performance
        - Studied by within-children cross-subject assignment, within-student and within-instructor variation
    - Assinment to female professors for the introductory math and science classes improves female students' performance as wel as their majoring decision in science, math, or engineering
        - Studies with random assignment as well as within-course and student variation
    - No such role model effect by **mother** (Fryer and Levitt, 2010)
        - Uses panel data of 20,000 children from kindergarten to fifth grade
        - Finds that a set of variables capturing parental begaviour and expectations do not explain the gender gap in math scores amongst young children
- **Socialisation ro environmental forces**
    - Cross-country variation in the degree of sexism and 15-year-old girls' skills in math and reading comprehension (Guiso et al., 2008)
        - No gender differenec in math and larger gender difference in reading (favors women) in more gender-equal societies
    - No such pattern when including the middle-eastern coutries (Fryer and Levitt, 2010)
        - More single-sex schools in the middle0earstern states

Nature

Hormone (testosterone level)

- Have shown that testosterone levels and behavioural outcomes are related:
    - Willingness to take financial risk (Dreber and Hoffman, 2007)
        - Exploits **2D:4D** ratio (the ratio of the lengths of 2nd finger and 4th finger)
    - Gender difference in career choice (financial sector) amongst MBA students disapears when controlling for teststerone levels (Maestripiei et al., 2009)
- Note that these researches are NOT causal
    - One's testosterone level may be affected by their and their parents' environmental (including socioeconomic) factors

---

Section 3. Gender Identity

- Persistence of the gender differences in labour market outcomes may be explained by social norms about *what is appropriate for men and women to do*, respectively
    - This may induce differential gender sorting across occupations
- Concept of **identity** has been import from social psychology to economics
    - Seminal paper: Akerlof and Kranton (2000)

1. Theoretical Foundations

Akerlof and Kranton (2000)

- Defines **identity** as *one's sense of self, or of belonging to one or multiple social categories*
- Proposes a model where one's identity directly enters the utility funciton
    - One's identity can influence economic outcomes because the deviation from the hahaviour compatible with identity is assumed to decrease utility

Some applicatoins

- Labour force participation
  - Norms that *mean work outside and women work home*
- Occupational segregation by gender
  - Some occupations are viewed as male jobs
    - For women, their decisions to take those jobs are in conflict with their gender identity
    - For male workers in those occupations, accepting women as co-workers may threatens their gender identiy
      - A microfoundation for reduced-form discrimination models (e.g. Becker, 1971)
  - Related to Goldin (2002)'s pullution theory of discrimination
    - Assumes that men derive utility also from *how their image is affected by where they work and who they work with*
    - Goldin's model is closer to a **statistical discrimination** model
    - Akerlof and Kranton's model is closer to a **taste-based discrimination** model
- Allocation of housework tasks between spouses
  - Norms that *mean work outside and women work home*
  - Men's gender identity is threatened if their wives work in the labour market, especially if they do well
    - This may make men threaten women to do a larger share of the housework
  - Opposite prediction to the **bargaining model**
    - A monotonic negative relationship between women's reltive labour market earnings and their relative contribution to housework activities

---

2. Testing the Relevance of Gender Identity Model to Labour Market Outcome

Fortin (2005)

- Setting:
  - Uses data from the World Value Surveys
  - 25 OECD countries for 10 years
- Result:
  - Social representation of each gender is stable across cohorts and over time
  - Social representation predicts women's labour market outcomes well
  - Less egalitarian attitudes also predicts the outcomes well
    - Declining both across cohorts and over time
  - *Mother's guilt* is closely related to a women's labour force participation

Fortin (2009)

- Setting:
  - Within US data for 30 years
- Result:
  - Evolution of gender role attitudes over time map well with the evolution of female labour force participation
    - Gender rols attitudes became less traditional untill the mid-1990s
    - The trend reversed in the mid-1990s
    - HIV/AIDS crisis might be responsible?

Charles et al. (2009)

- Setting:
  - Construct a measure of male sexism across US states
- Result:
  - A strong relationship between men's sexism and gender wage and employmen gaps
  - Controlling for men's sexism makes women's own view little predictive of their labour market outcomes
  - Attitudes of the **median** man matters
    - Consistent with Becker's tast-based discrimination model

Booth and van Ours (2009)

- Investigate Australian couples
- Finds a patterns in the relationship between male shares of market work and housework that is consistent with Akerlof and Kranton's model more than a standard household specialisation model

---

3. Empirical Determinants of Gender Identity Norms

What drives gender identity?

1. **Innovations in contraception and the introduction of Pill**
   - Women's adult indetities were less influenced by traditional gender roles and more by career considerations (Goldin, 2006)
2. **Family environment**
   - A relationship between a young female's attitudes towards working women and her background characteristics (e.g. religious affiliation, parents' educational and woking background) (Vella, 1994)

- Men grown up in families with working mothers might contribute to the female labour force participation (Fernandez et al., 2004)
  - Exploits exogenous variation in mother's labour force participation stemmed from male draft across US states (as Acemoglu et al., 2004)
  - Men whose mothers worked are more likely to have working wives
- Mother's view on the female role in the market and family affects her children's attitudes in labour force participation (Farre and Vella, 2007)
- Womeb's cultural background matters to their labour force participation and fertility (Fernandez and Fogli, 2009)
  - Uses female labour force participation and fertility rate in the American women's country of ancestry as cultural proxies
  - Spousal culture also matters to women's labour force participation

3. **Schooling environment**
   - Adolescent girls in a coed environment might reinforce their traditional female identity (Maccoby, 1990 and 1998)
     - Girls who attend single-sex schools are less likely to hold traditional gender role views
   - College environment also matters (Dasgupta and Asgari, 2004)
     - Compares college-age women both before and after their first year at either a coeducational or a women's college
     - No difference at college entry
     - Those at the coeducaitonal college show higher levels of gender stereotyping
     - Exposure to female professors reduces this development

---

4. Does Gender Identity Drives Psychological Attributes?

- Gender identity norms are possibly responsible for gender differences inpsychological attributes (e.g. risk aversion)
  - People expect women to be docile and generous (Eagly, 1987)
  - Men expect women to be more risk averse than they truly are
    - Socially constructed gender norms?
- Gender identity and preferenecs -> mixed results
  - Benjamin et al. (2010, forthcoming)
    - Experimentally manipulates one's salient identity
    - Shows no gender salience effects on patience or risk aversion
  - Boschini et al. (2009)
    - Gender priming affects altruistic behaviour only in mixed-gender groups
    - Men responds to the priming but women do not

Section 4. Women's Well-being

- Improvements of women's educational and labour market outcomes -> Well-being for women?
  - Stevenson and Wolfers (2009)
    - Uses US General Social Survey from the early 1970s to the present
    - Finds that **women have become less happier over time**
      - both absolutely and relative to men
    - Similar patterns exists in European coutries
    - Possibly through the changes in family structure over time?
      - e.g. an increase in single mothers
      - BUT the trends are similar regardless of education or whether single parents or not
    - Today's women are possibly emotionally stuggling in more complicated lives and with more obhectives in life
    - Today's women are possibly shifting their reference when answering subjective well-being question
      - Also possible with higher aspirations of women
  - Lalive and Stutzer (2010)
    - Examines various communities in Switzerland that differed in their voting in a national referenecdum on an equal rights amendment to the Constitution
      - This may capture the degree of trational gender role views
    - Finds that in the communities with a larger share of the equal rights amendment supports...
      - Smaller gender wage gap
      - lower level of overall life satisfaction amongst women
  - Aguiar and Hurst (2007)
    - Uses time use data in the US between 1965 and 2003
    - Finds that both men and women have experiecend a decline in total work (including household work)
      - Men decreased market work but increased non-market work
      - Women exhibited the opposite changes
  - Krueger (2007)
    - Uses Aguiar and Hurst's time use data with *experienced utility* data
      - the Day Reconstructin Method (DRM)
        - Survey participants report their activities in the prior day and their feeling to a random subset of the activities
        - Compute average pleasantness of various activities
    - Finds that
      - For men, a gradual decline in the proportion of time spent in unpleasant activities

- For women, no detectable trend in the same proportion

Section 5. Conclusion: Future Research

- Empirical relevance of psychological attributes for actual outcomes
- How the psychological factor fit within the time series of women's improvements in education and professional achievements
- Why wpmen are now surpassing men in educational attainment
- How differentially women and men evaluate the quality of their life