

How Do Gender Quotas Affect Hierarchical Relationships?

Edwin Ip (Monash), Andreas Leibbrandt (Monash),
Joseph Vecci (Gothenburg)

Australian Gender Economics Workshop

8th February, 2018

Introduction

- Gender quotas guarantee a proportion of (leadership) positions to women

Introduction

- Gender quotas guarantee a proportion of (leadership) positions to women
- Constitute one of the biggest recent labour market interventions affecting public and private organizations.

Introduction

- Gender quotas guarantee a proportion of (leadership) positions to women
- Constitute one of the biggest recent labour market interventions affecting public and private organizations.
- Previous studies look at how they affect participation rate and effort provision in tournaments

Introduction

- Gender quotas guarantee a proportion of (leadership) positions to women
- Constitute one of the biggest recent labour market interventions affecting public and private organizations.
- Previous studies look at how they affect participation rate and effort provision in tournaments
- We are first to study what happens post-tournament:

Introduction

- Gender quotas guarantee a proportion of (leadership) positions to women
- Constitute one of the biggest recent labour market interventions affecting public and private organizations.
- Previous studies look at how they affect participation rate and effort provision in tournaments
- We are first to study what happens post-tournament:
- how using a gender quota to select managers affect subsequent manager-worker relationships

Introduction

- Gender quotas guarantee a proportion of (leadership) positions to women
- Constitute one of the biggest recent labour market interventions affecting public and private organizations.
- Previous studies look at how they affect participation rate and effort provision in tournaments
- We are first to study what happens post-tournament:
- how using a gender quota to select managers affect subsequent manager-worker relationships
- this depends on attitudes towards quotas

Opinions on Gender Quotas

- Gender quotas are controversial, opinions are divided

Opinions on Gender Quotas

- Gender quotas are controversial, opinions are divided
- Opponents claim that they are unfair: not the best person gets the job/position

Opinions on Gender Quotas

- Gender quotas are controversial, opinions are divided
- Opponents claim that they are unfair: not the best person gets the job/position
- Proponents claim they are necessary: females have to go the extra mile to get the same recognition

Opinions on Gender Quotas

- Gender quotas are controversial, opinions are divided
- Opponents claim that they are unfair: not the best person gets the job/position
- Proponents claim they are necessary: females have to go the extra mile to get the same recognition
- Quotas are required to correct for the unfair disadvantage

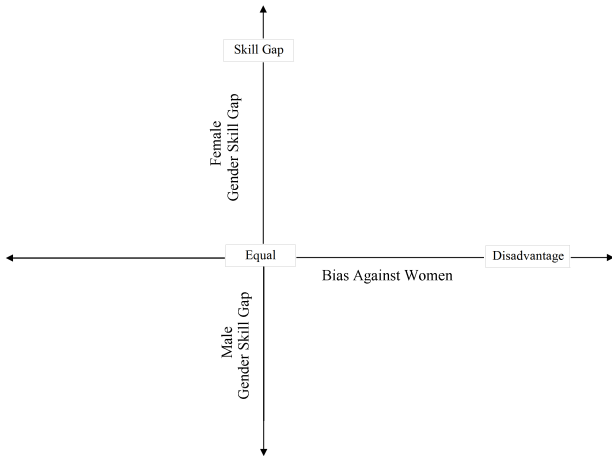
Opinions on Gender Quotas

- Gender quotas are controversial, opinions are divided
- Opponents claim that they are unfair: not the best person gets the job/position
- Proponents claim they are necessary: females have to go the extra mile to get the same recognition
- Quotas are required to correct for the unfair disadvantage
- **These arguments revolve around “best person for the job” (meritocracy)**

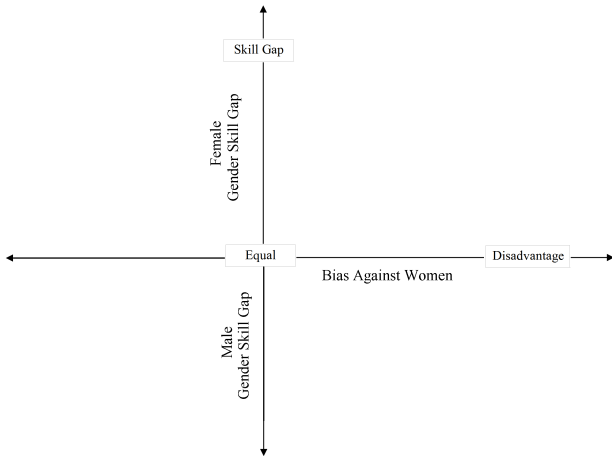
Opinions on Gender Quotas

- Gender quotas are controversial, opinions are divided
- Opponents claim that they are unfair: not the best person gets the job/position
- Proponents claim they are necessary: females have to go the extra mile to get the same recognition
- Quotas are required to correct for the unfair disadvantage
- **These arguments revolve around “best person for the job” (meritocracy)**
- We propose that whether quota is meritocratic depends on the perception of labour market environment

Meritocracy



Meritocracy



- Meritocratic nature of quota vs no quota varies in these 3 environments

Attitude towards Quota

- If people's attitude towards gender quota depends on its meritocratic nature and its meritocratic nature depends on the environments,

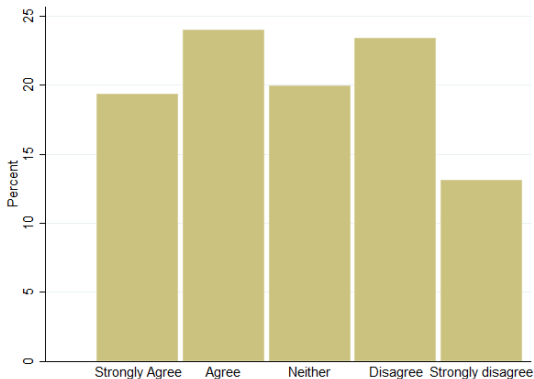
Attitude towards Quota

- If people's attitude towards gender quota depends on its meritocratic nature and its meritocratic nature depends on the environments,
- Then attitude towards gender quota should depend on the environments

Attitude towards Quota

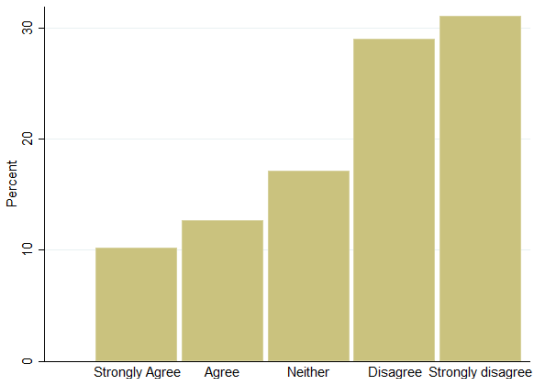
- If people's attitude towards gender quota depends on its meritocratic nature and its meritocratic nature depends on the environments,
- Then attitude towards gender quota should depend on the environments
- Online survey of 1,011 US residents (representative sample)

General Opinion on Gender Quotas



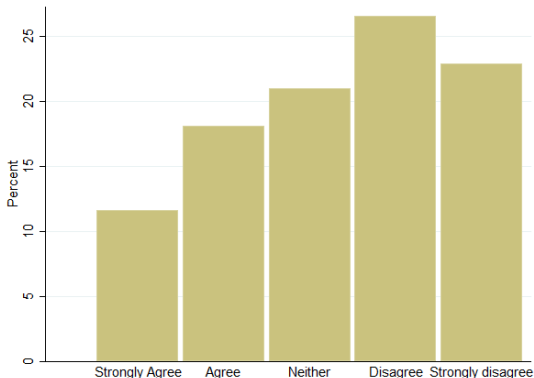
“Gender quota should be used to increase the number of women in leadership positions”

Skill Gap



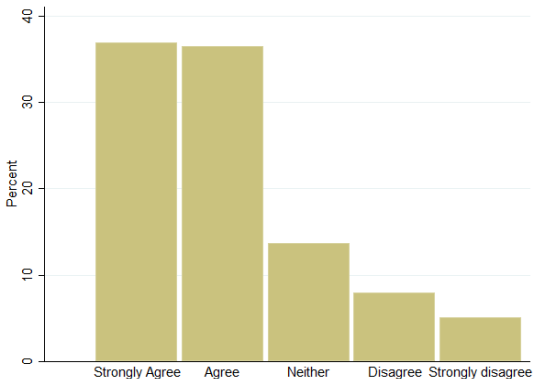
“Suppose women are on average less suited for a certain leadership position, gender quota should be used”

Equal (No Skill Gap or Disadvantage)



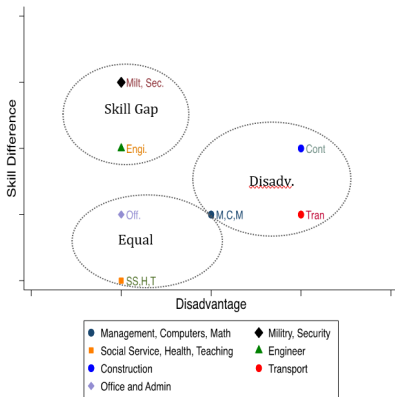
“Suppose women are on average equally suited for a certain leadership position, gender quota should be used”

Disadvantage



“Suppose women are on average equally suited for a certain leadership position but there is a bias against female candidates in the selection process, gender quota should be used”

Perceptions of Different Professions



“In your profession, female candidates are on average less capable of taking leadership roles than male candidates”

“In your profession, there is a bias against female candidates in the selection process of leadership positions relative to male candidates”

Attitudes towards Quota

- Opinions about quota in general is divided

Attitudes towards Quota

- Opinions about quota in general is divided
- When we specify the environment, there is more consensus

Attitudes towards Quota

- Opinions about quota in general is divided
- When we specify the environment, there is more consensus
- Attitude towards quota is reflected by the degree of meritocracy

Attitudes towards Quota

- Opinions about quota in general is divided
- When we specify the environment, there is more consensus
- Attitude towards quota is reflected by the degree of meritocracy
- Environments differ across professions in reality

Attitudes towards Quota

- Opinions about quota in general is divided
- When we specify the environment, there is more consensus
- Attitude towards quota is reflected by the degree of meritocracy
- Environments differ across professions in reality
- **What are the economic impacts?**

Attitudes towards Quota

- Opinions about quota in general is divided
- When we specify the environment, there is more consensus
- Attitude towards quota is reflected by the degree of meritocracy
- Environments differ across professions in reality
- **What are the economic impacts?**
- We hypothesise that hierarchical relationships may be reflected by attitude towards quota, which depends on the perception of labour market environment

Laboratory Experiment

- Computerised lab experiment: 516 participants at Monash U

Laboratory Experiment

- Computerised lab experiment: 516 participants at Monash U
 - Randomise implementation of Gender Quotas

Laboratory Experiment

- Computerised lab experiment: 516 participants at Monash U
 - Randomise implementation of Gender Quotas
 - Make selection process objective and transparent

Laboratory Experiment

- Computerised lab experiment: 516 participants at Monash U
 - Randomise implementation of Gender Quotas
 - Make selection process objective and transparent
 - Manipulate Perceptions of Skill Gap

Laboratory Experiment

- Computerised lab experiment: 516 participants at Monash U
 - Randomise implementation of Gender Quotas
 - Make selection process objective and transparent
 - Manipulate Perceptions of Skill Gap
 - Create Bias in the selection process

Laboratory Experiment

- 2 tasks:

Laboratory Experiment

- 2 tasks:
- Task 1: 5 minutes to complete as many sums as possible

Laboratory Experiment

- 2 tasks:
- Task 1: 5 minutes to complete as many sums as possible
- Managers selected based on task 1 score

Laboratory Experiment

- 2 tasks:
- Task 1: 5 minutes to complete as many sums as possible
- Managers selected based on task 1 score
 - No quota: select highest scorers as managers

Laboratory Experiment

- 2 tasks:
- Task 1: 5 minutes to complete as many sums as possible
- Managers selected based on task 1 score
 - No quota: select highest scorers as managers
 - Quota: half of the manager positions reserved for highest scoring females

Laboratory Experiment

- 2 tasks:
- Task 1: 5 minutes to complete as many sums as possible
- Managers selected based on task 1 score
 - No quota: select highest scorers as managers
 - Quota: half of the manager positions reserved for highest scoring females
- Each manager paired with a worker

Laboratory Experiment

- 2 tasks:
- Task 1: 5 minutes to complete as many sums as possible
- Managers selected based on task 1 score
 - No quota: select highest scorers as managers
 - Quota: half of the manager positions reserved for highest scoring females
- Each manager paired with a worker
- Task 2: gift exchange game

Laboratory Experiment

- 2 tasks:
- Task 1: 5 minutes to complete as many sums as possible
- Managers selected based on task 1 score
 - No quota: select highest scorers as managers
 - Quota: half of the manager positions reserved for highest scoring females
- Each manager paired with a worker
- Task 2: gift exchange game
 - Manager offers a wage to the paired worker

Laboratory Experiment

- 2 tasks:
- Task 1: 5 minutes to complete as many sums as possible
- Managers selected based on task 1 score
 - No quota: select highest scorers as managers
 - Quota: half of the manager positions reserved for highest scoring females
- Each manager paired with a worker
- Task 2: gift exchange game
 - Manager offers a wage to the paired worker
 - Worker, upon observing wage, provide costly effort

Laboratory Experiment

- 2 tasks:
- Task 1: 5 minutes to complete as many sums as possible
- Managers selected based on task 1 score
 - No quota: select highest scorers as managers
 - Quota: half of the manager positions reserved for highest scoring females
- Each manager paired with a worker
- Task 2: gift exchange game
 - Manager offers a wage to the paired worker
 - Worker, upon observing wage, provide costly effort
 - Manager's payoff = (endowment - wage offered) x effort

Laboratory Experiment

- 2 tasks:
- Task 1: 5 minutes to complete as many sums as possible
- Managers selected based on task 1 score
 - No quota: select highest scorers as managers
 - Quota: half of the manager positions reserved for highest scoring females
- Each manager paired with a worker
- Task 2: gift exchange game
 - Manager offers a wage to the paired worker
 - Worker, upon observing wage, provide costly effort
 - Manager's payoff = (endowment - wage offered) \times effort
 - Worker's payoff = Wage - effort cost

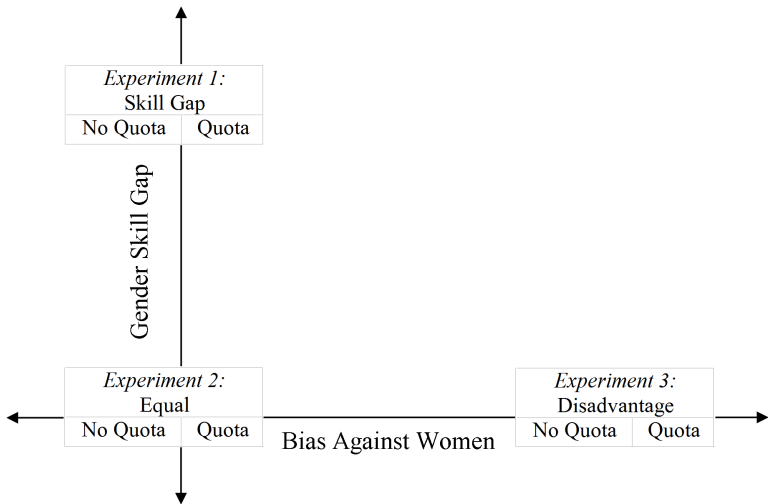
Laboratory Experiment

- 2 tasks:
- Task 1: 5 minutes to complete as many sums as possible
- Managers selected based on task 1 score
 - No quota: select highest scorers as managers
 - Quota: half of the manager positions reserved for highest scoring females
- Each manager paired with a worker
- Task 2: gift exchange game
 - Manager offers a wage to the paired worker
 - Worker, upon observing wage, provide costly effort
 - Manager's payoff = (endowment - wage offered) x effort
 - Worker's payoff = Wage - effort cost
 - Repeat 15 rounds (partner)

Laboratory Experiment

- 2 tasks:
- Task 1: 5 minutes to complete as many sums as possible
- Managers selected based on task 1 score
 - No quota: select highest scorers as managers
 - Quota: half of the manager positions reserved for highest scoring females
- Each manager paired with a worker
- Task 2: gift exchange game
 - Manager offers a wage to the paired worker
 - Worker, upon observing wage, provide costly effort
 - Manager's payoff = (endowment - wage offered) \times effort
 - Worker's payoff = Wage - effort cost
 - Repeat 15 rounds (partner)
 - Final payoffs multiplied by manager's task 1 score

3x2 Design



3 Experiments

- Skill Gap:
 - “In a previous session, females solved approximately 20% fewer sums than males on average.”

3 Experiments

- Skill Gap:
 - “In a previous session, females solved approximately 20% fewer sums than males on average.”
- Equal:
 - “In a previous session, males and females solved approximately the same number of sums on average”

3 Experiments

- Skill Gap:
 - “In a previous session, females solved approximately 20% fewer sums than males on average.”
- Equal:
 - “In a previous session, males and females solved approximately the same number of sums on average”
- Disadvantage:
 - Equal + For female subjects, only first 4 minutes of the arithmetic task are scored for manager selection procedure
- All Experiments: all 5 minutes of the arithmetic task are scored for payoffs regardless of gender

Belief Elicitation

- Incentivised task to elicit each subject's belief about:

Belief Elicitation

- Incentivised task to elicit each subject's belief about:
- 1) The average male arithmetic score

Belief Elicitation

- Incentivised task to elicit each subject's belief about:
- 1) The average male arithmetic score
- 2) The average female arithmetic score

Belief Elicitation

- Incentivised task to elicit each subject's belief about:
 - 1) The average male arithmetic score
 - 2) The average female arithmetic score
 - 3) His/her own arithmetic score

Belief Elicitation

- Incentivised task to elicit each subject's belief about:
 - 1) The average male arithmetic score
 - 2) The average female arithmetic score
 - 3) His/her own arithmetic score
- For each question, if the subject's guess within ± 1 the actual answer he/she receives \$1

Manipulation Check

- Skill Gap: average beliefs males are 22.9% better than females in the arithmetic task

Manipulation Check

- Skill Gap: average beliefs males are 22.9% better than females in the arithmetic task
- Equal: average beliefs males are 3.6% better than females in the arithmetic task

Manipulation Check

- Skill Gap: average beliefs males are 22.9% better than females in the arithmetic task
- Equal: average beliefs males are 3.6% better than females in the arithmetic task
- Disadvantage: average beliefs males are 3.2% better than females in the arithmetic task

Hypothesis

	Standard/ Reciprocity	Meritocracy
Skill Gap	→	
Equal	→	
Disadvantage	→	

Table: Impact of Gender Quota on Gift-Exchange (Wage and Effort) Levels

Hypothesis

	Standard/ Reciprocity	Meritocracy
Skill Gap	→	↓
Equal	→	↓
Disadvantage	→	↑

Table: Impact of Gender Quota on Gift-Exchange (Wage and Effort) Levels

Result: Skill Gap

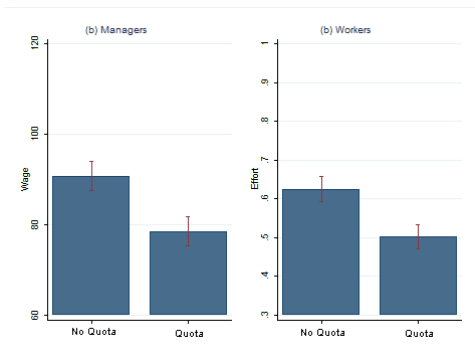


Figure: $N_{\text{no quota}} = 44$, $N_{\text{quota}} = 42$

GLS Random Effect controlling for beliefs, period and subject characteristics:
Quota reduces effort by 13.2 % pt*** and wage by 13.4 % pt***

Result: Equal



Figure: $N_{\text{no quota}} = 42$, $N_{\text{quota}} = 34$

GLS Random Effect controlling for beliefs, period and subject characteristics:
Quota reduces effort by 12.0 % pt*** and wage by 9.6 % pt**

Result: Disadvantage



Figure: $N_{\text{no quota}} = 48$, $N_{\text{quota}} = 48$

GLS Random Effect controlling for beliefs, period and subject characteristics:
Quota increases effort by 6.5 % pt* and wage by 9.6 % pt***

Discussions

- Gender quotas are widely used to increase female representation in leadership positions

Discussions

- Gender quotas are widely used to increase female representation in leadership positions
- Little consensus on the side effects, good or bad

Discussions

- Gender quotas are widely used to increase female representation in leadership positions
- Little consensus on the side effects, good or bad
- Little is known about what it does to hierarchical relationships

Discussions

- Gender quotas are widely used to increase female representation in leadership positions
- Little consensus on the side effects, good or bad
- Little is known about what it does to hierarchical relationships
- We implement a new survey and experimental design to study the effect of gender quota on hierarchical relationships

Discussions

- Gender quotas are widely used to increase female representation in leadership positions
- Little consensus on the side effects, good or bad
- Little is known about what it does to hierarchical relationships
- We implement a new survey and experimental design to study the effect of gender quota on hierarchical relationships
- We find that Behaviour found in the Lab corresponds to Attitude found in the Field

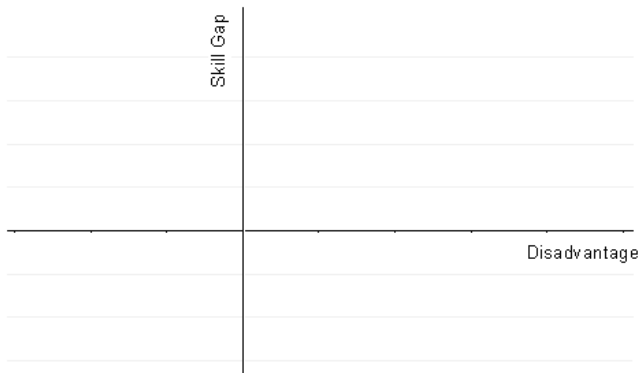
Discussions

- Gender quotas are widely used to increase female representation in leadership positions
- Little consensus on the side effects, good or bad
- Little is known about what it does to hierarchical relationships
- We implement a new survey and experimental design to study the effect of gender quota on hierarchical relationships
- We find that Behaviour found in the Lab corresponds to Attitude found in the Field
- Quota should not be blindly implemented across the board

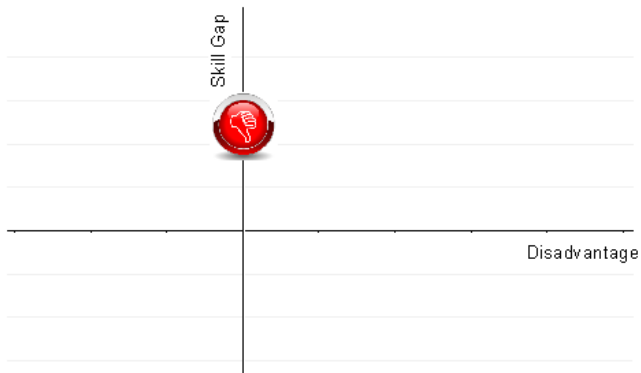
Discussions

- Gender quotas are widely used to increase female representation in leadership positions
- Little consensus on the side effects, good or bad
- Little is known about what it does to hierarchical relationships
- We implement a new survey and experimental design to study the effect of gender quota on hierarchical relationships
- We find that Behaviour found in the Lab corresponds to Attitude found in the Field
- Quota should not be blindly implemented across the board
- Whether quota is good or bad depends on the perceived environment

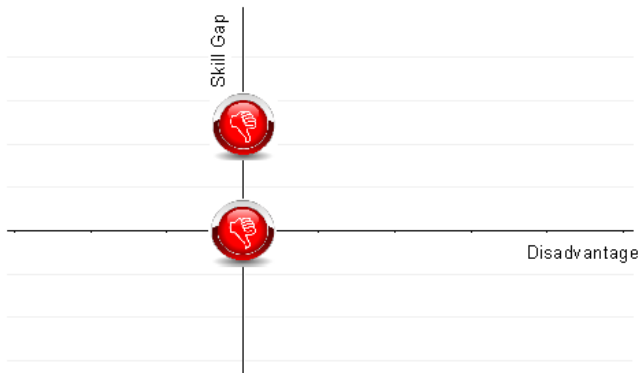
Skill Gap vs. Disadvantage



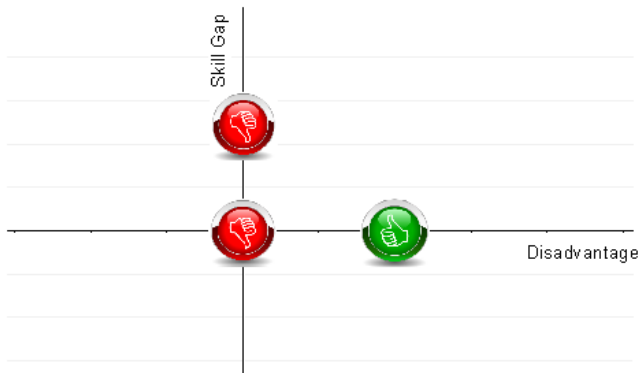
Skill Gap vs. Disadvantage



Skill Gap vs. Disadvantage



Skill Gap vs. Disadvantage



Thank You!