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# Tester Motivation

Dr Stuart Reid

Testing Solutions Group  
London, UK

[www.testing-solutions.com](http://www.testing-solutions.com)

- Introduction to Motivation
- Outline of the Motivation Survey
- Survey analysis and results
  - What factors correlate best with motivation?
  - How does motivation change
    - for different roles
    - for different regions
  - Do existing theories work for testing?
  - What is the best combination?
- Conclusions & recommendations

# Defining Motivation

- a reason or reasons for acting or behaving in a particular way - Oxford Dictionaries
- **internal and external factors that stimulate desire and energy in people to be continually interested and committed to a job**, role or subject, or to make an effort to attain a goal
  - <http://www.businessdictionary.com>

# Motivation 101



# Multi-faceted Motivation

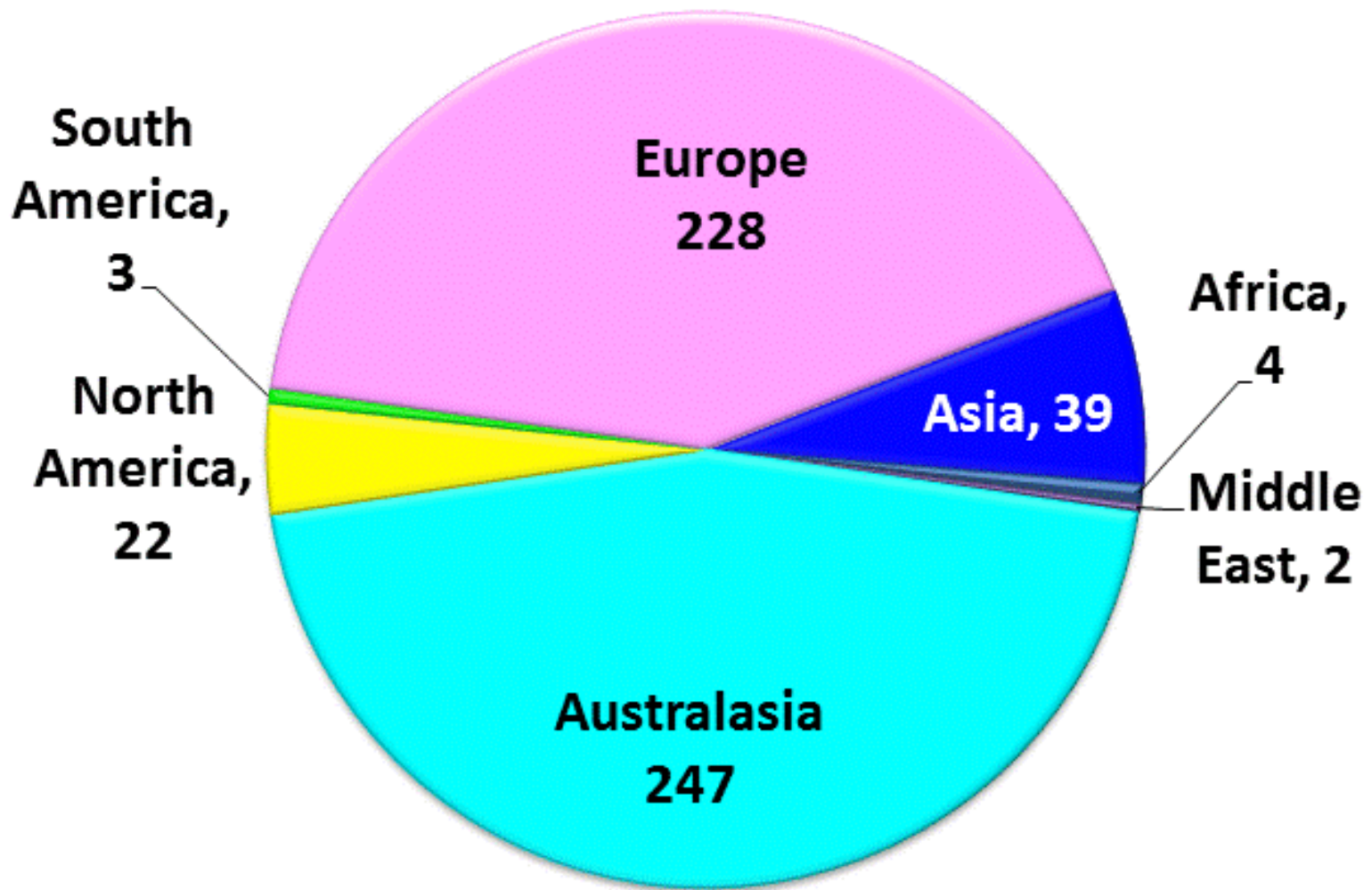


# Investigation Approach

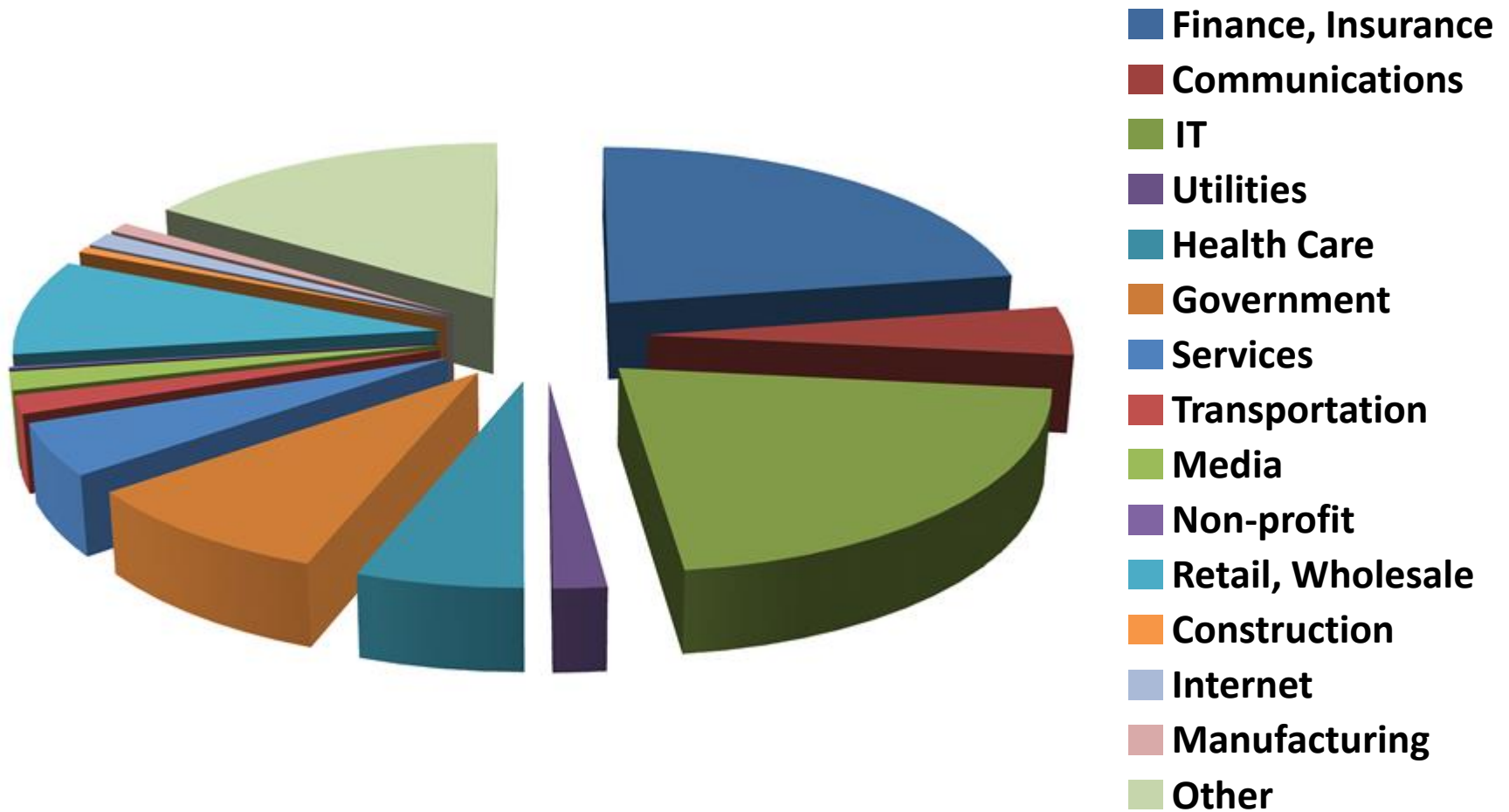
- Questionnaire
  - Paper-based
  - SurveyMonkey
- 40 Questions
  - Demographic
  - Motivation-related (Likert-scale)
  - Open-ended
  - Qualitative & quantitative data
- Responses from around the world (over 600)
- Thanks to Tafline Murnane
  - KJ Ross – Australia



# Respondents by Region

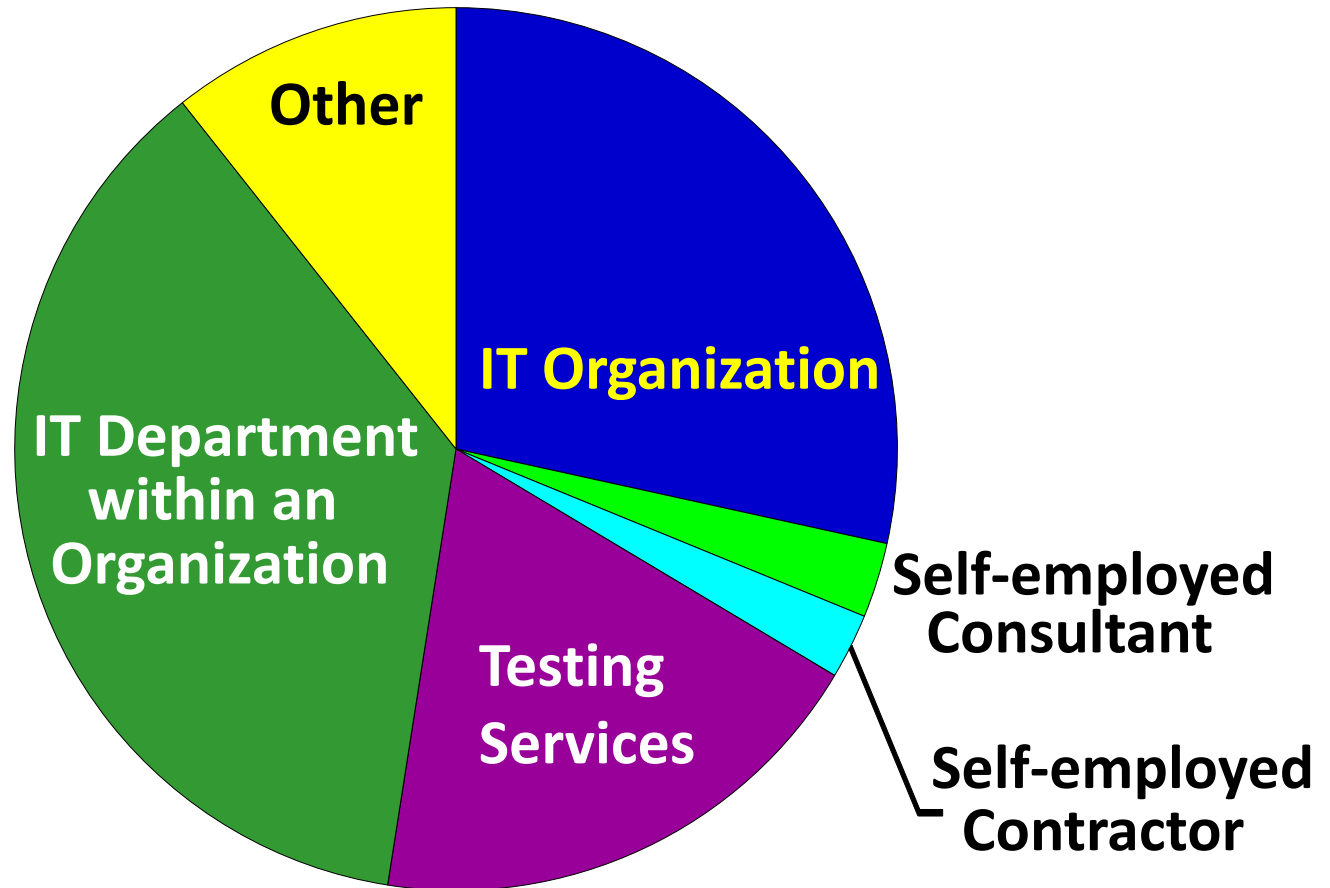


# Industry Sectors

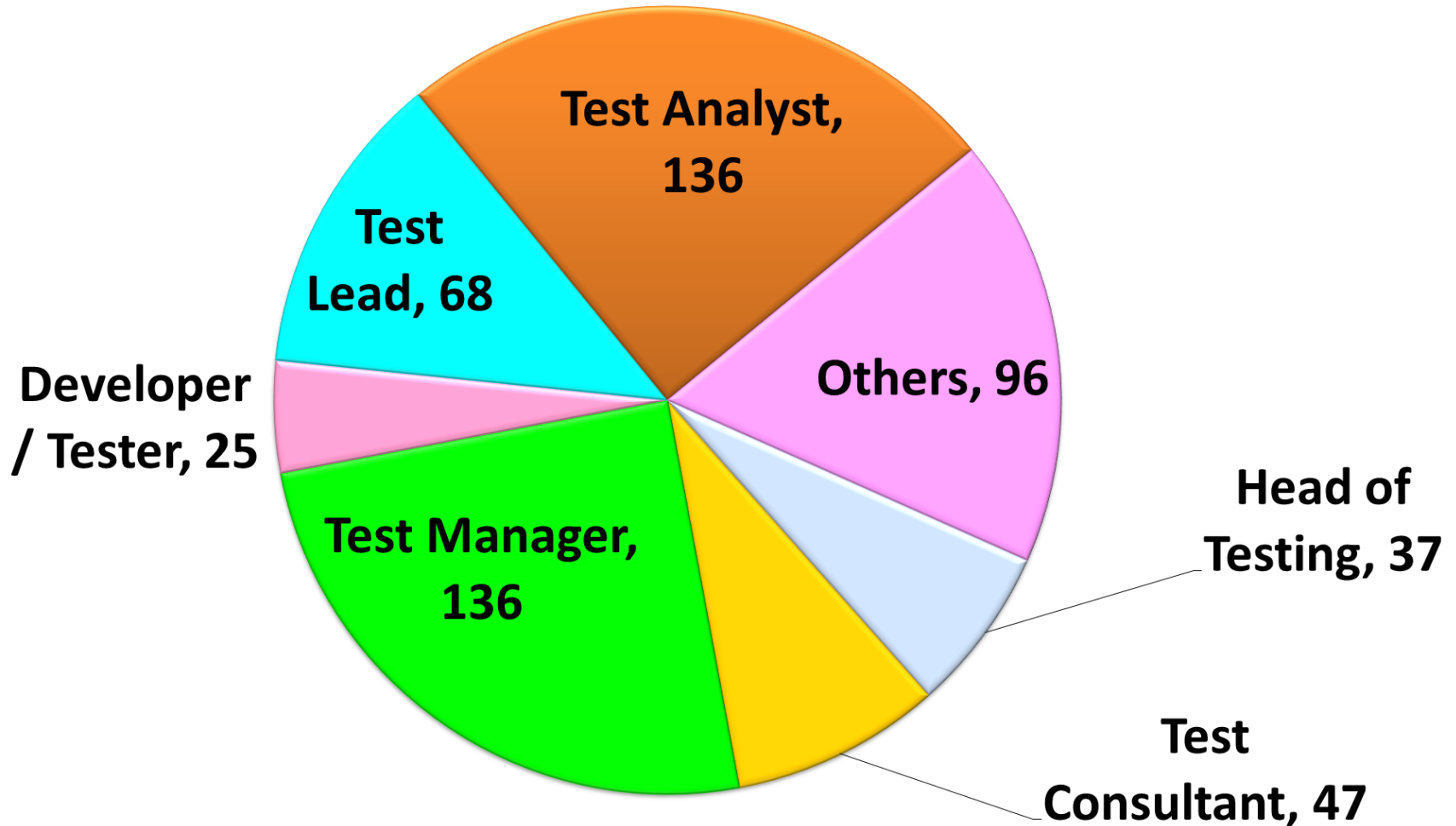




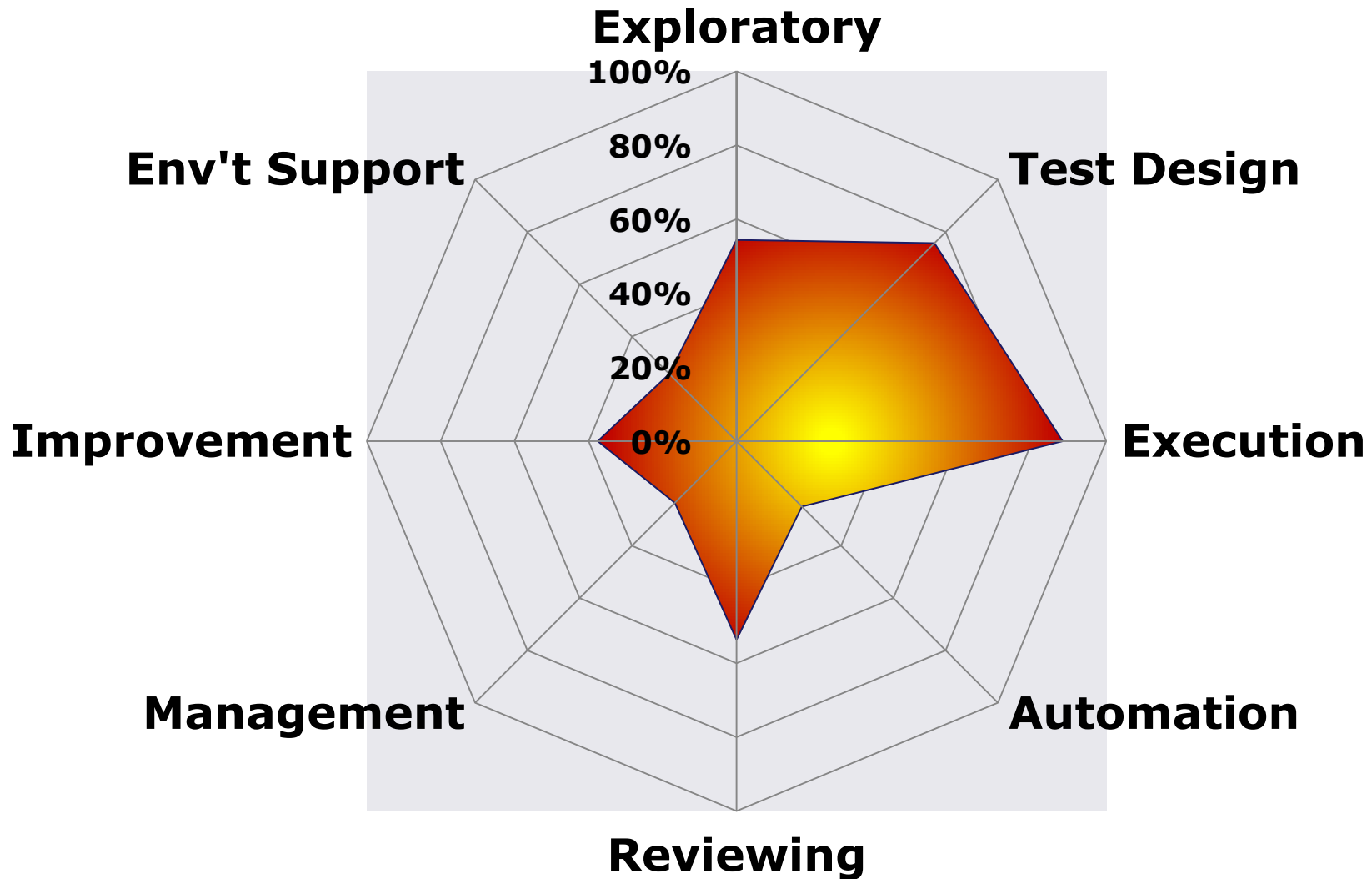
# Organization Types



# Testing Roles

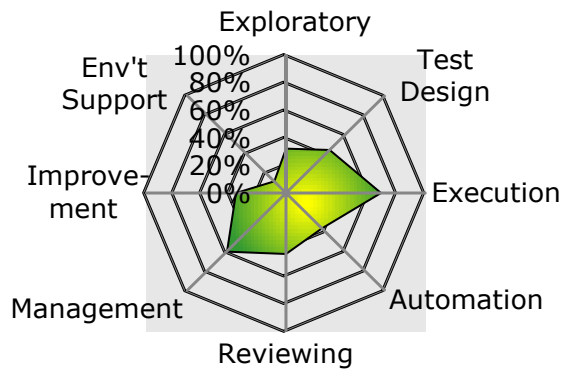


# Specified Variety - Test Analyst

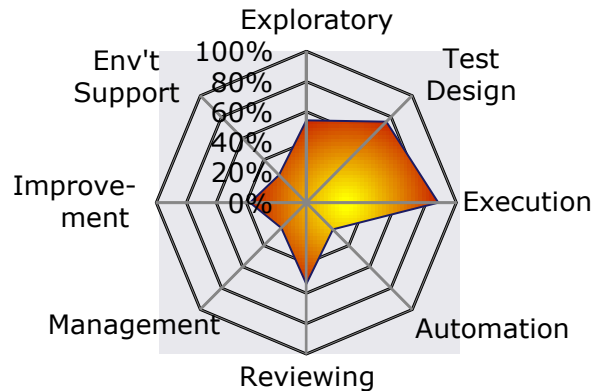


# Different Jobs...

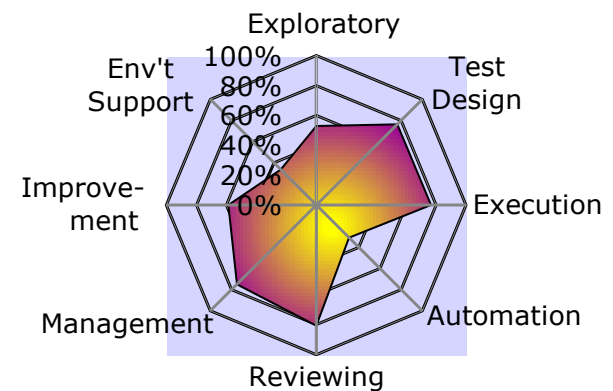
## Developer/Tester



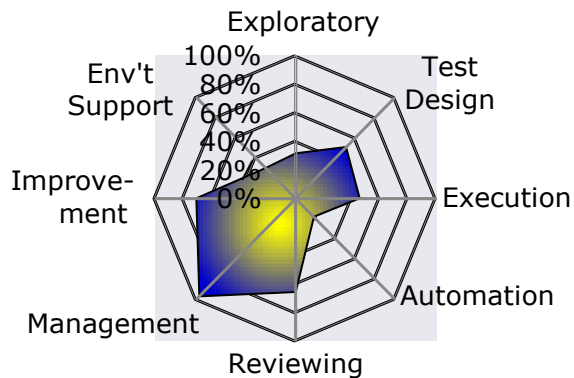
## Test Analyst



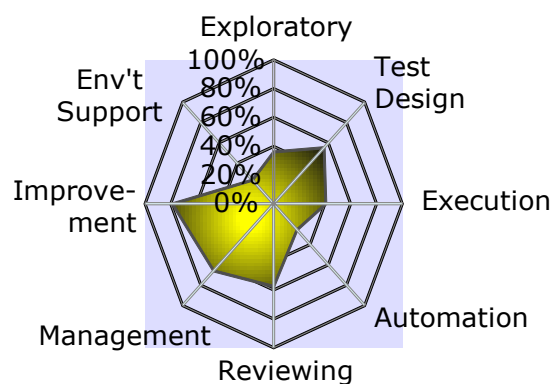
## Test Lead



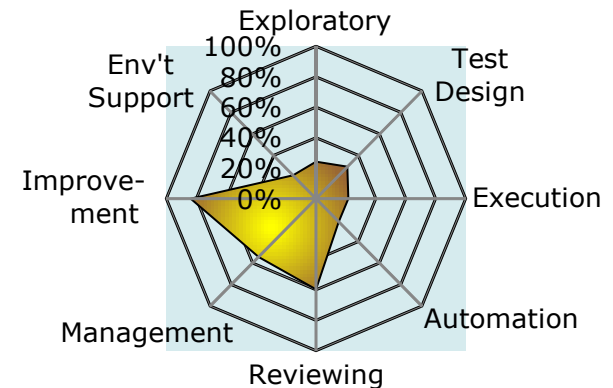
## Test Manager



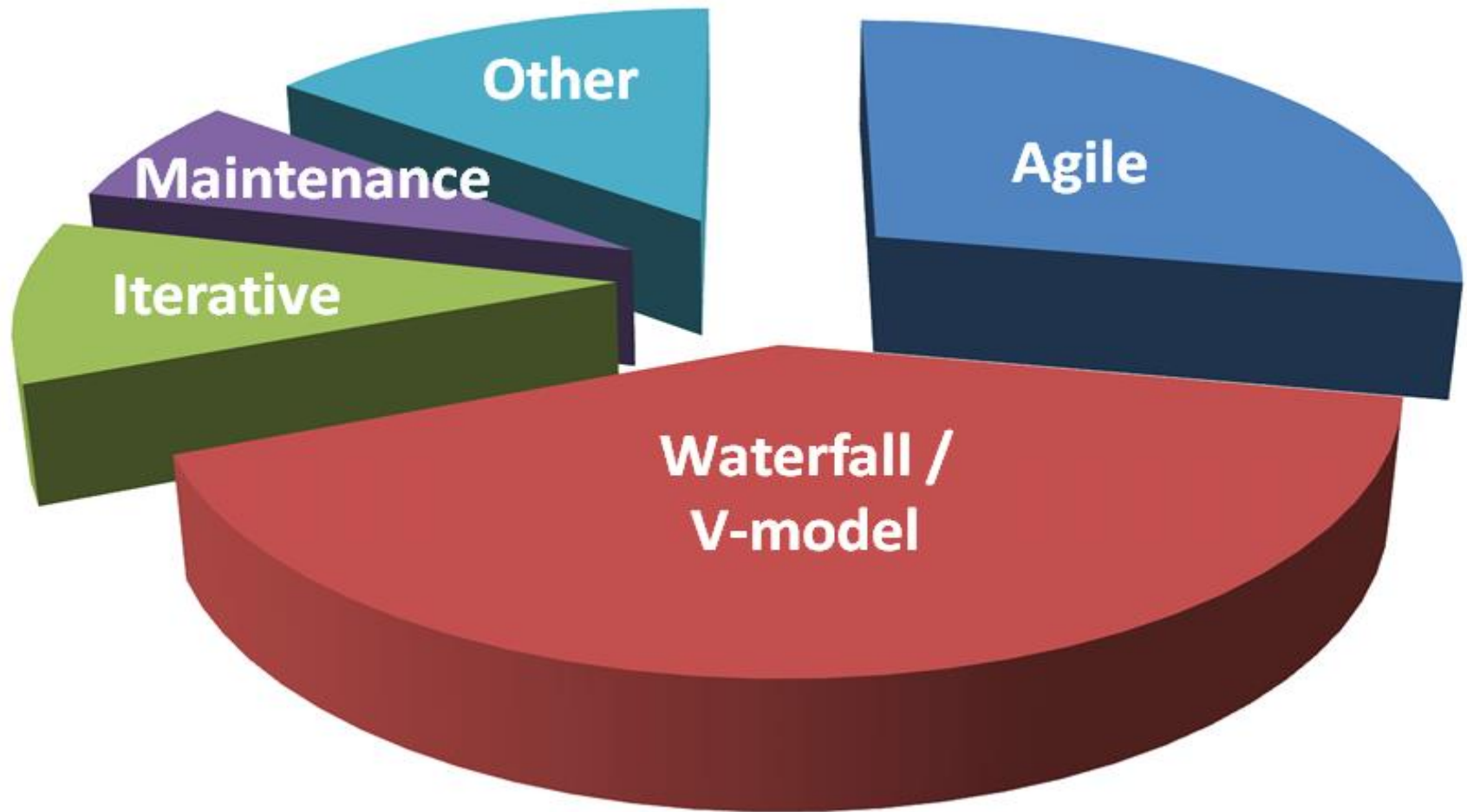
## Test Consultant



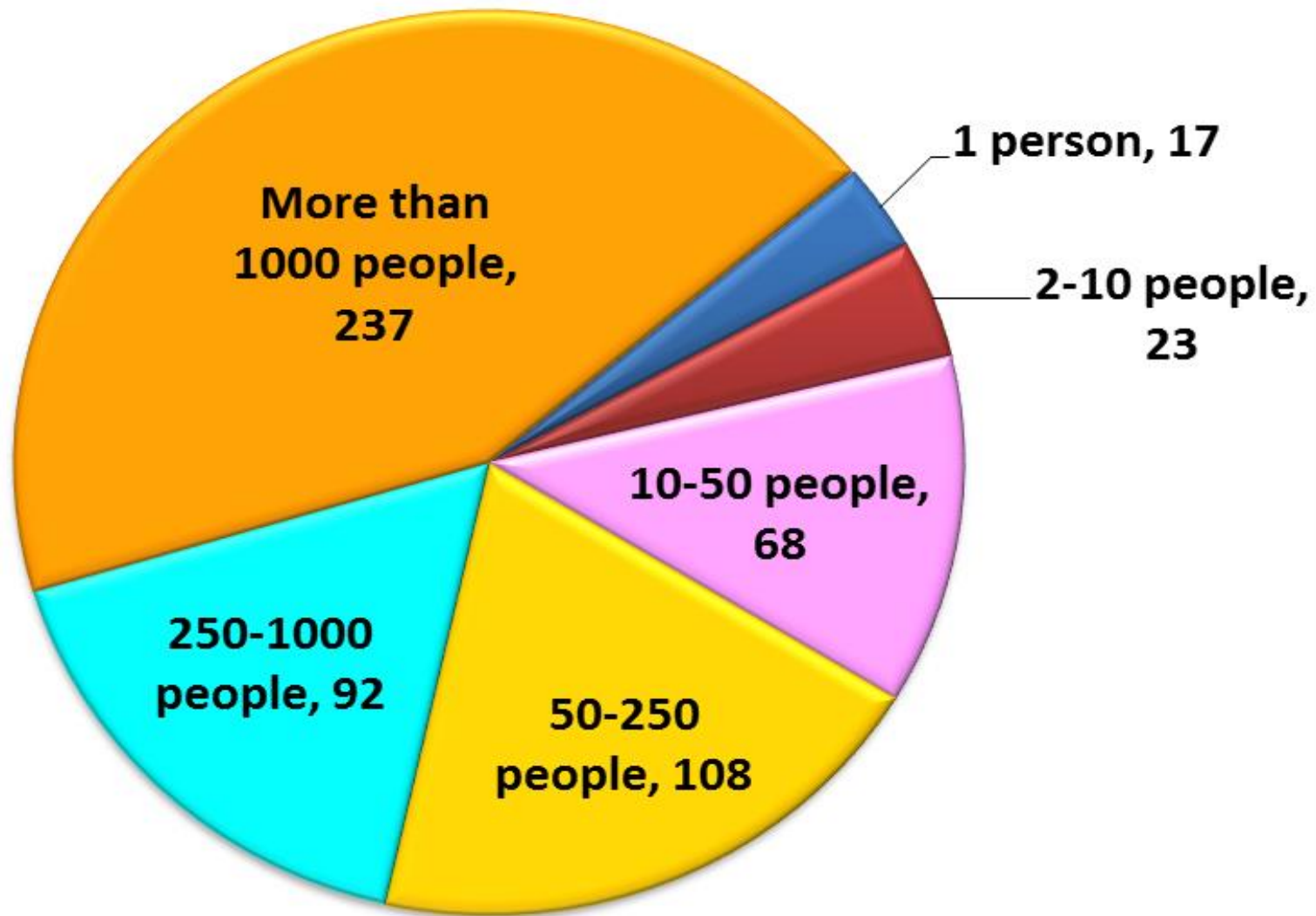
## Head of Testing



# Life Cycles



# Company Size



# Motivation Theories

- Hierarchy of Needs – Maslow, 1943
- Motivation-Hygiene Theory – Herzberg, 1959
- Theory X & Theory Y – McGregor, 1960
- Expectancy Theory – Vroom, 1964
- Equity Theory – Adams, 1965
- Job Characteristics Model (MPS) – Hackman & Oldham, 1976
- Three Needs Theory – McClelland, 1988
- Temporal Motivation Theory (TMT) - Steel and Konig, 2006
- Motivation 3.0 (MAP) – Pink, 2010

# Motivating Potential Score

- **Skill Variety** (V)
  - range of different skills used
- **Task Identity** (I)
  - degree of completing a whole job
- **Task Significance** (S)
  - importance of the job
- **Autonomy** (A)
  - level of control of your own time
- **Feedback** (F)
  - degree of supervisory & results-based feedback

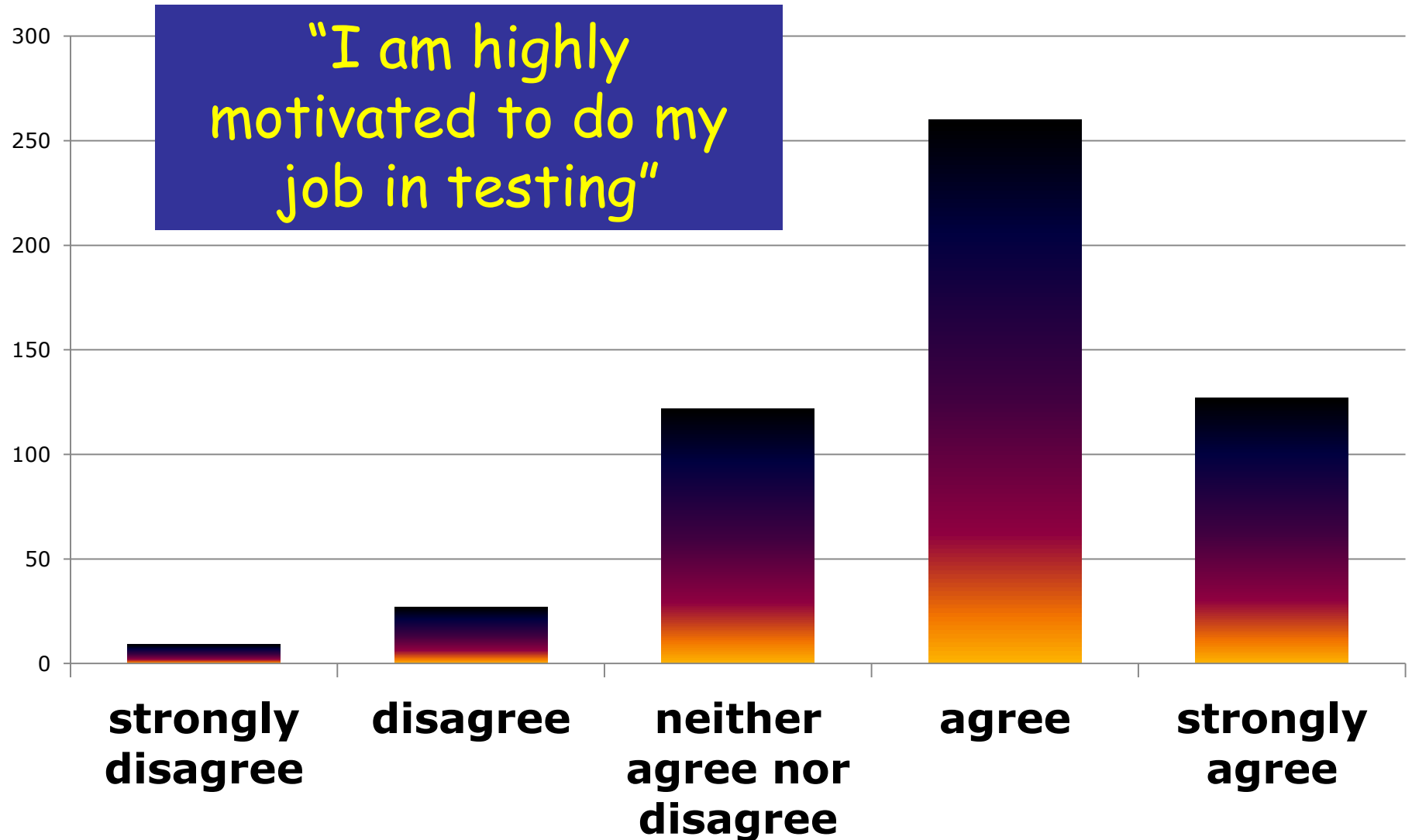
Assign a score of 1 to 7 to each attribute...

- **MPS** = 
$$\frac{(V + I + S)}{3} * A * F$$

...and then calculate your MPS

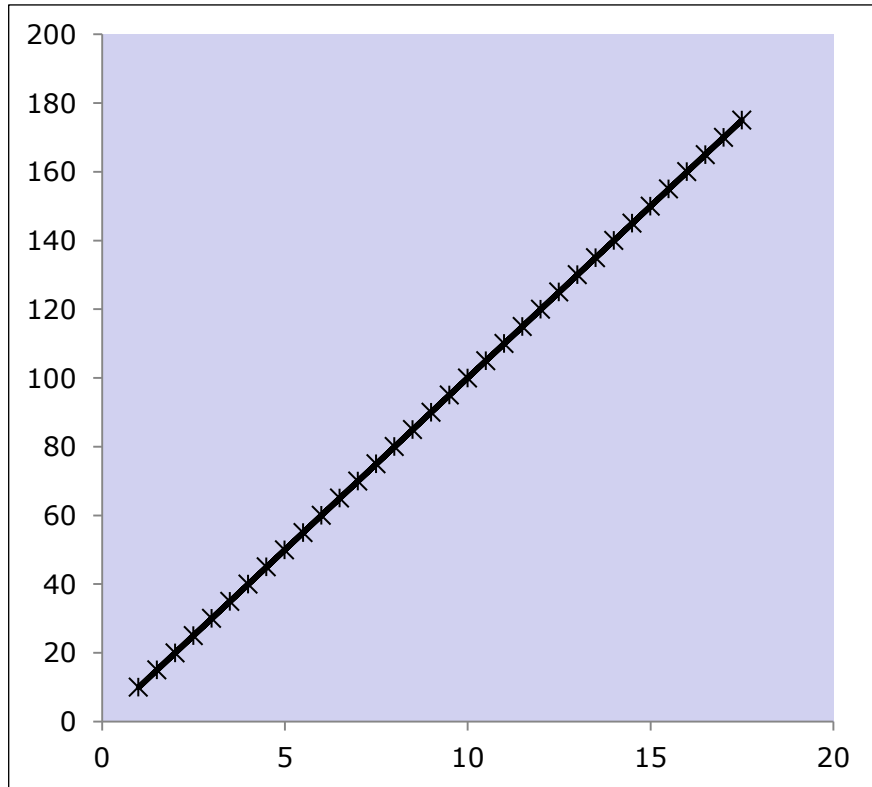


# Perceived Motivation

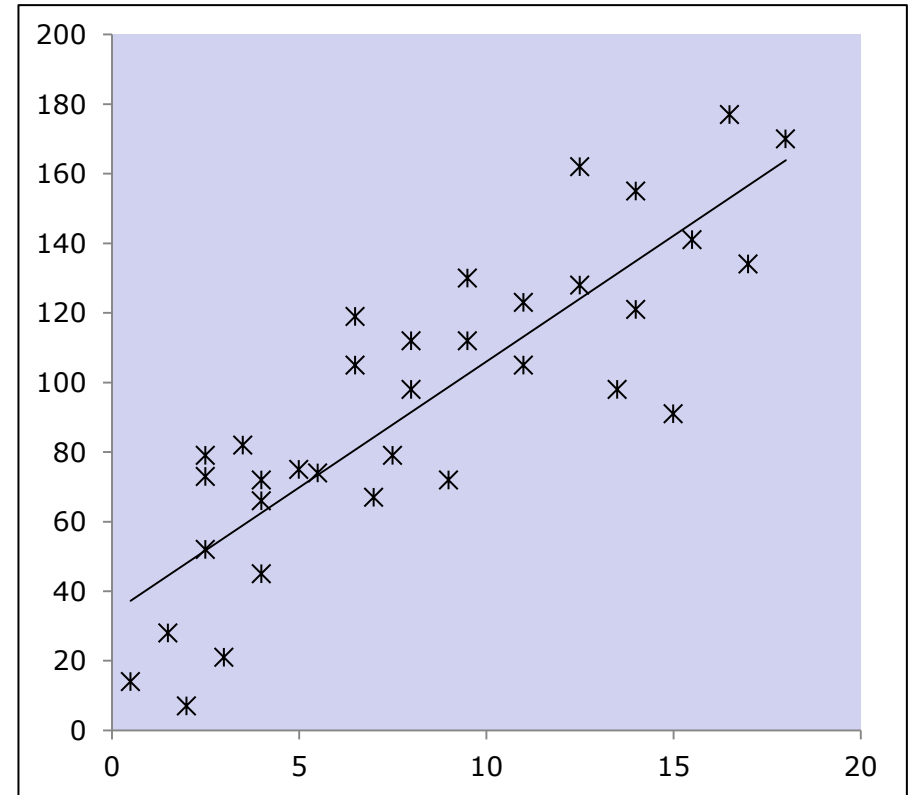


# Pearson's Correlation Coefficient **tsg**

$$r = 1$$



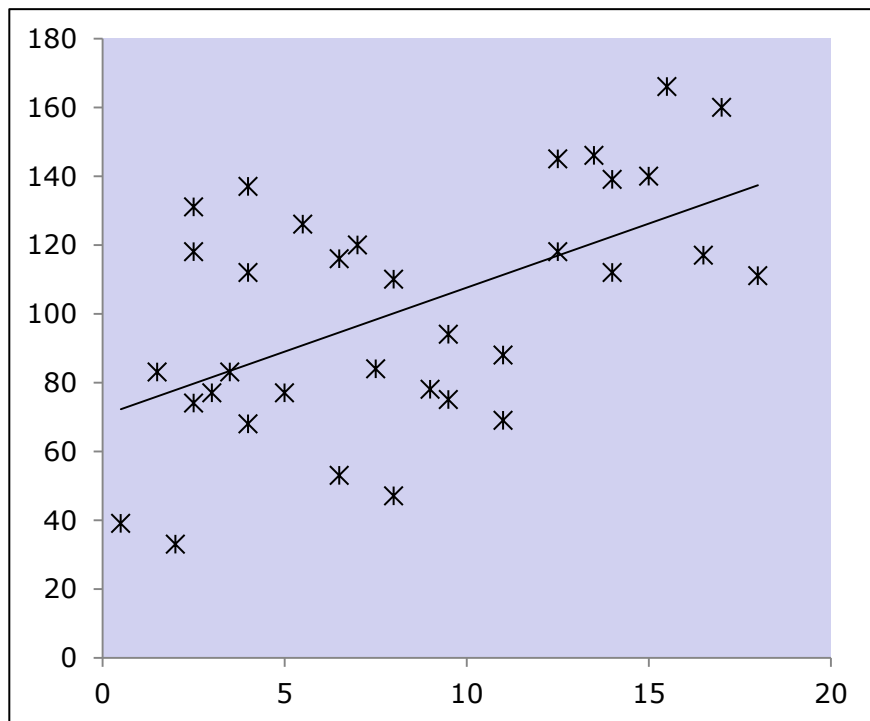
$$r = 0.85$$



**$r = +0.70$  or higher**  
**Very strong positive relationship**

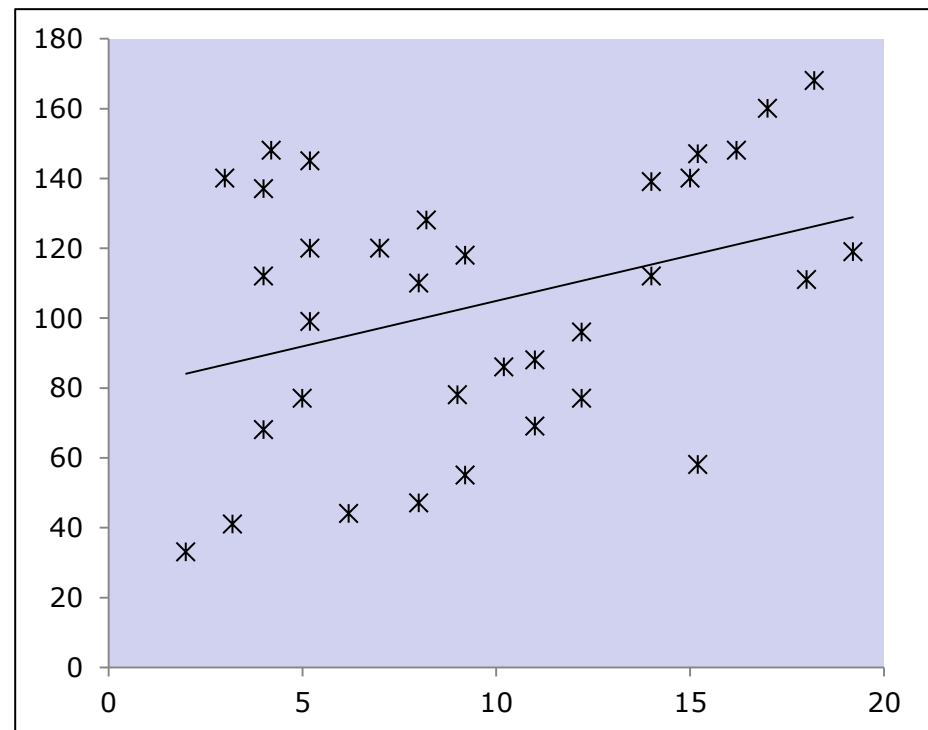
# Pearson's Correlation Coefficient **tsg**

$$r = 0.55$$



**$r = +0.40$  to  $+0.69$**   
**Strong positive relationship**

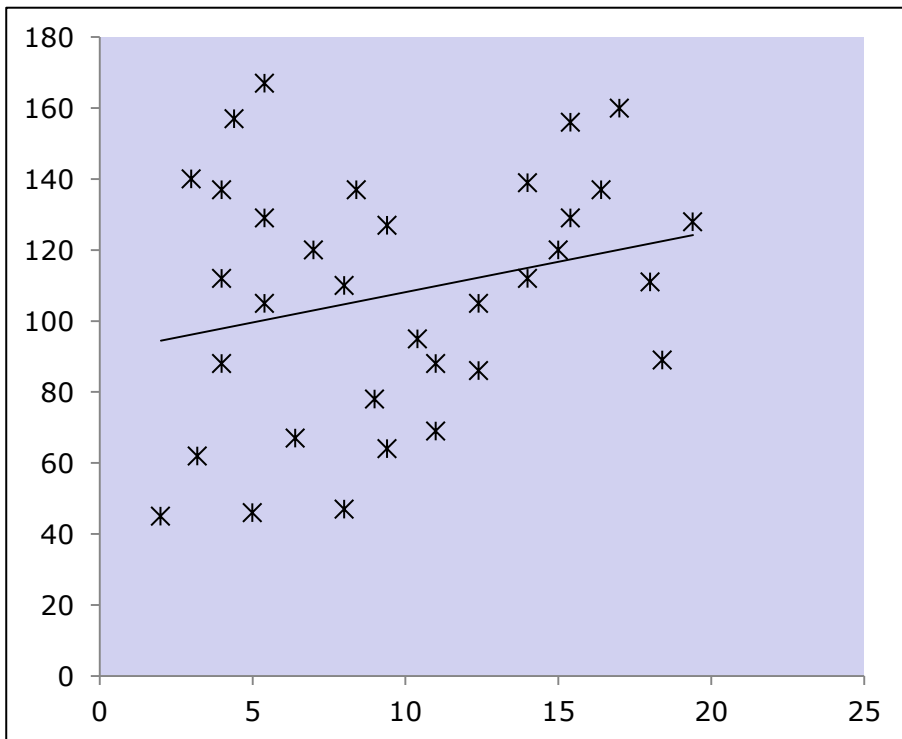
$$r = 0.35$$



**$r = +0.30$  to  $+0.39$**   
**Moderate positive relationship**

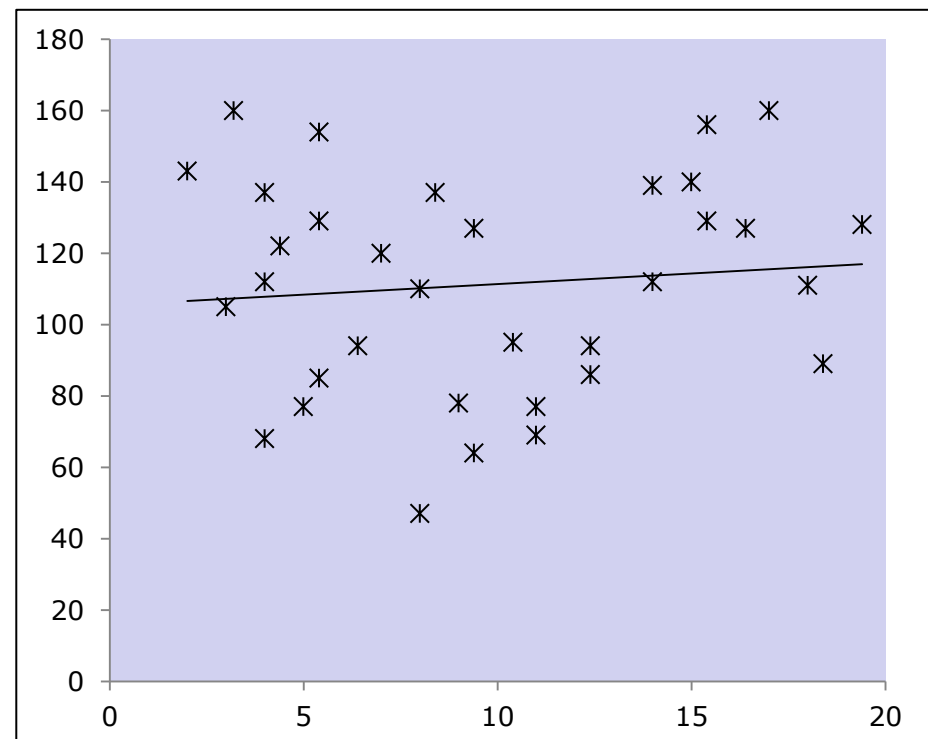
# Pearson's Correlation Coefficient **tsg**

$$r = 0.25$$



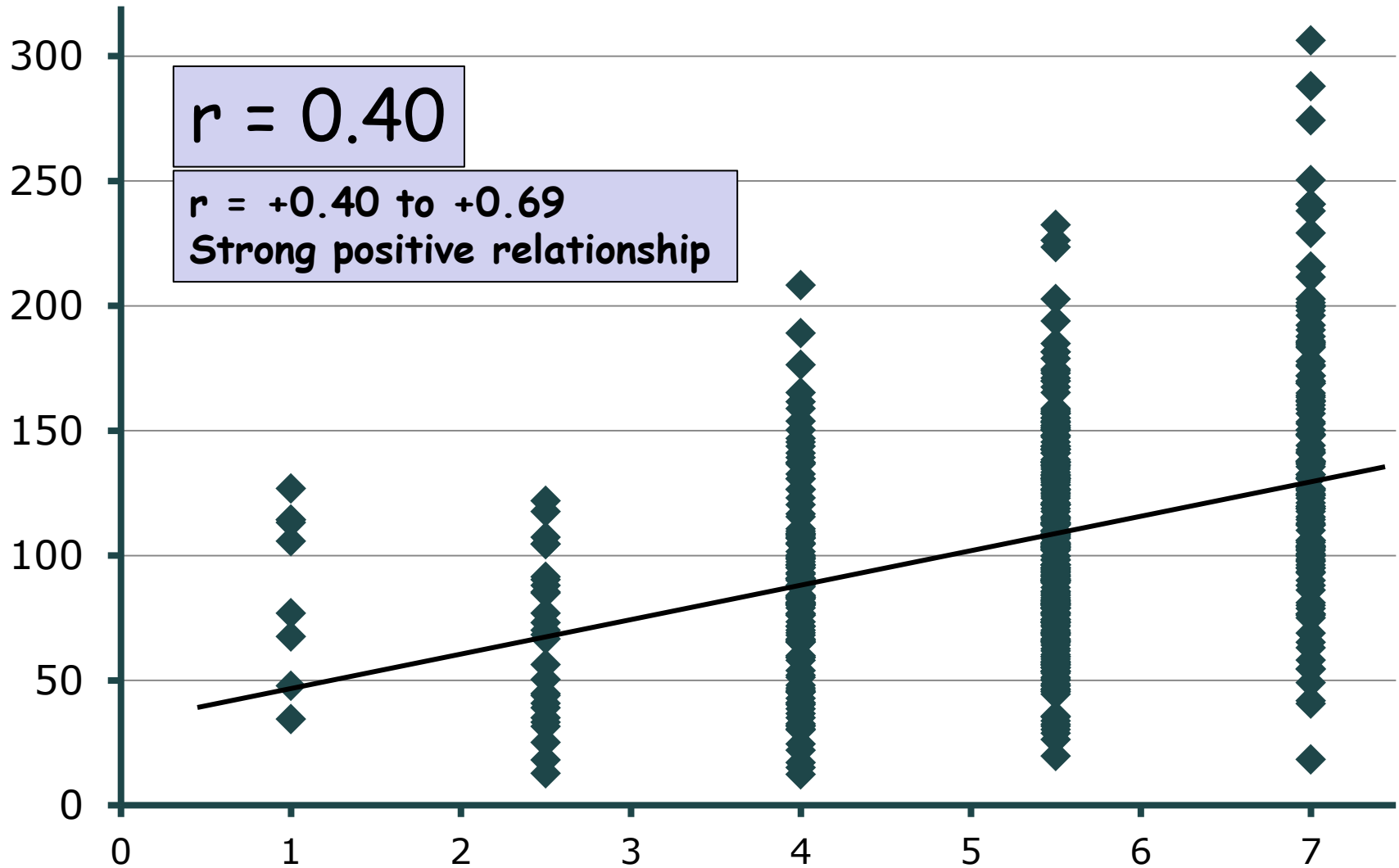
**$r = +0.20$  to  $+0.29$**   
**Weak positive relationship**

$$r = 0.10$$

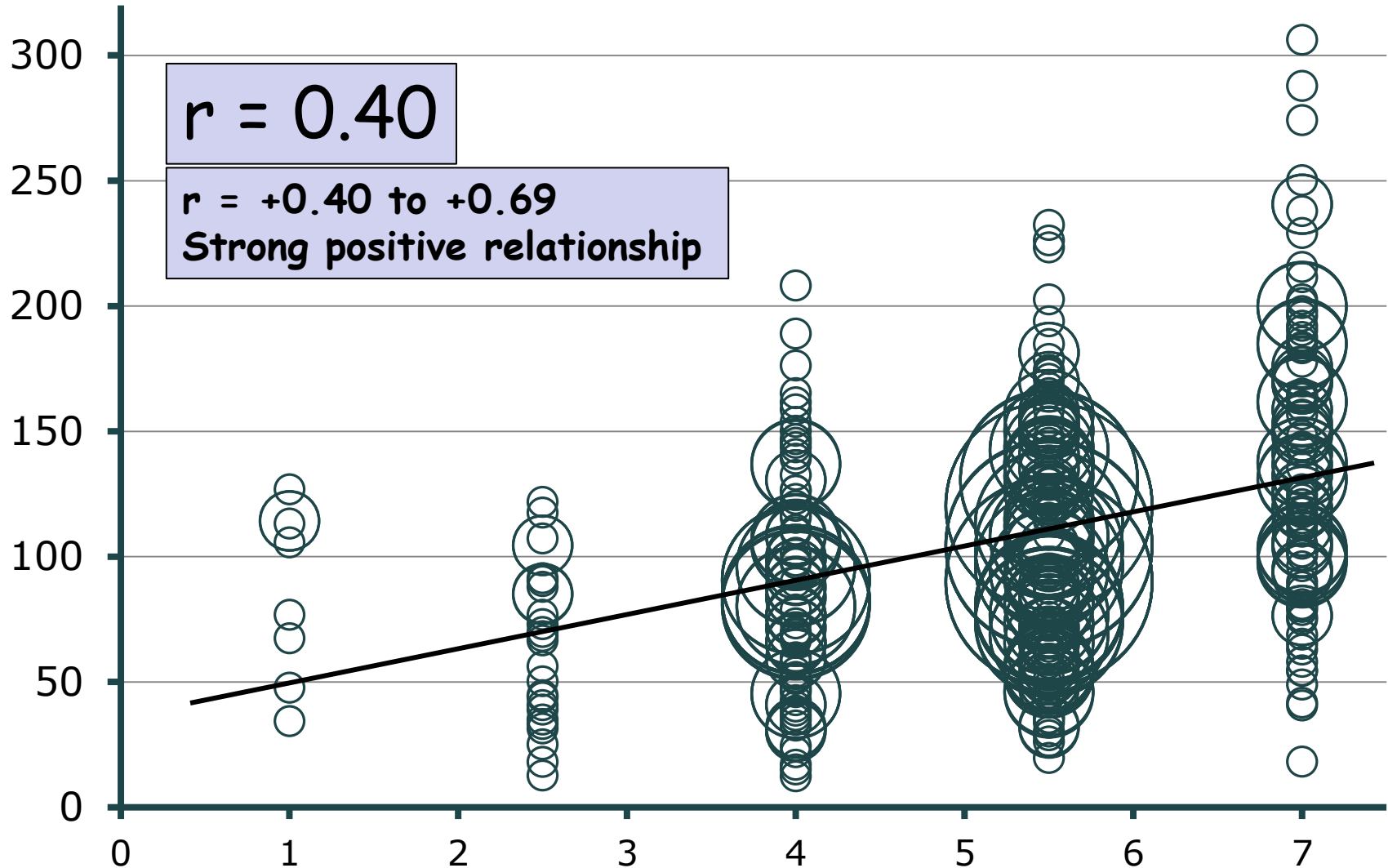


**$r = 0$  to  $+0.19$**   
**Negligible positive relationship**

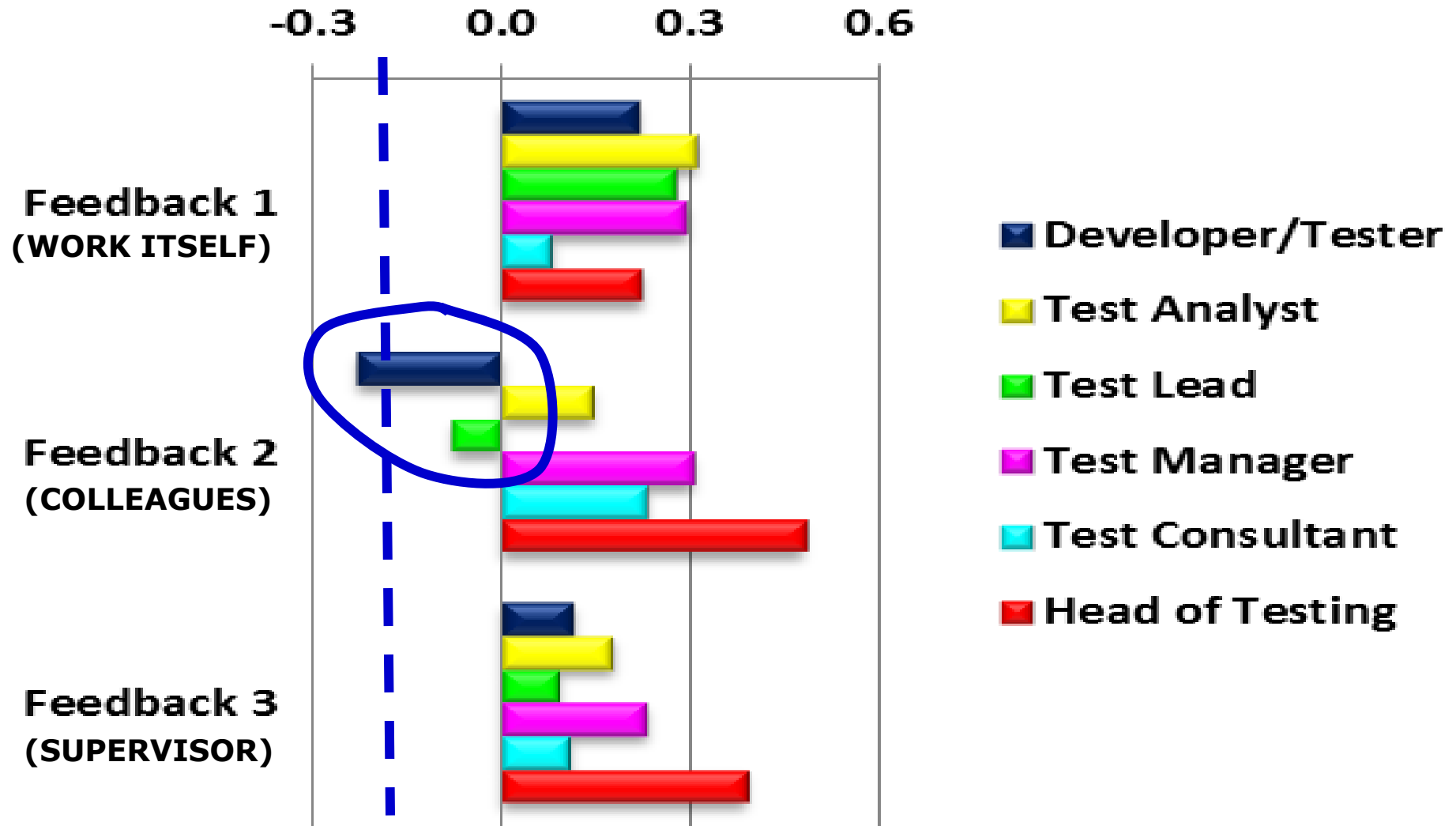
# MPS & Perceived Motivation



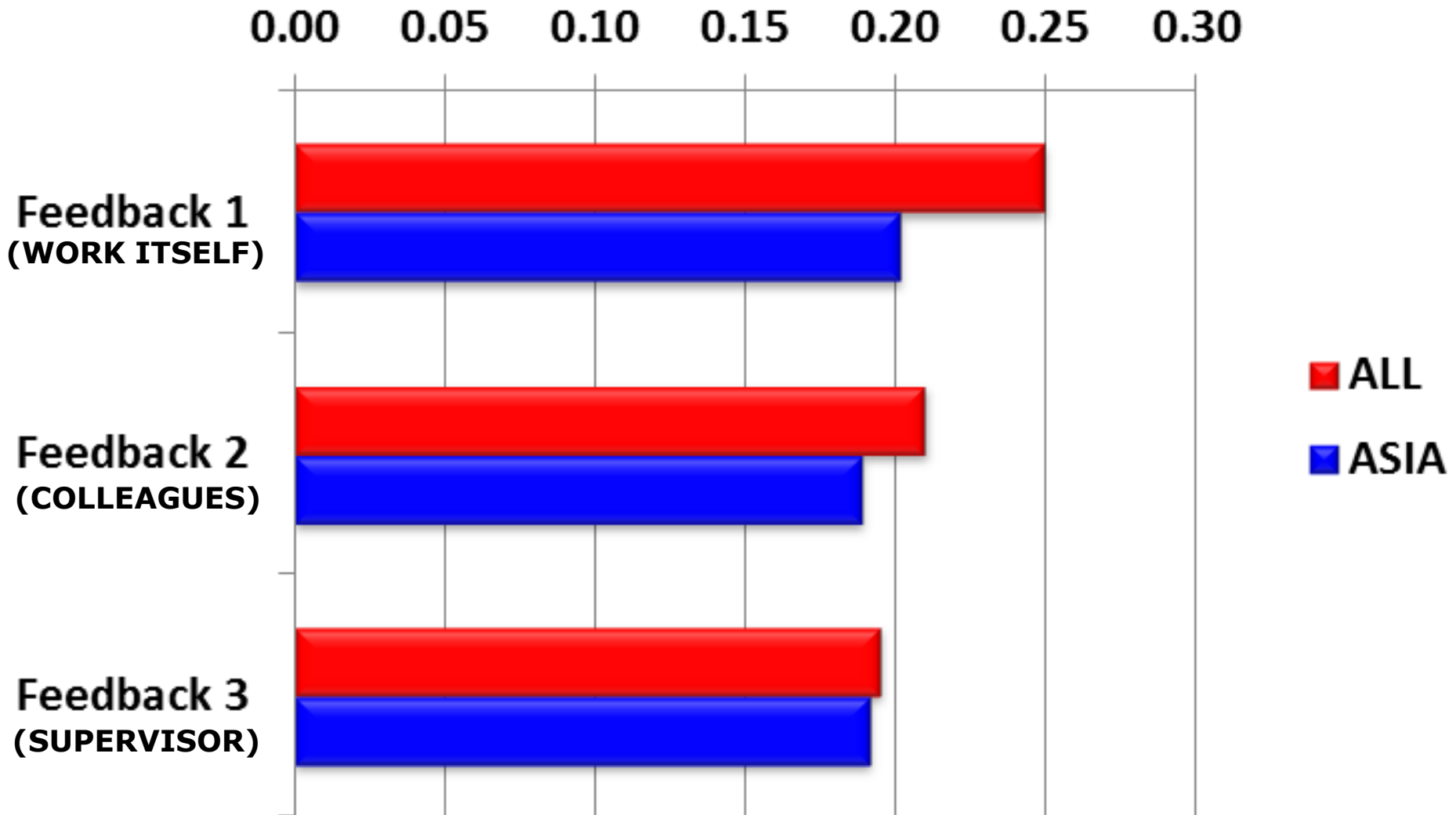
# MPS & Perceived Motivation



# Feedback

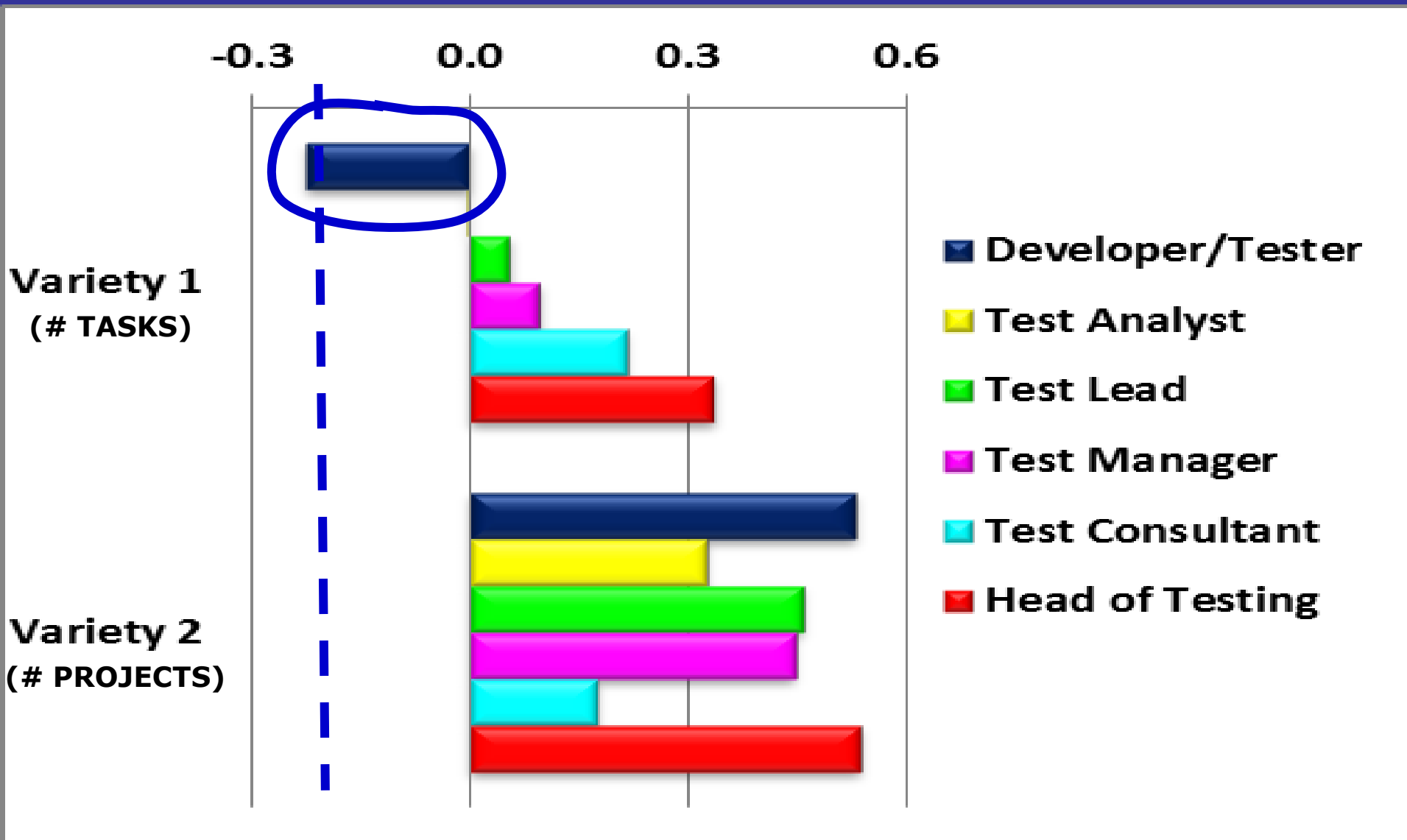


# Feedback - Asian vs All

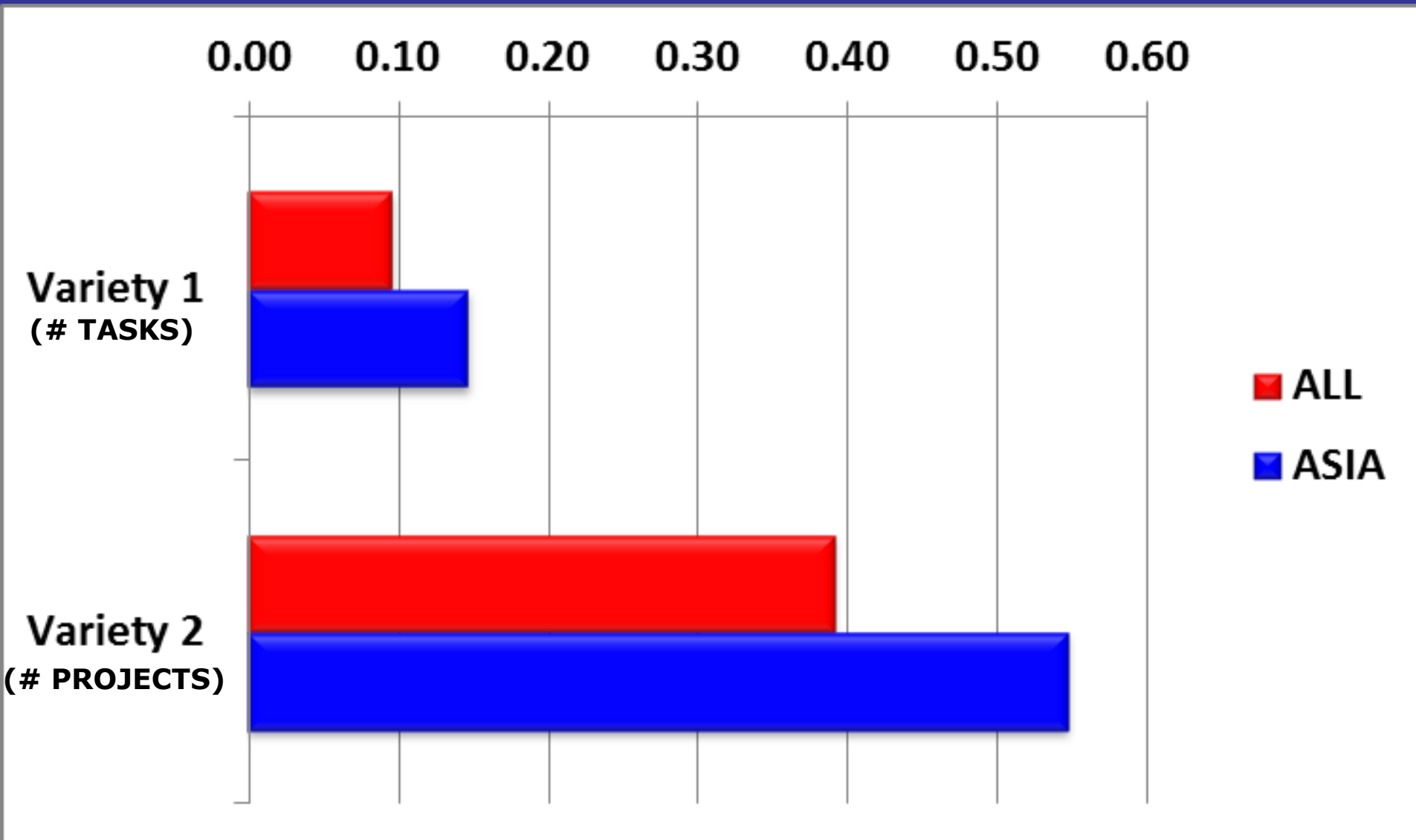




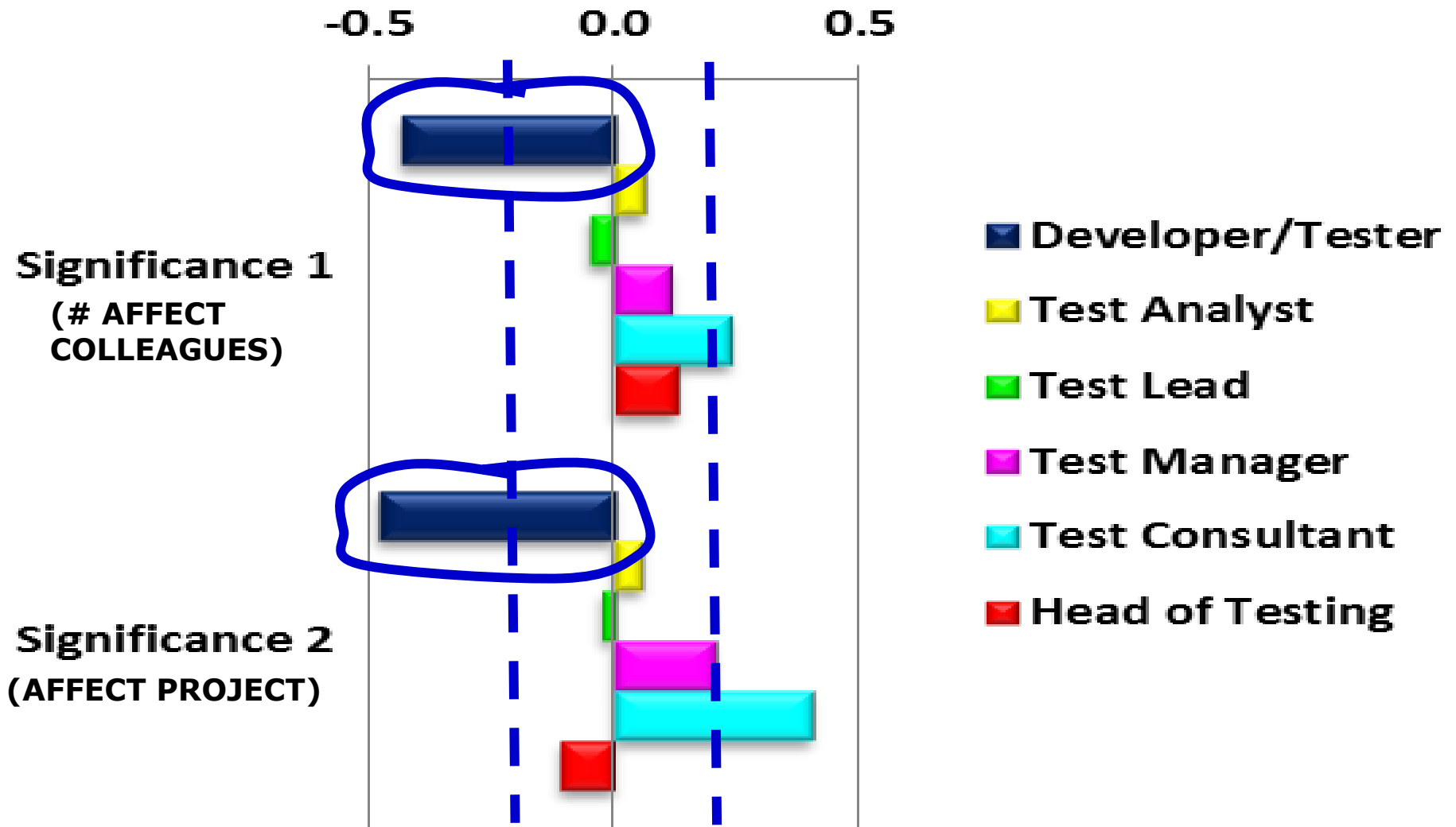
# Variety



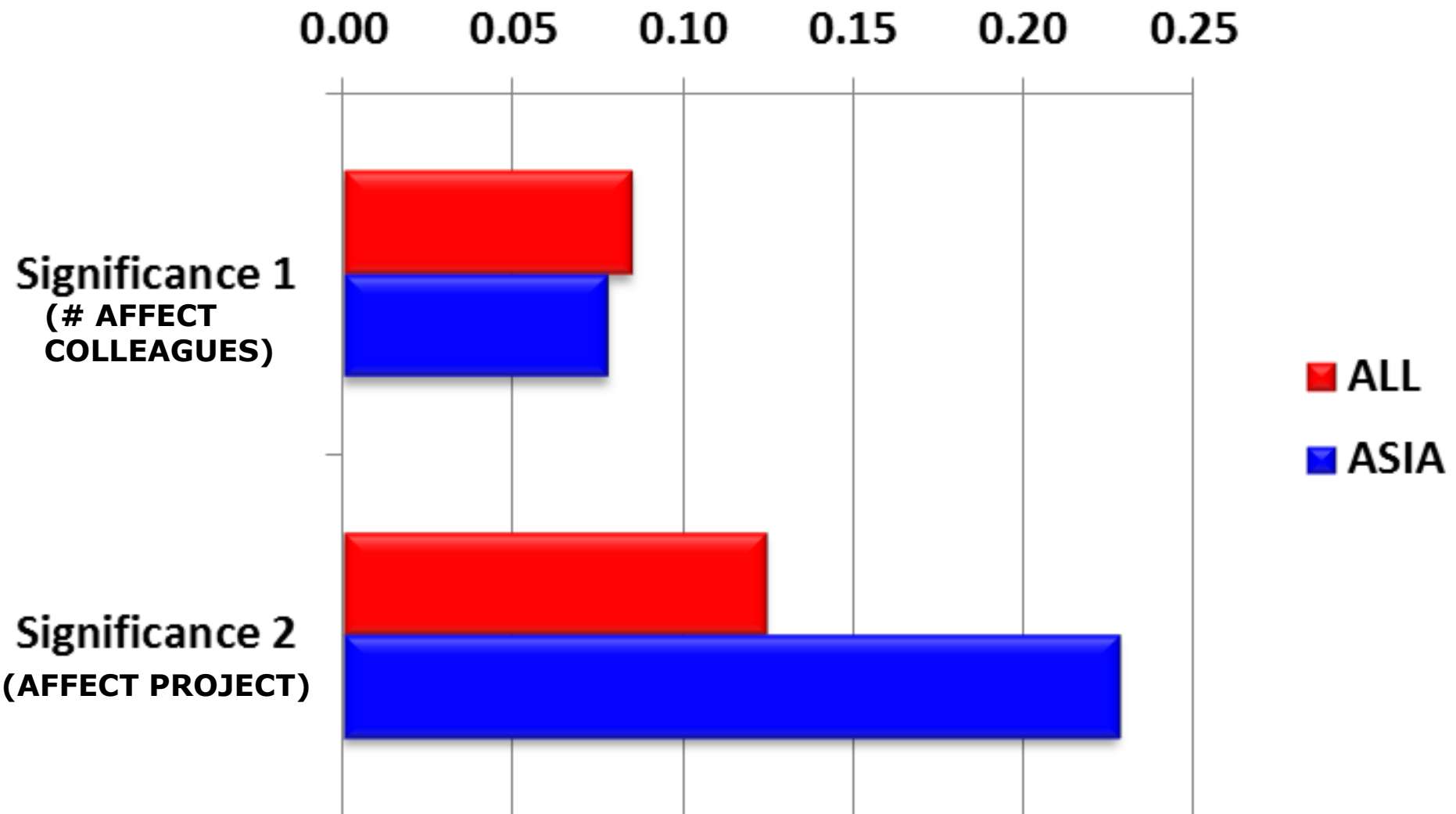
# Variety - Asian vs All



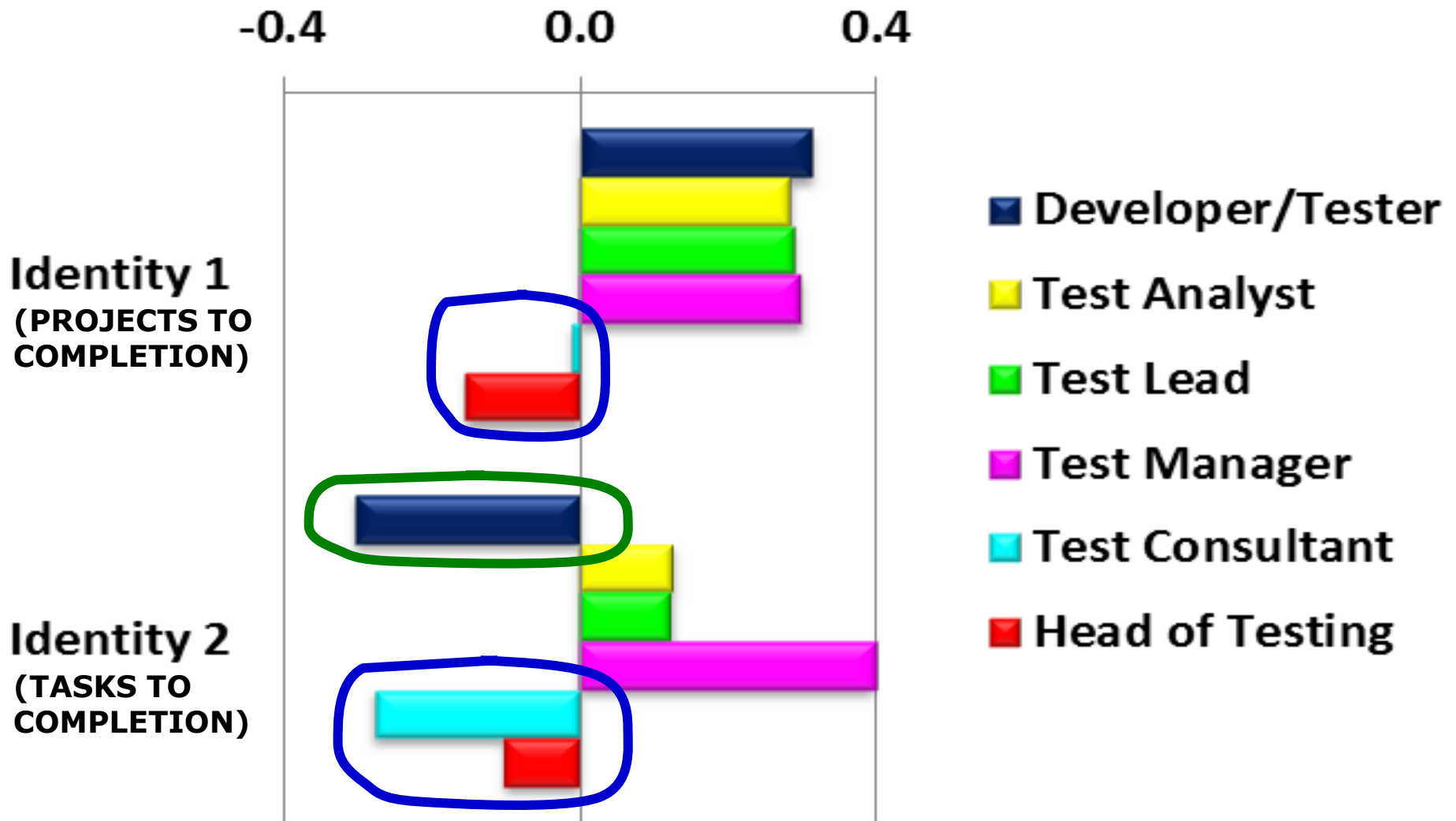
# Significance



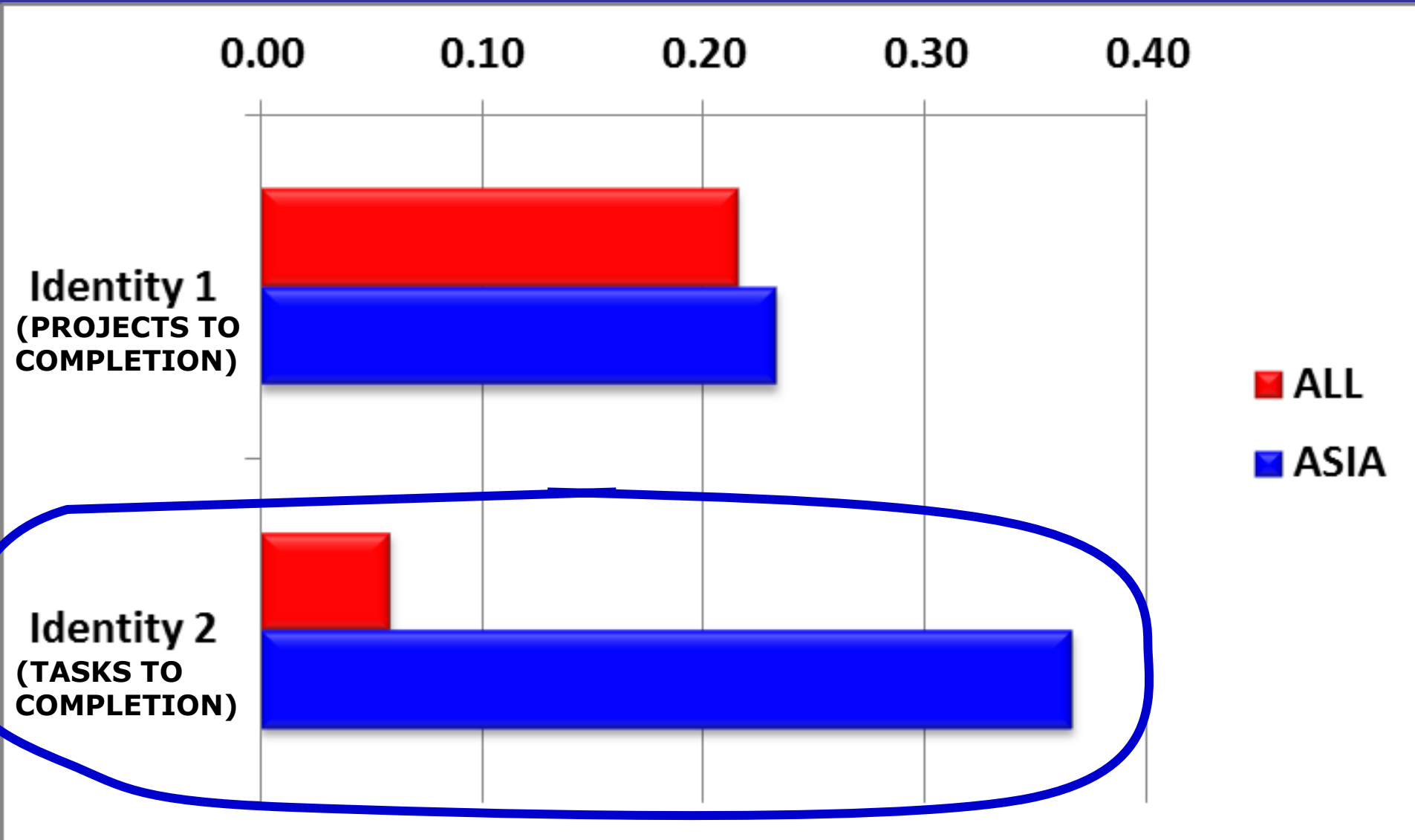
# Significance - Asian vs All



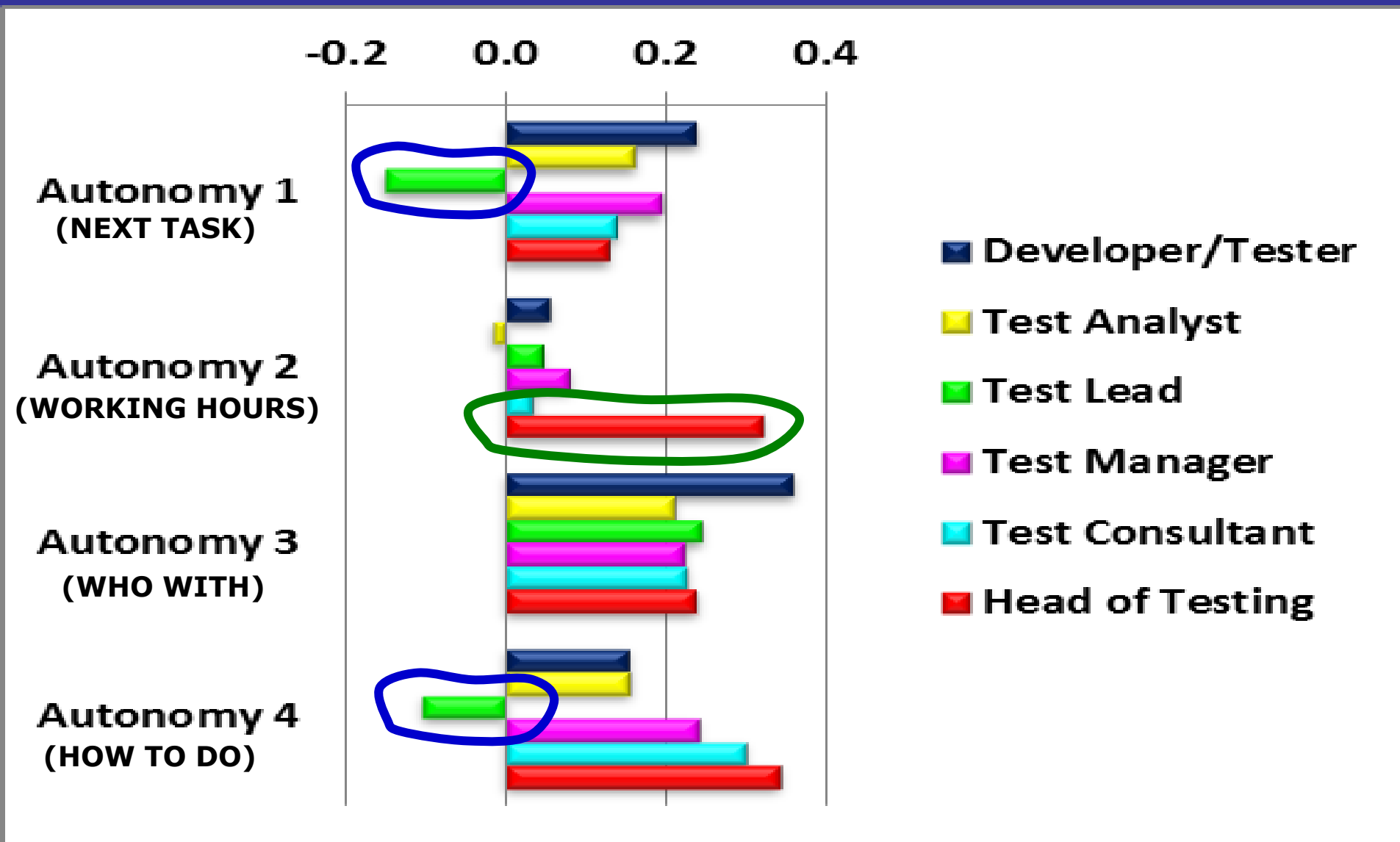
# Identity



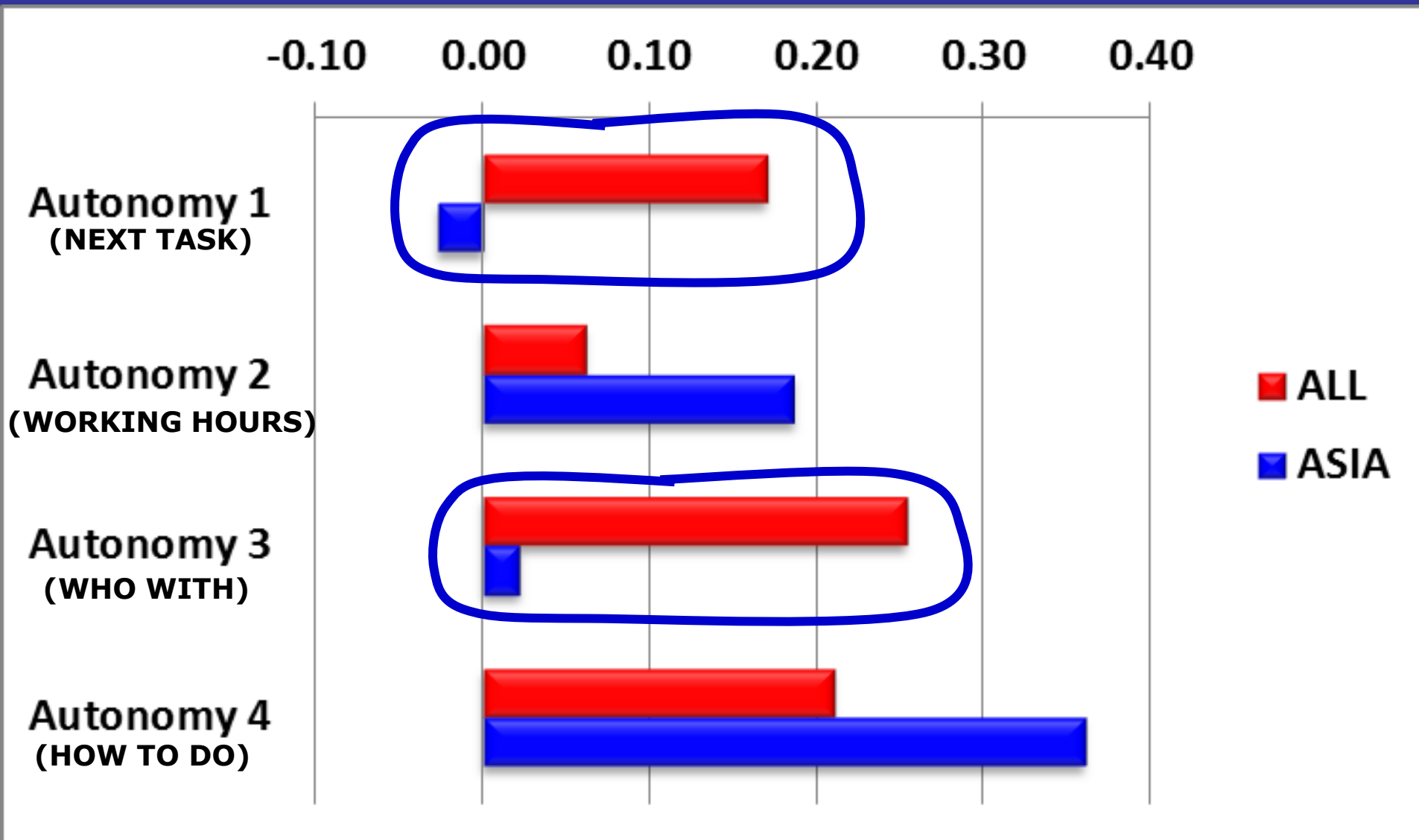
# Identity - Asian vs All



# Autonomy

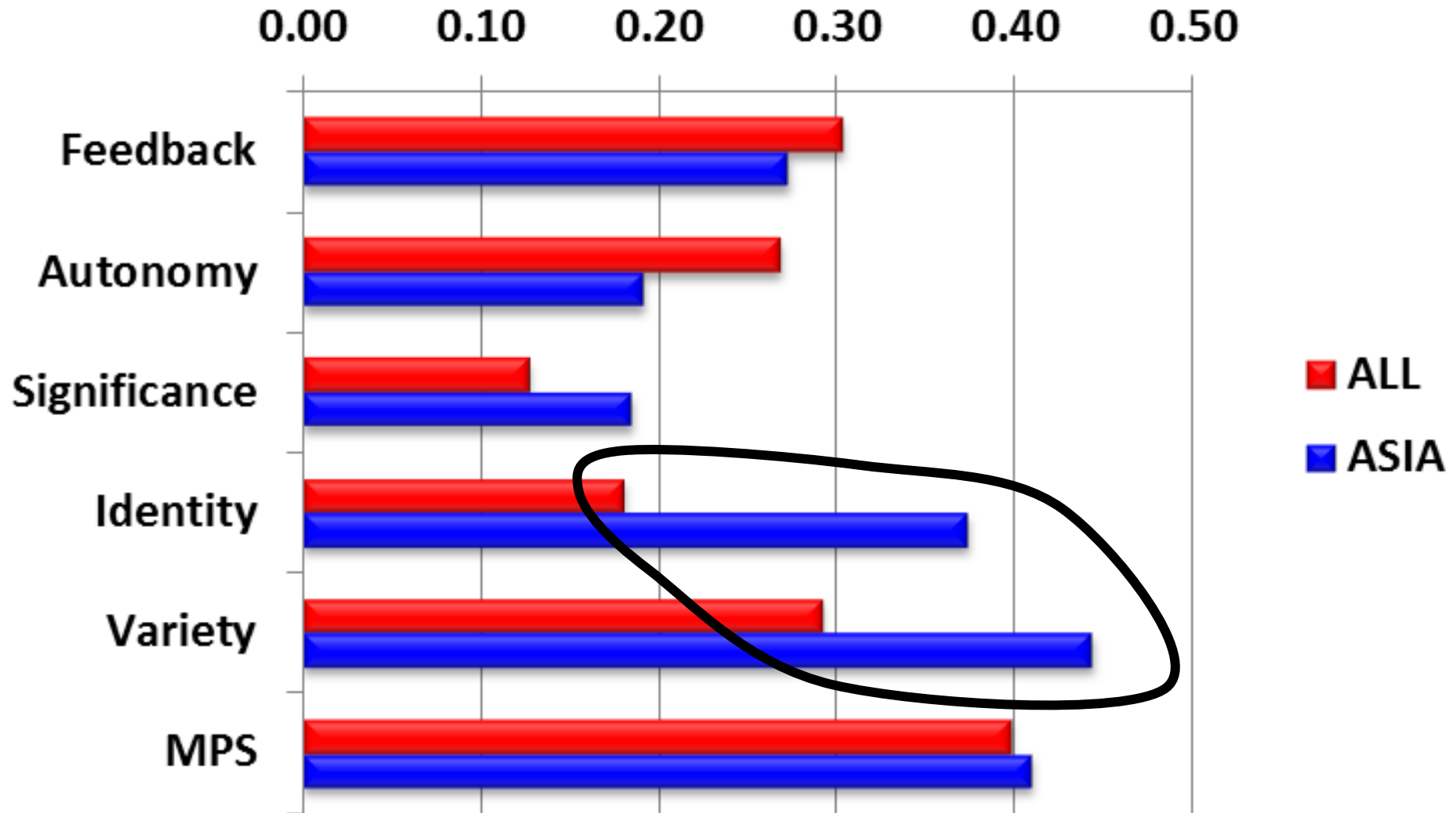


# Autonomy - Asian vs All



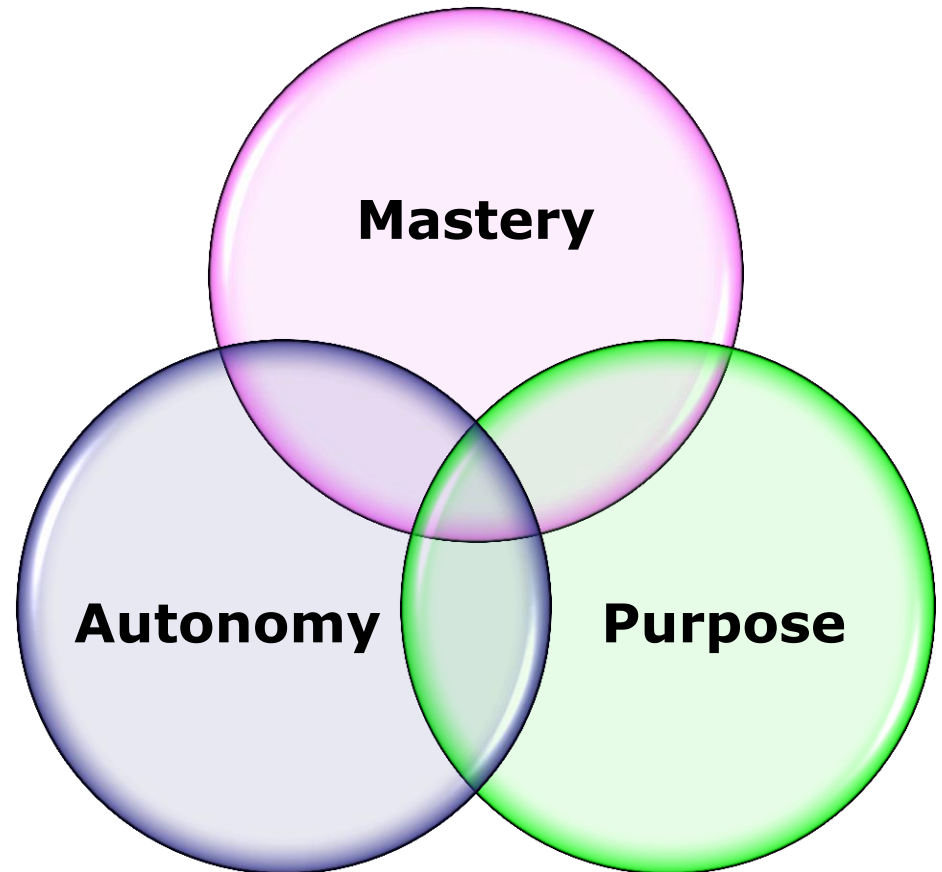
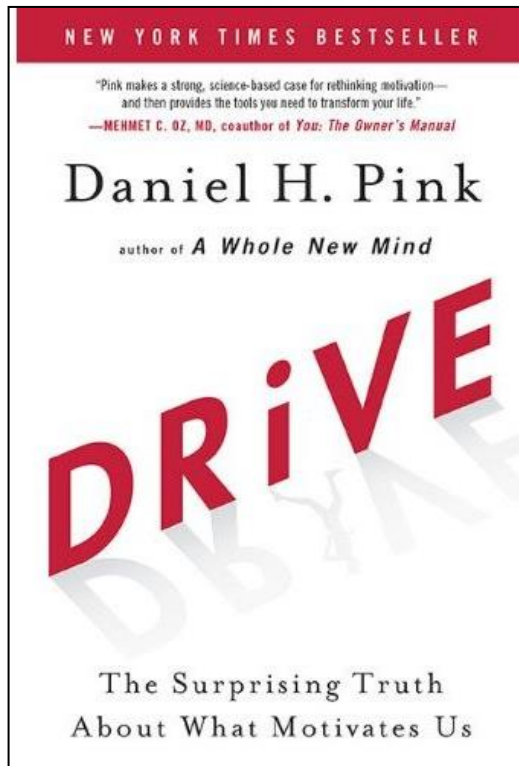


# MPS Factors - Asian vs All

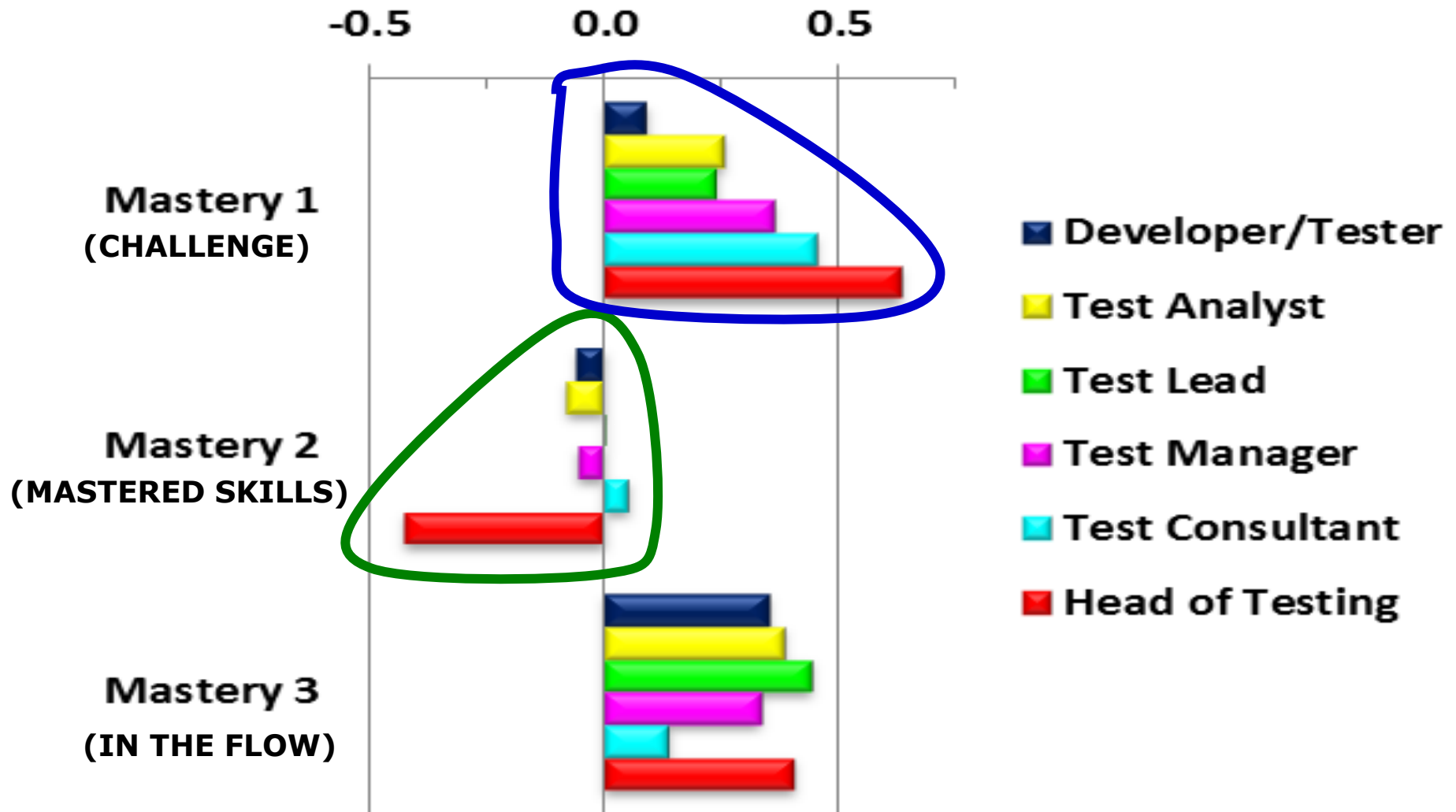


# Daniel Pink's MAP

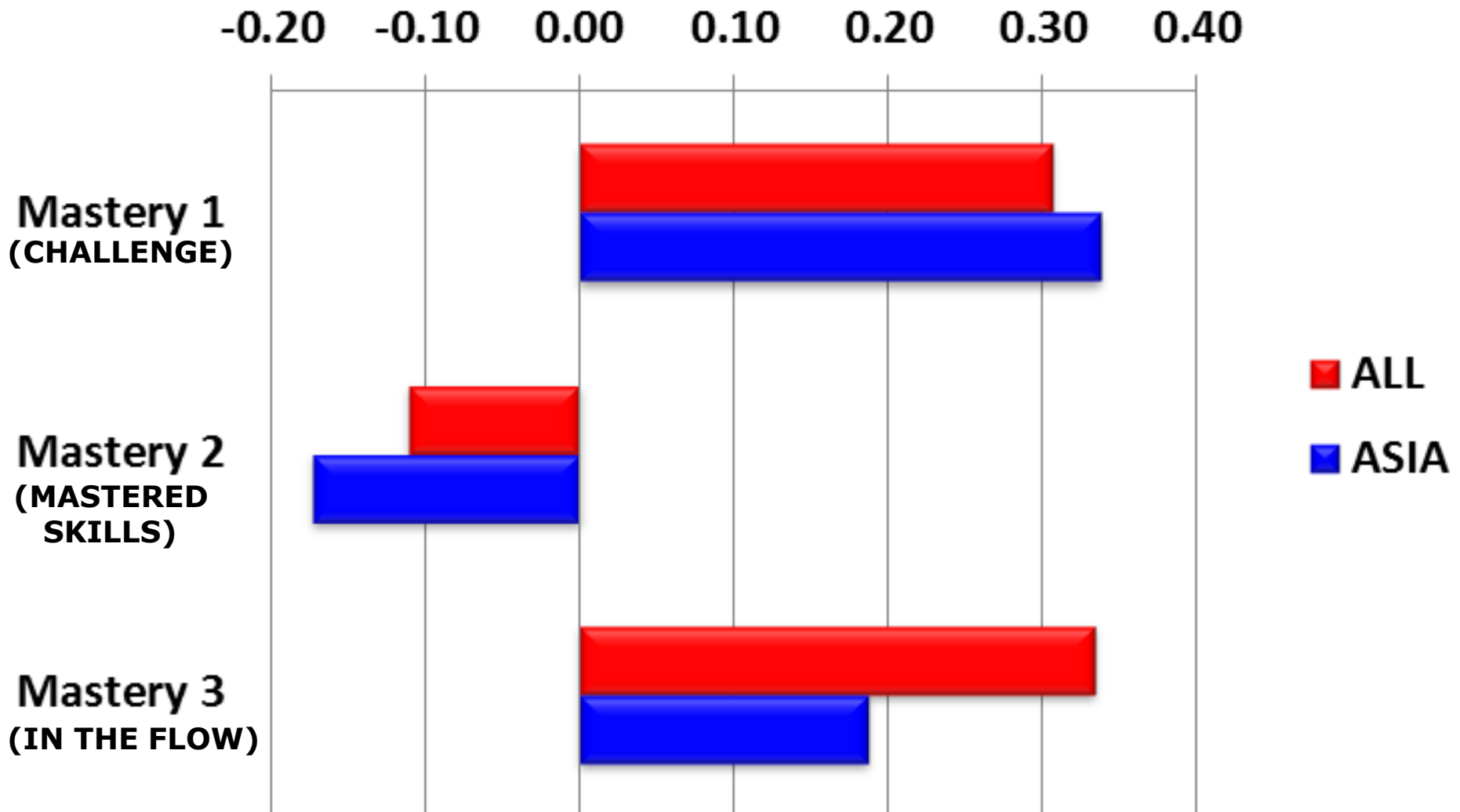
- Daniel Pink's Motivation 3.0



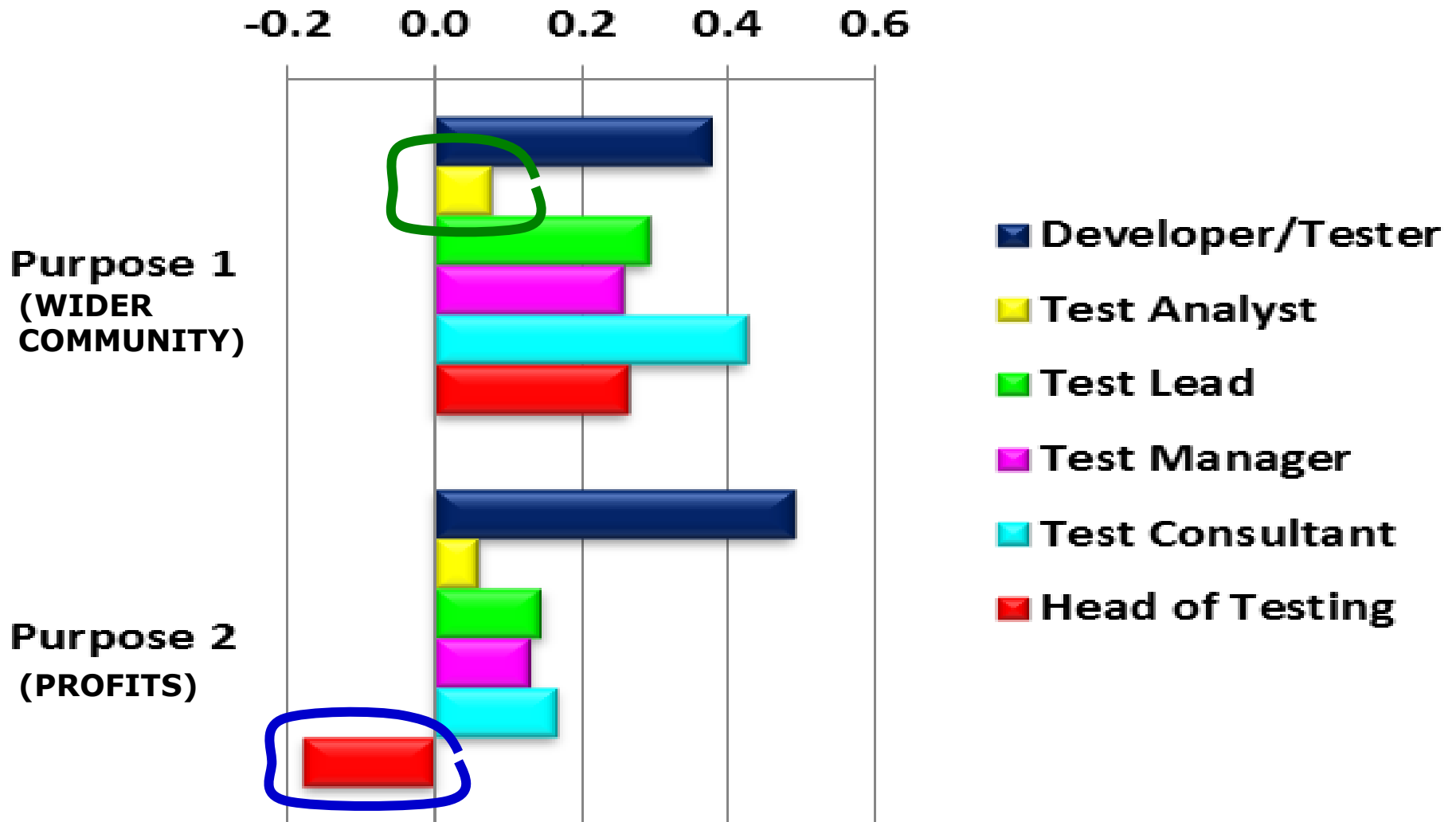
# Mastery



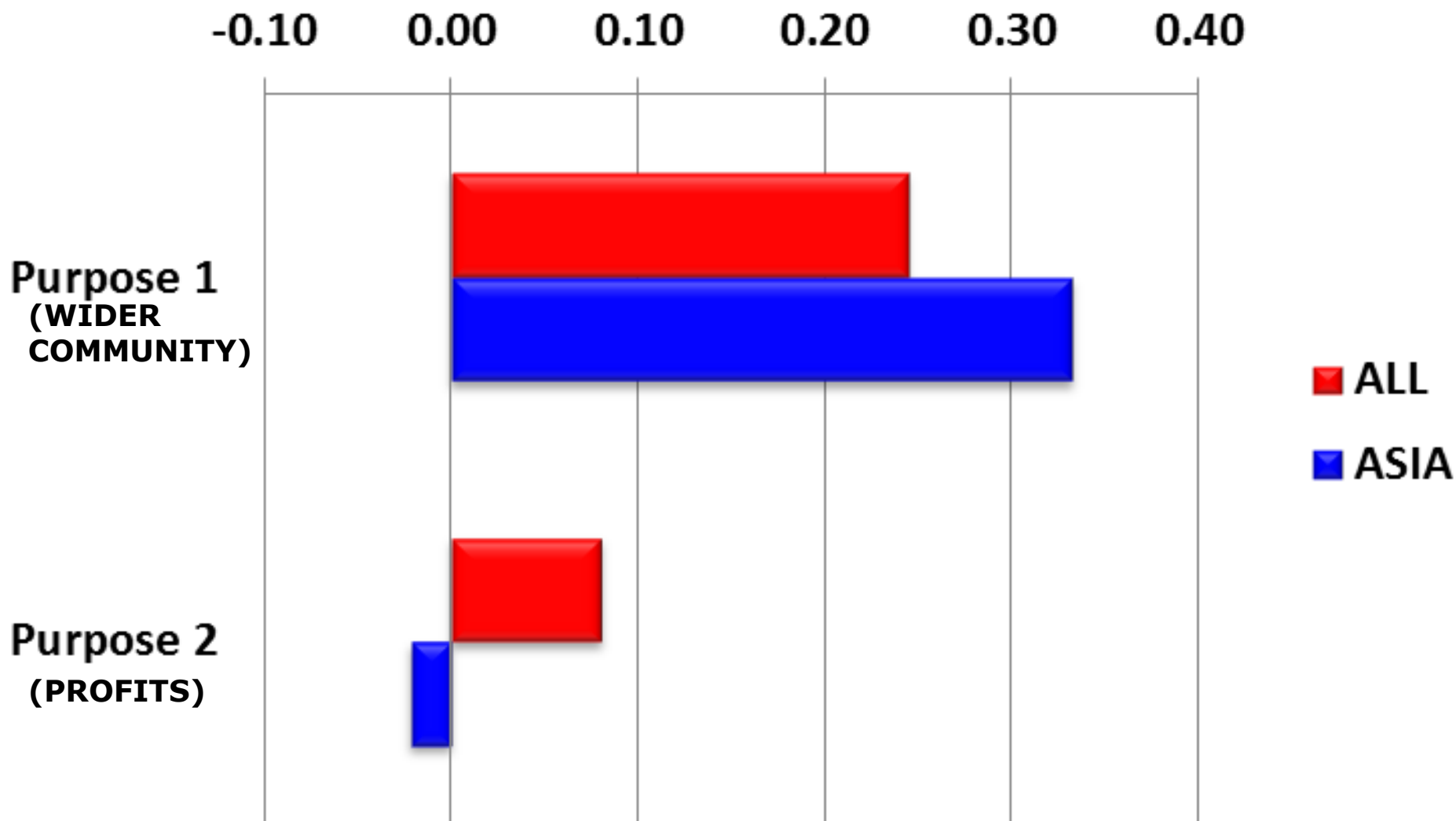
# Mastery - Asian vs All



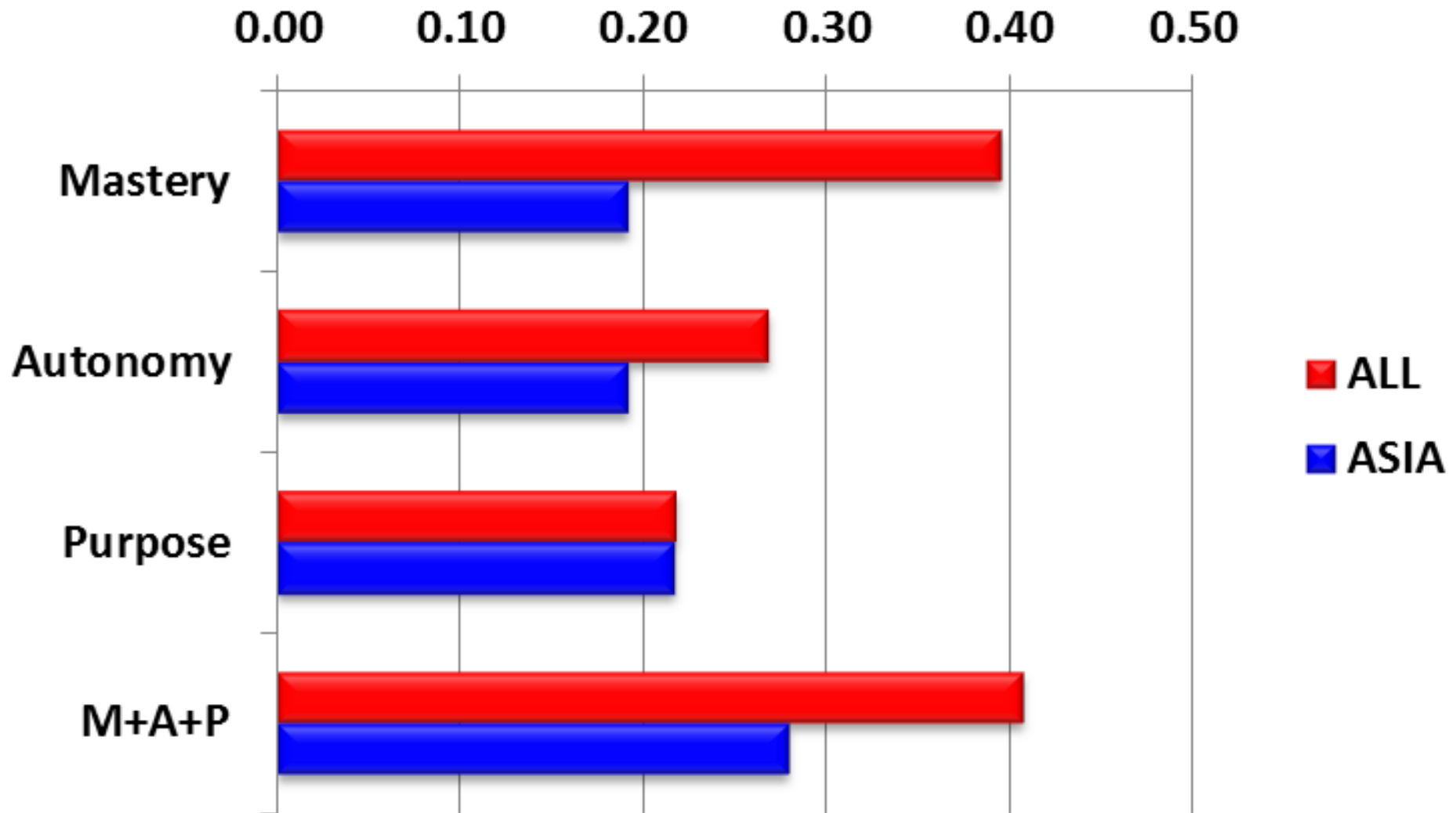
# Purpose



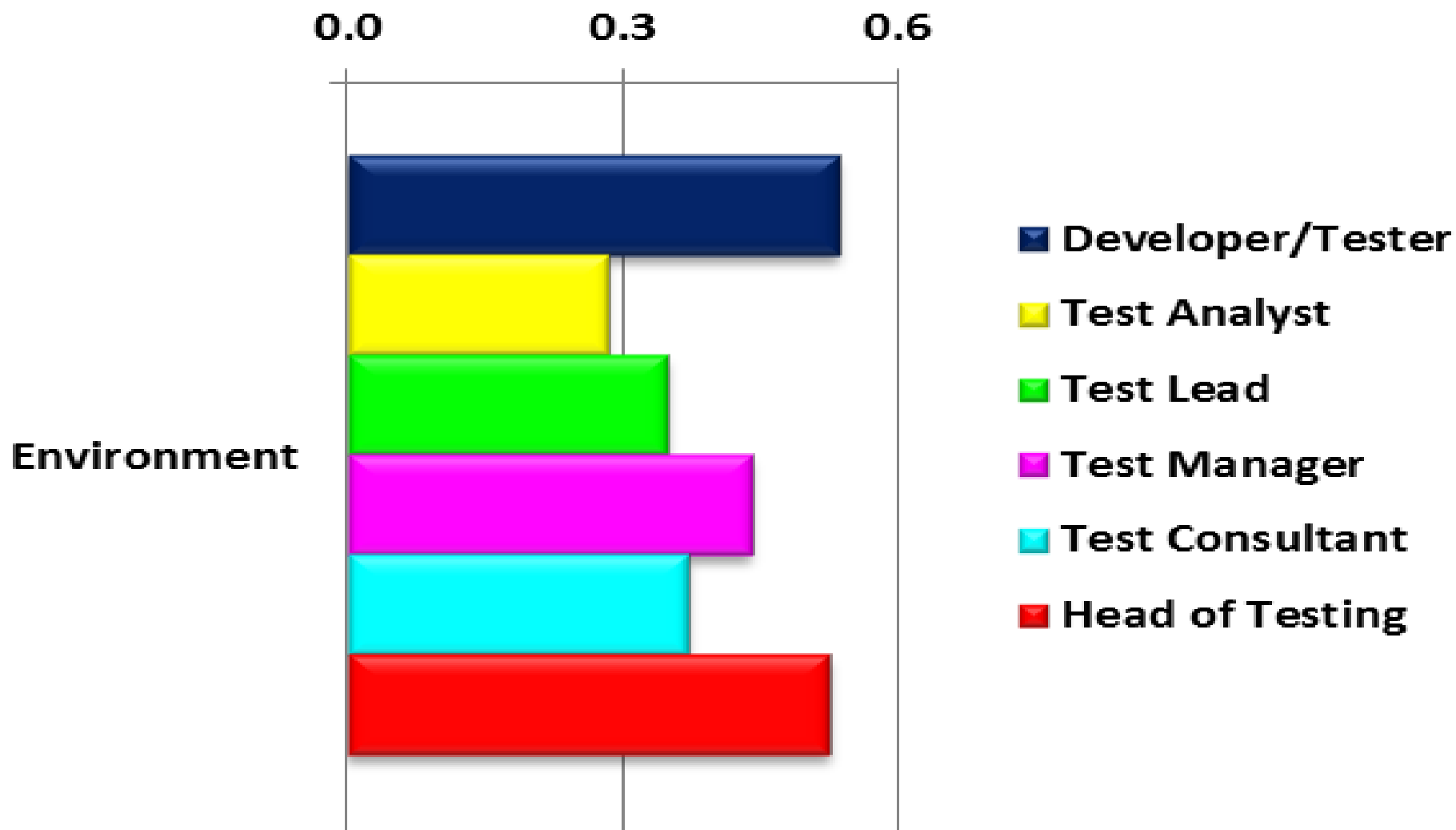
# Purpose - Asian vs All



# MAP Factors - Asian vs All

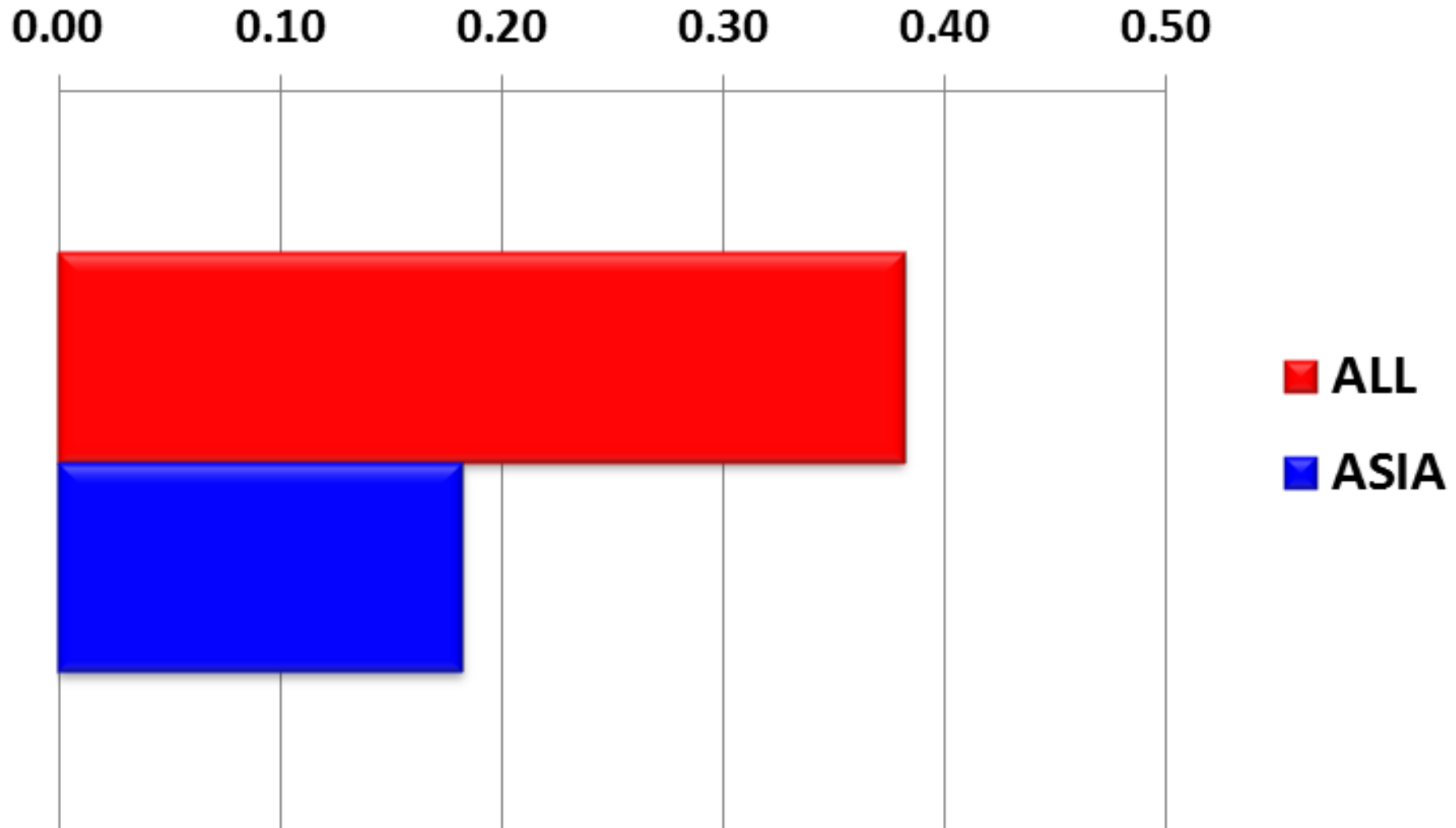


# Environment

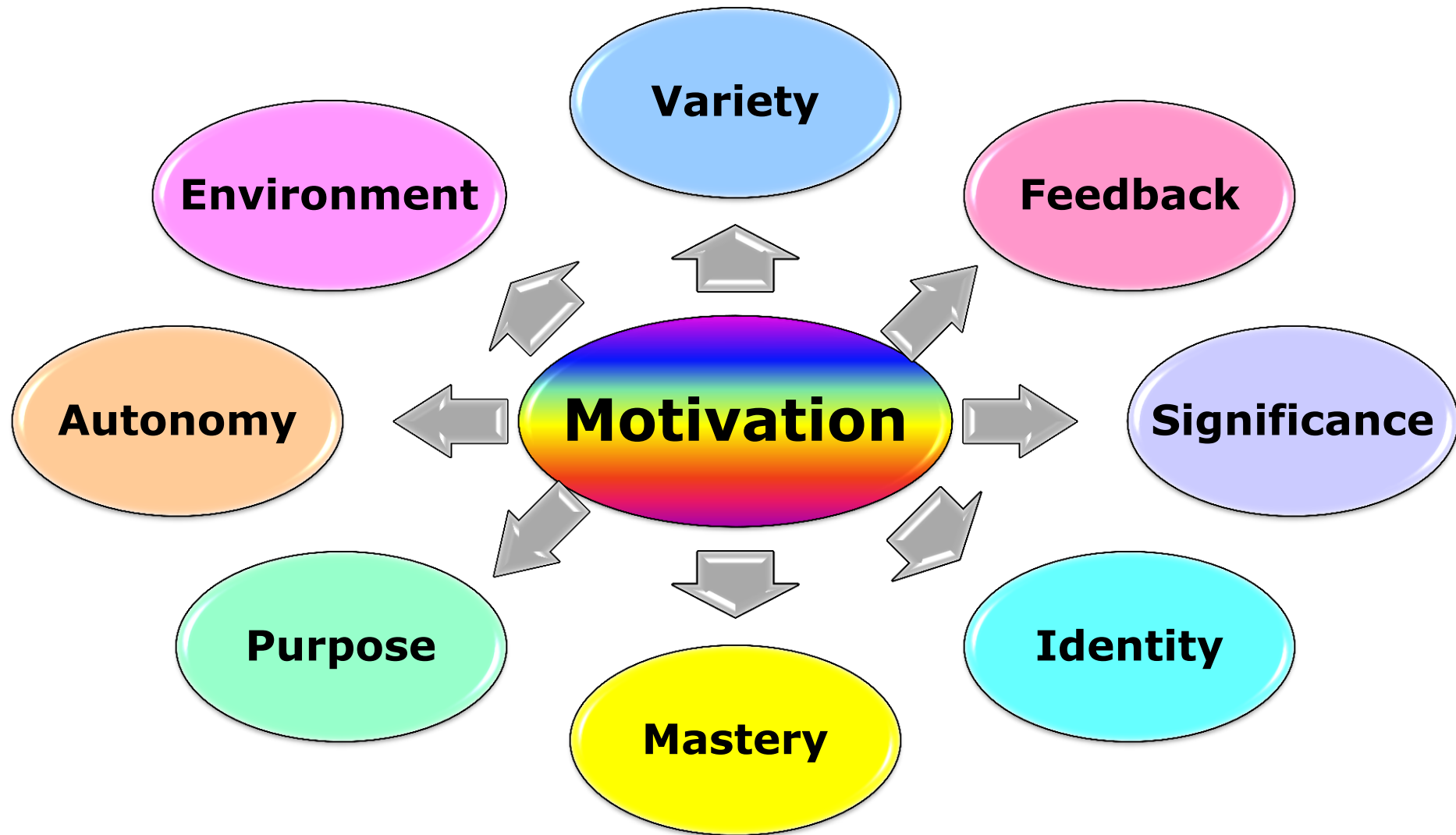




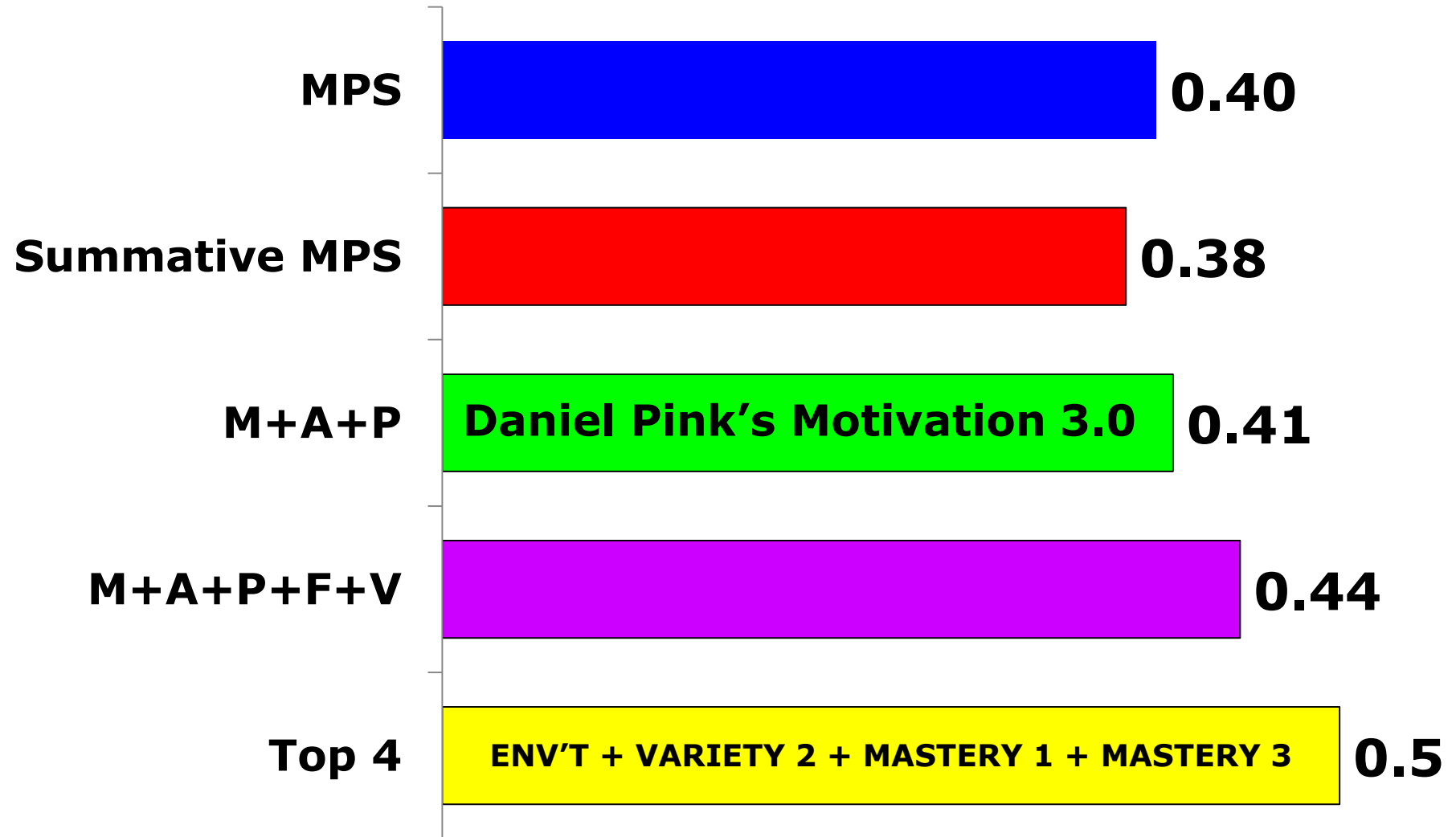
# Environment - Asian vs All



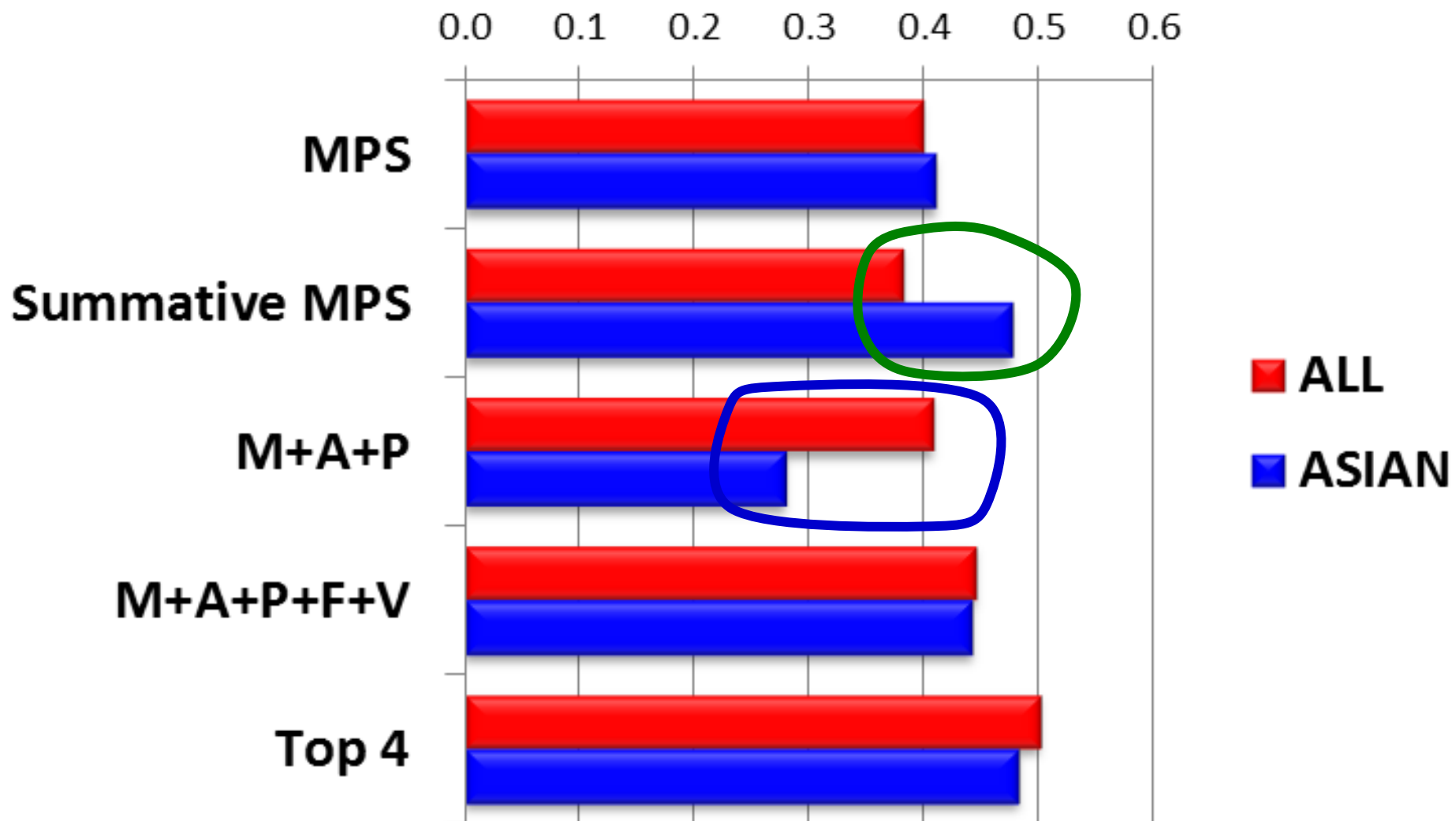
# Integrating Theories



# MPS and MAP and MAPFV and...



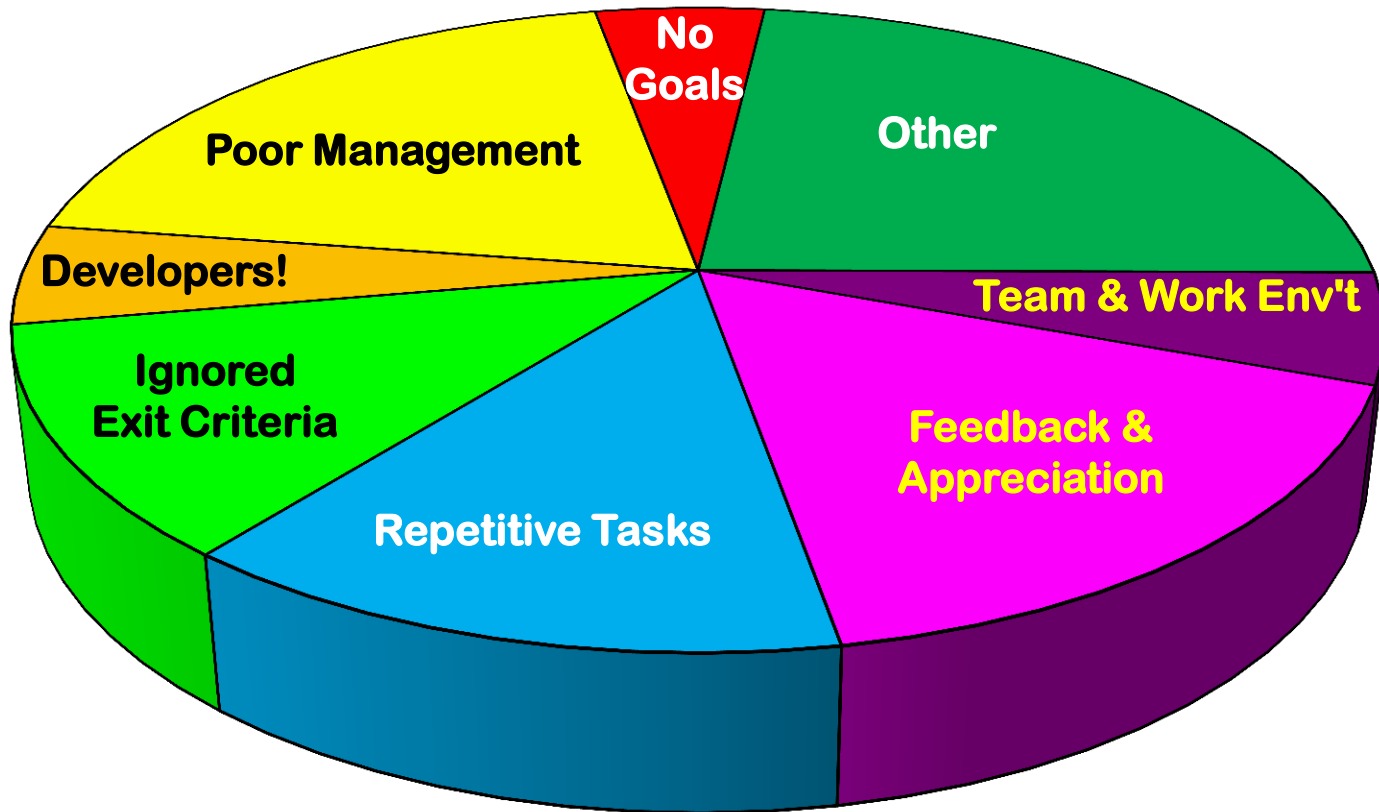
# Asian vs All – Motivation Models



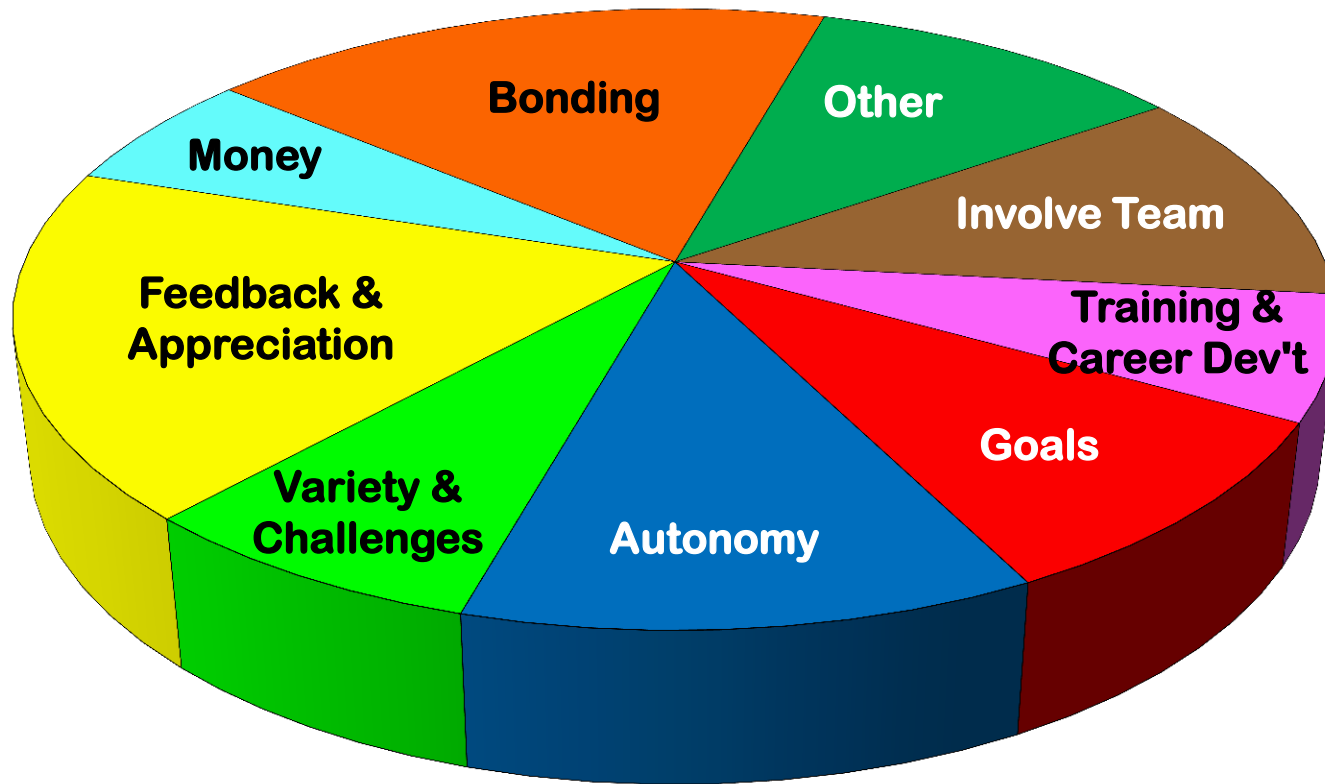
# What Motivates Testers?



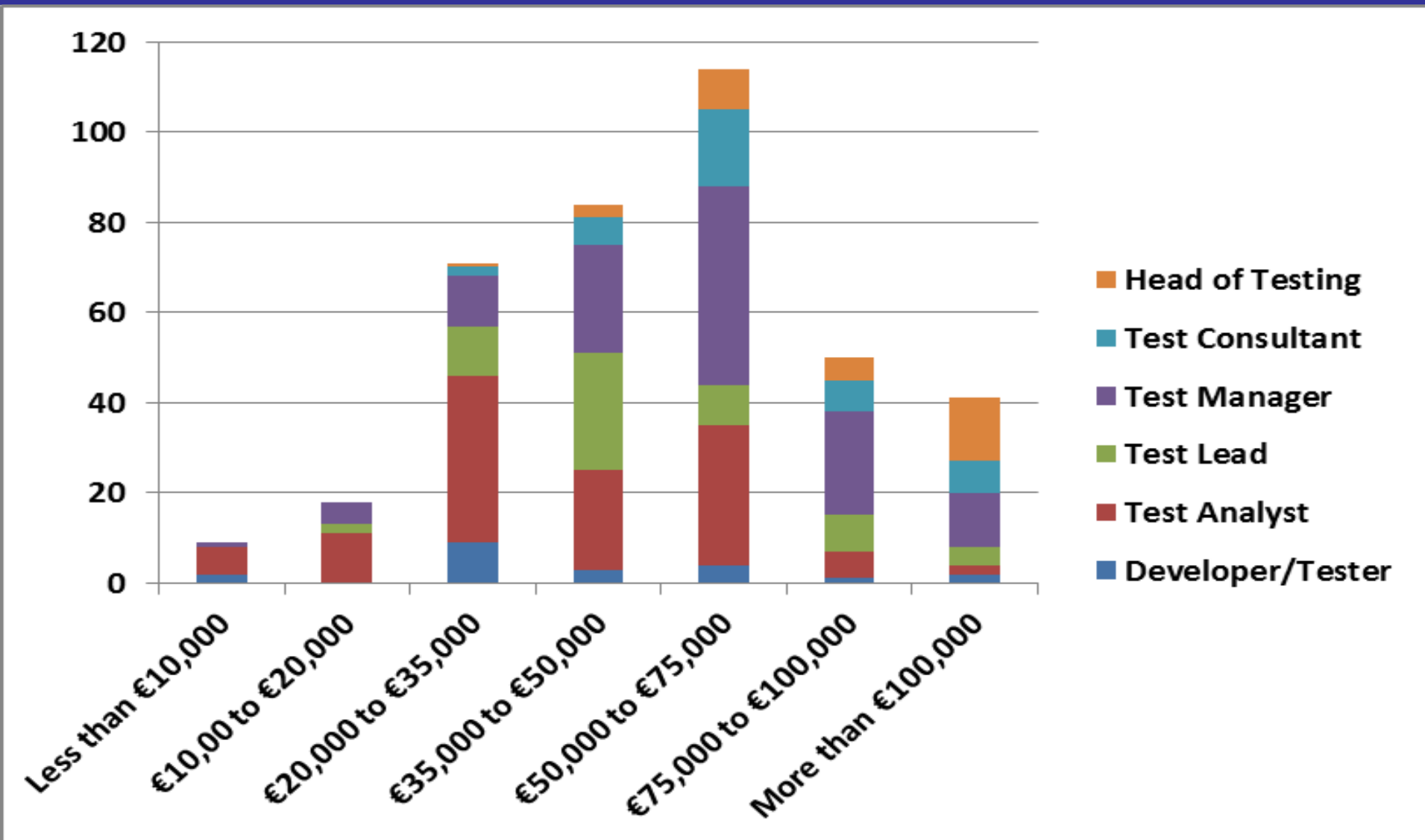
# What Demotivates Testers?



# How Do You Motivate?

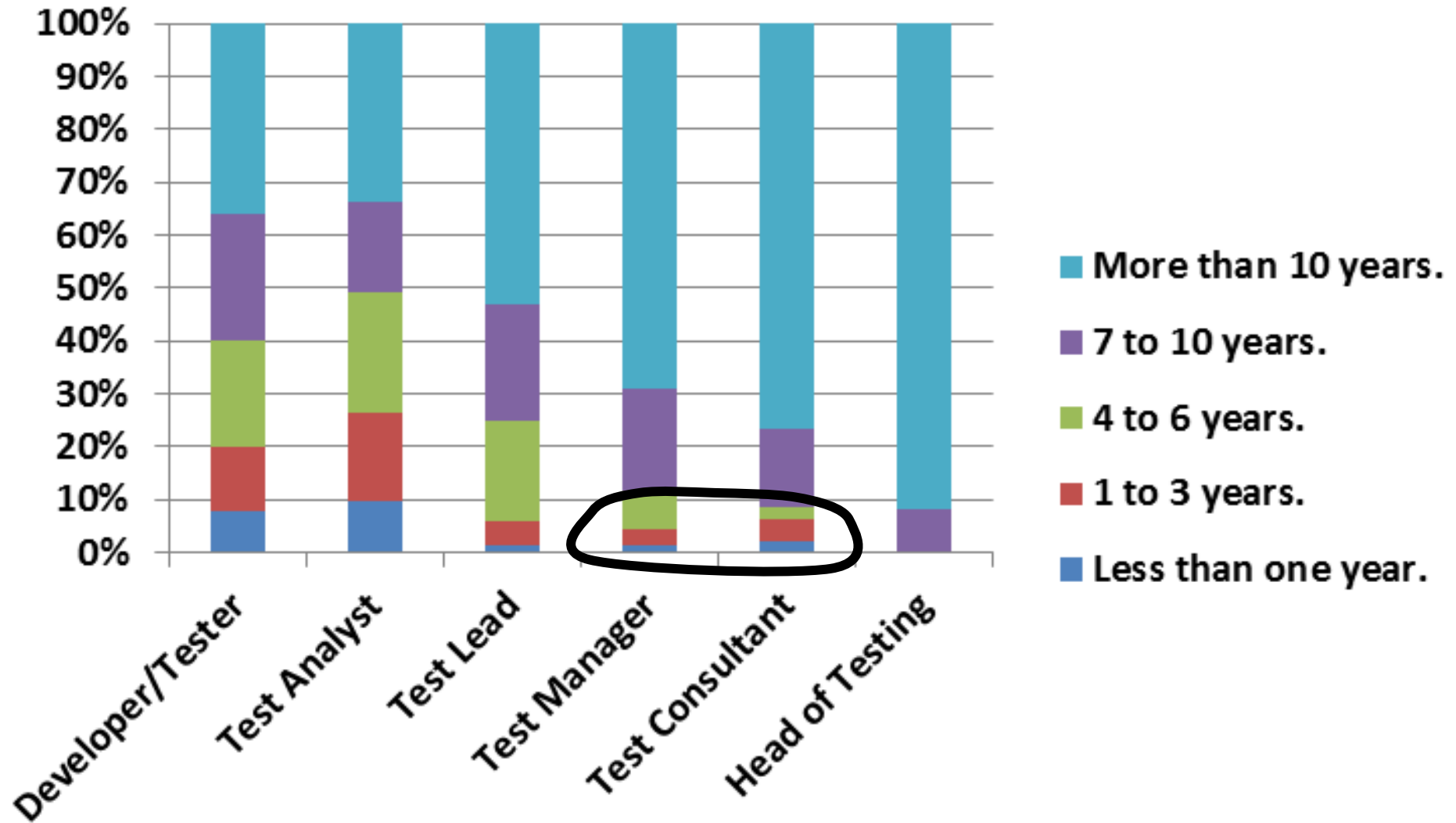


# Salary Profile

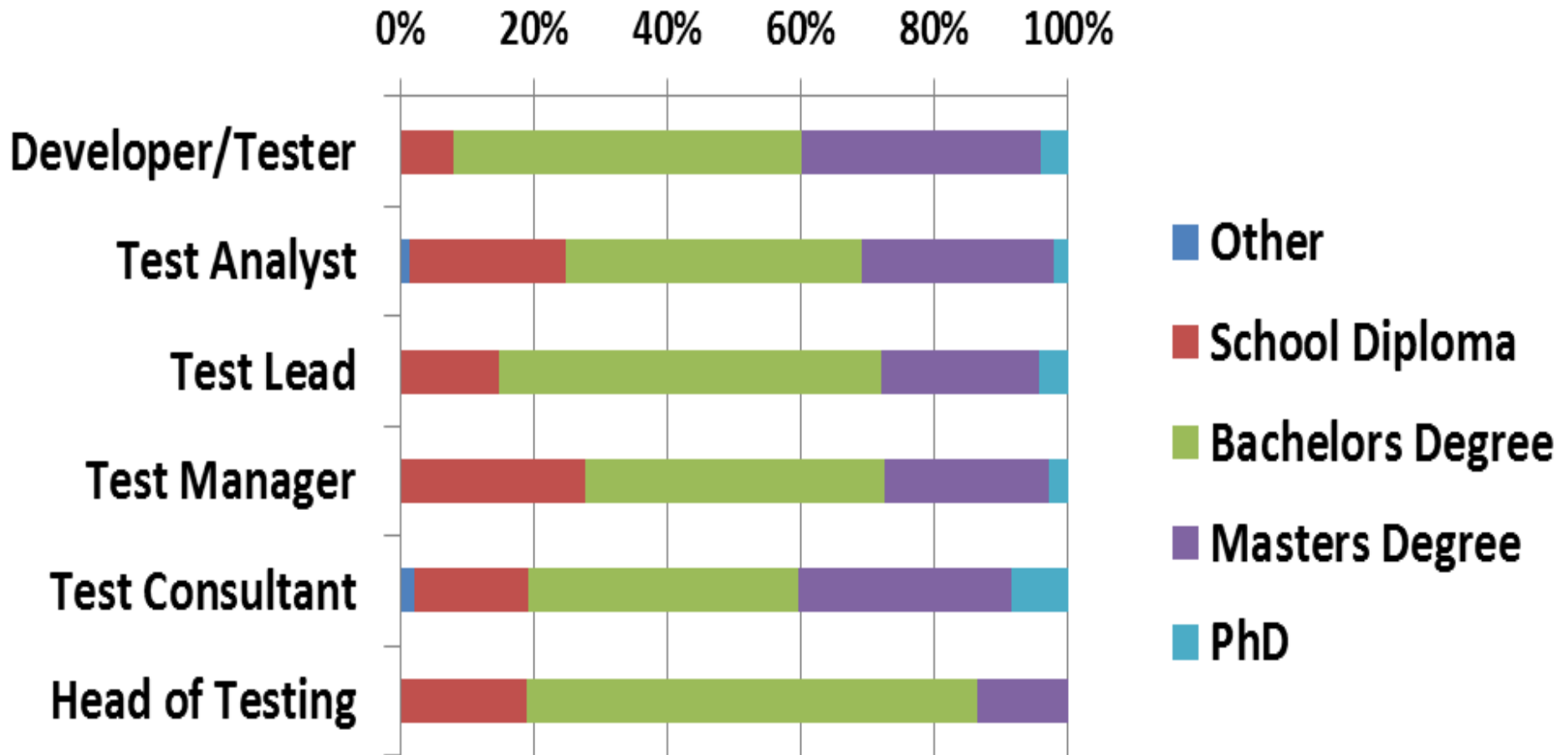




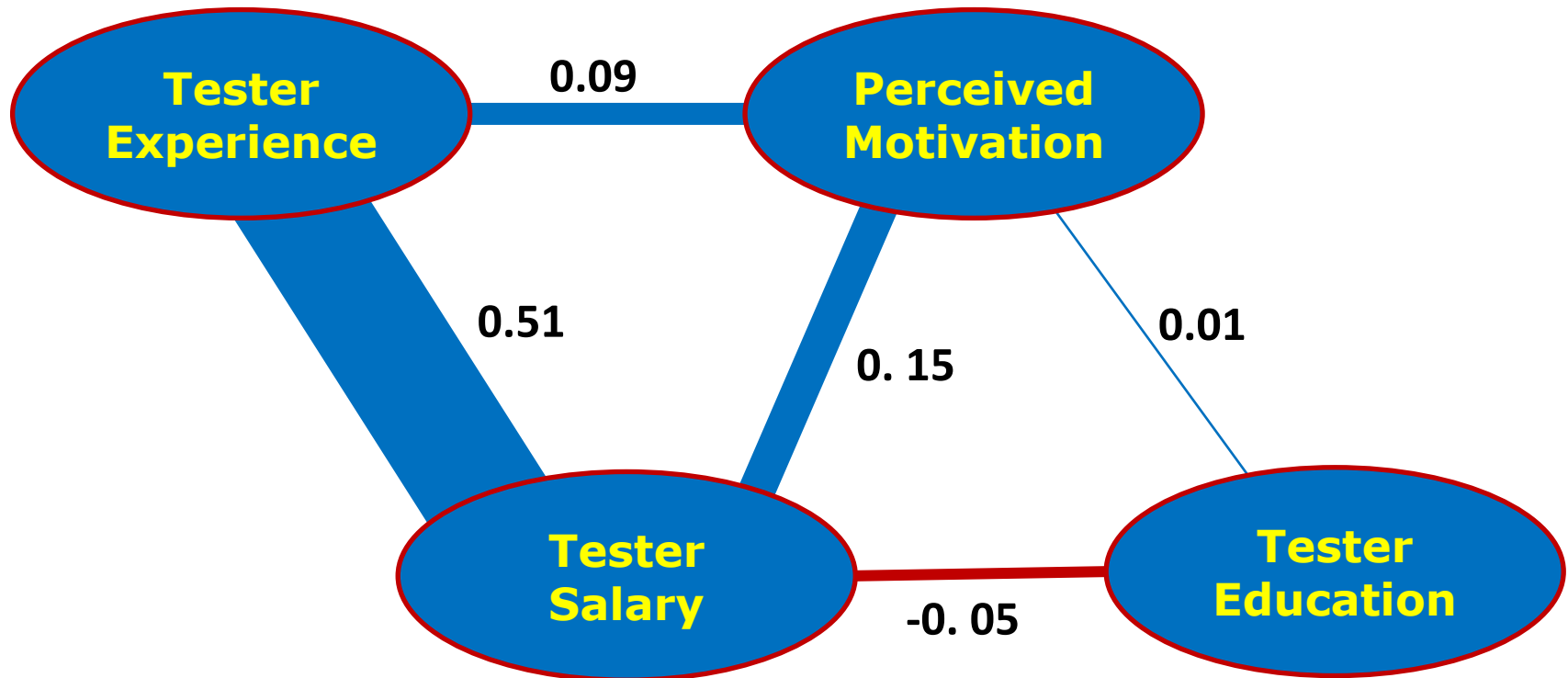
# Experience Levels



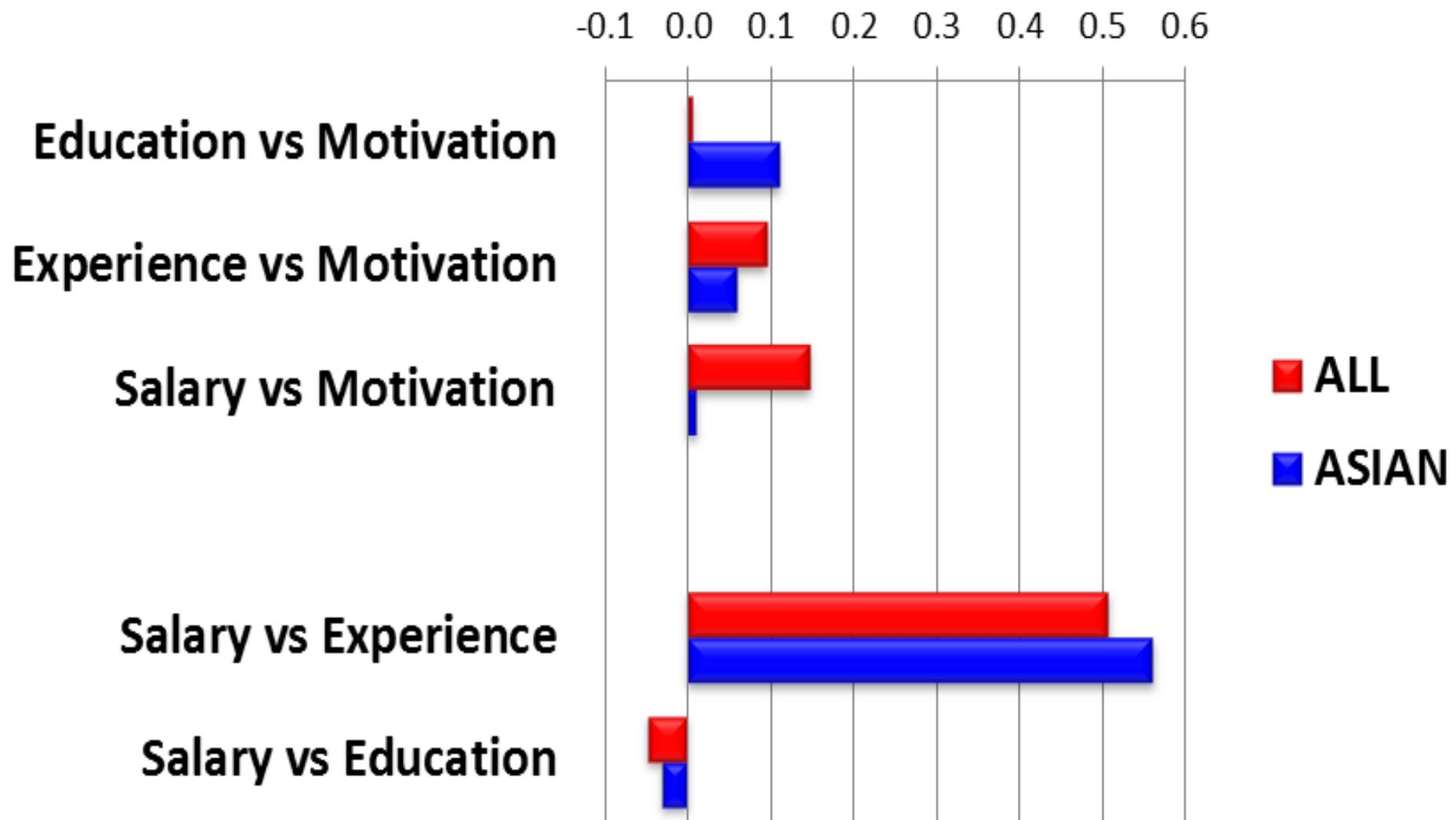
# Education Levels



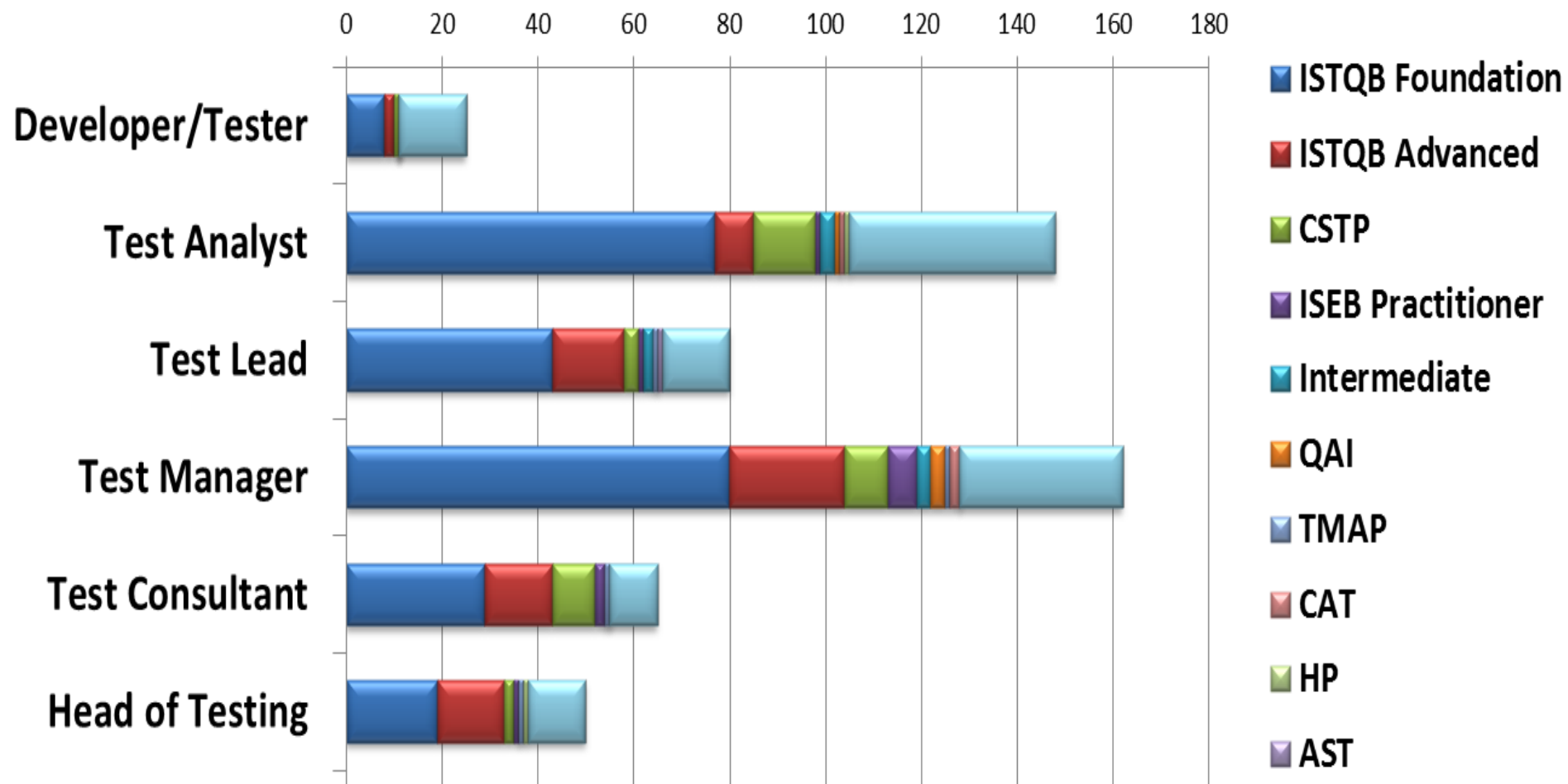
# Salary, Experience & Education



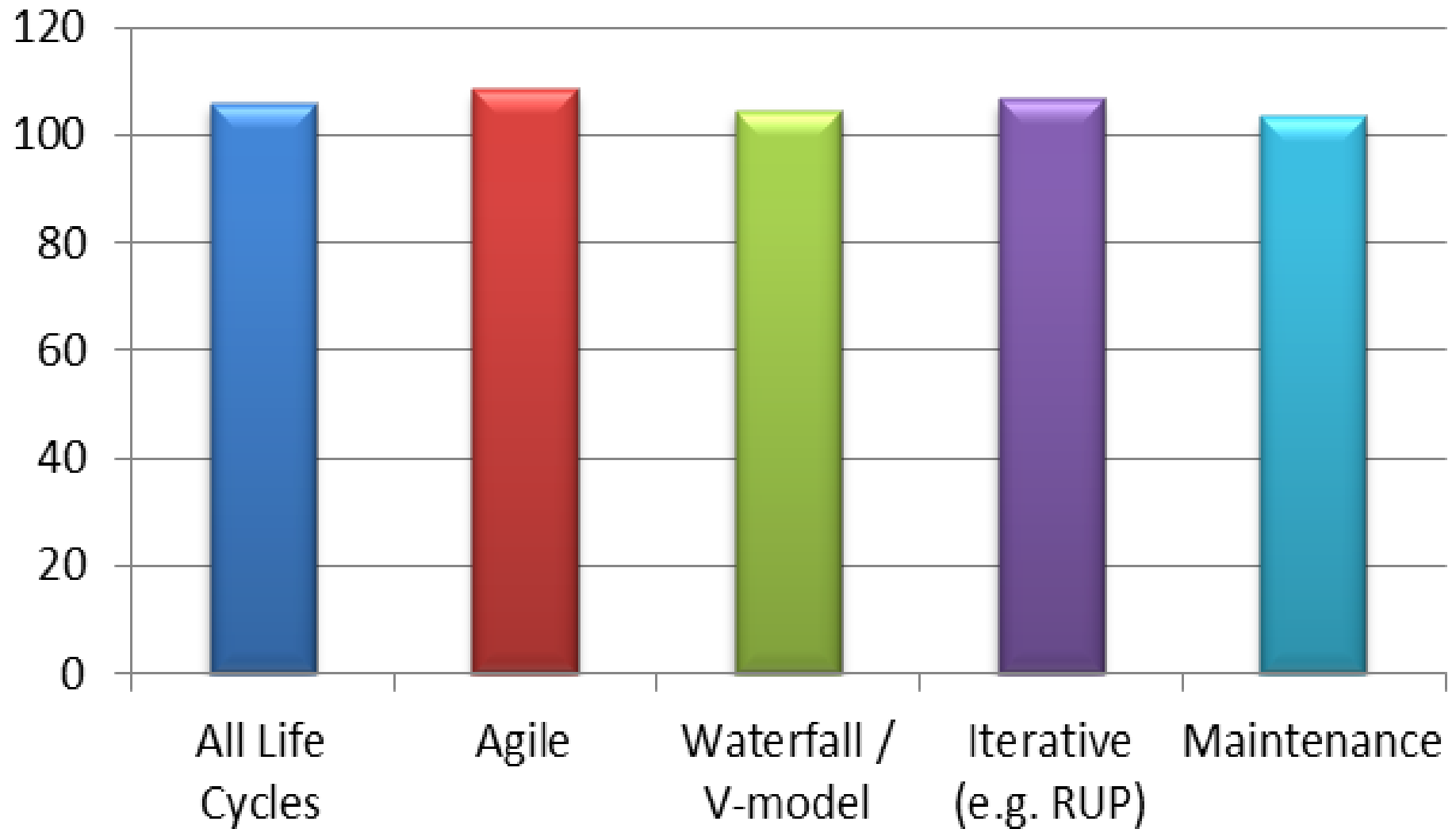
# Salary, Experience & Education



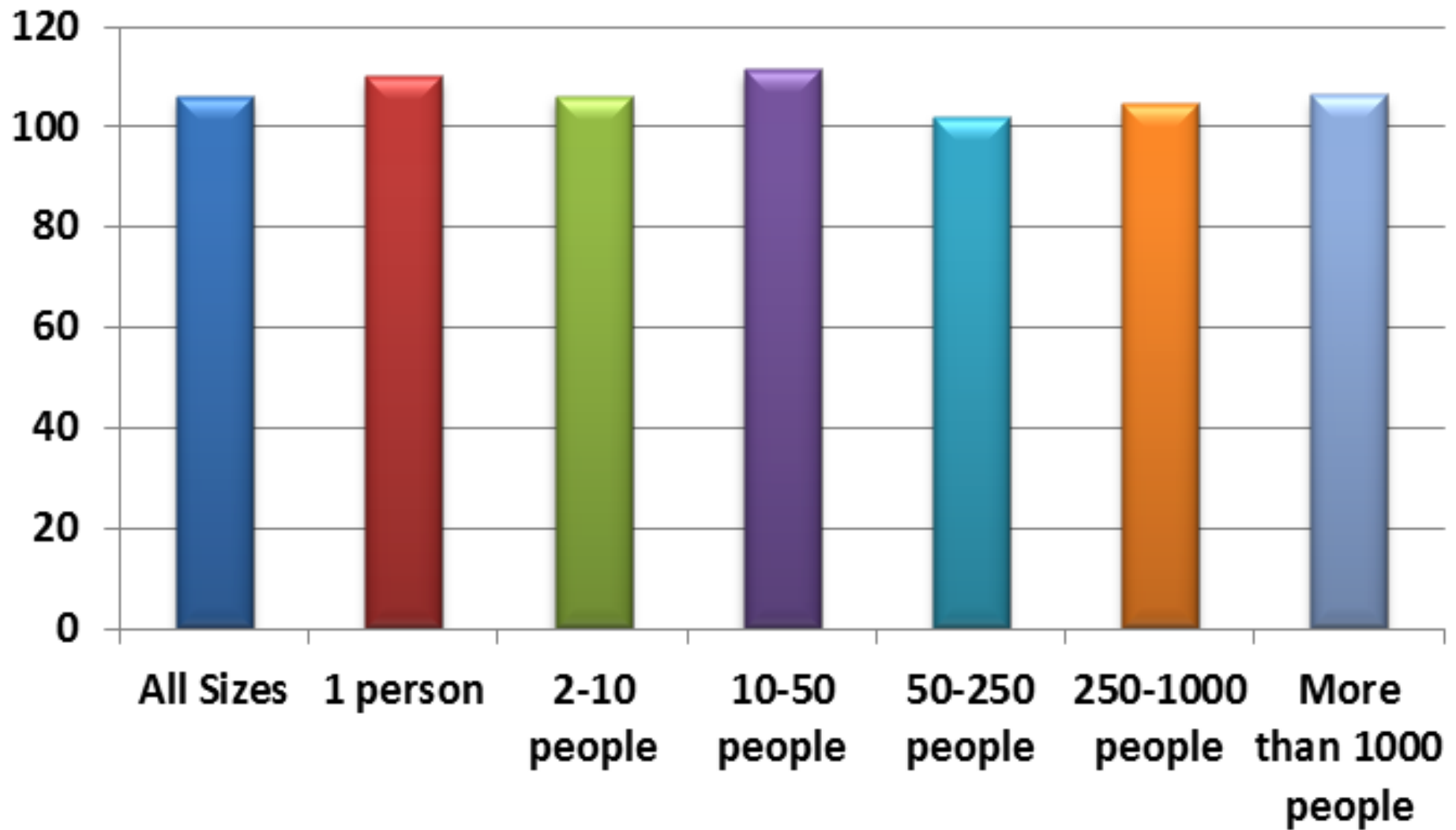
# Qualification Levels



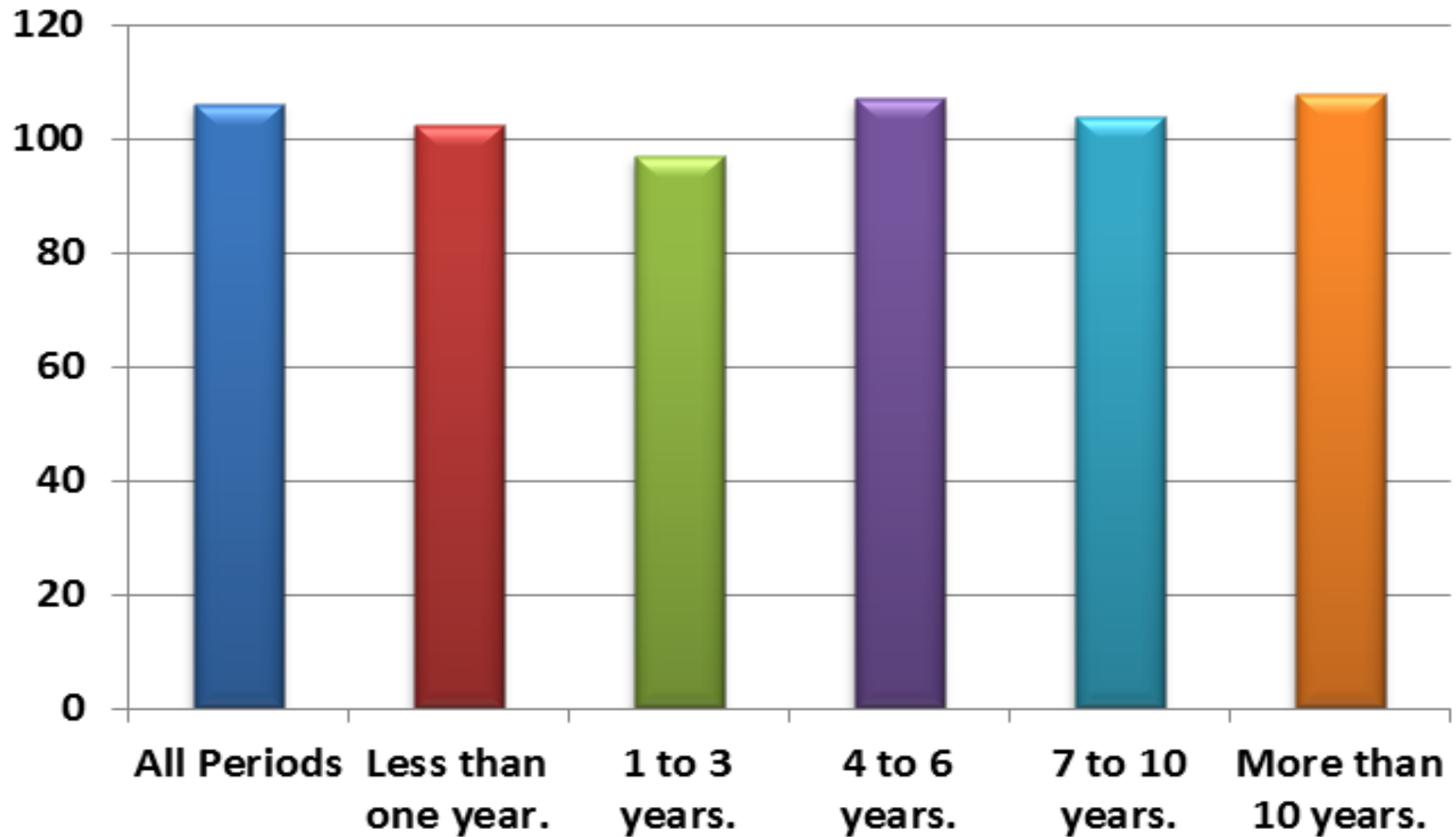
# Different Life Cycles...



# Different Organization Sizes...

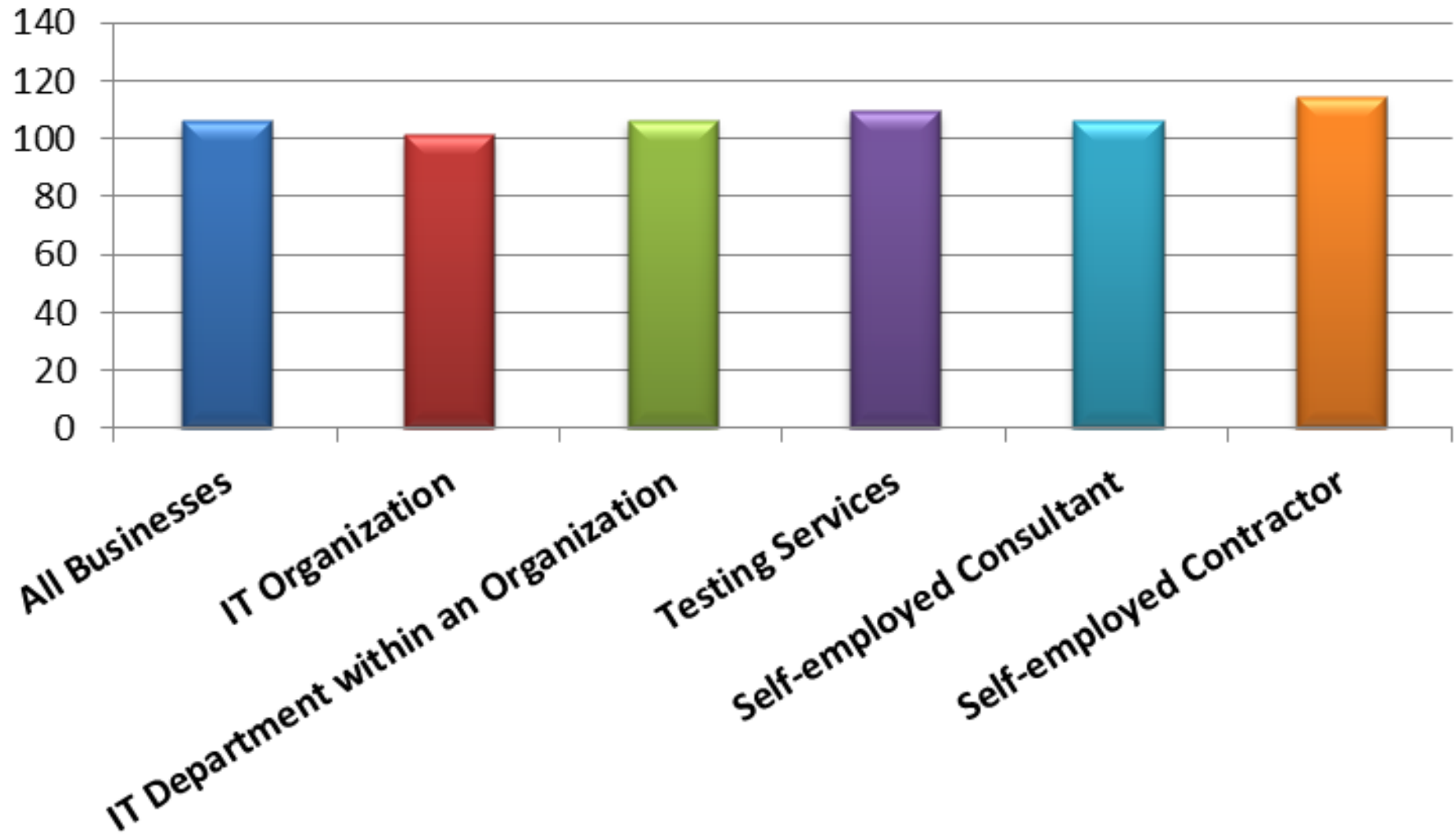


# Different Experience Levels...

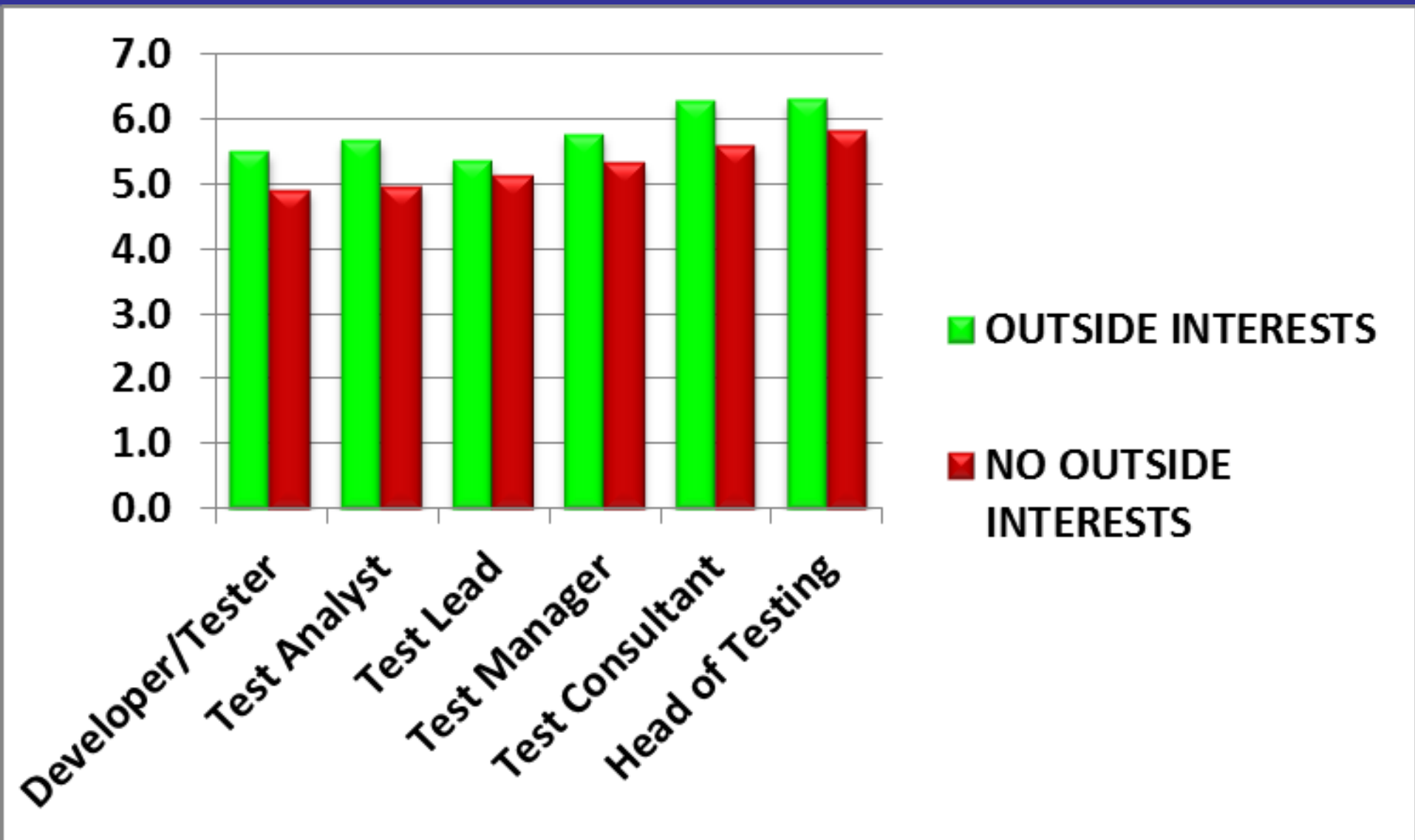




# Different Organization Types...



# Outside Interests?



# Conclusions

- Testers are special
  - we can improve on the generic motivation theories
- Please try to use the most influential factors
  - **ALL**
    - MASTERY + ENVIRONMENT + VARIETY + FEEDBACK + AUTONOMY
  - **ASIA**
    - IDENTITY + VARIETY + FEEDBACK
  - **TOP 4**
    - ENVIRONMENT + VARIETY 2 + MASTERY 1 & 3
- Not all testers are the same
  - Don't treat everyone working in testing the same
    - different roles require a different focus
    - culture plays a part – but less so than the roles
  - We need to consider 'smarter' approaches to the motivation of testers

Thanks for listening

# Any Questions?

More information available

– please email

[sreid@testing-solutions.com](mailto:sreid@testing-solutions.com)

<b>1</b>	<b>FEEDBACK 1</b>	<b>The work itself provides feedback on how well I am doing in my job. (POSITIVE)</b>
<b>2</b>	<b>FEEDBACK 2</b>	<b>My colleagues provide little or no feedback on how well I perform. (NEGATIVE)</b>
<b>3</b>	<b>FEEDBACK 3</b>	<b>My supervisor provides me with regular feedback on my performance. (POSITIVE)</b>
<b>4</b>	<b>AUTONOMY 1</b>	<b>Most of the time someone else decides what tasks I should do next. (NEGATIVE)</b>
<b>5</b>	<b>AUTONOMY 2</b>	<b>My job is flexible enough to allow me to decide which hours I work most days. (POSITIVE)</b>
<b>6</b>	<b>AUTONOMY 3</b>	<b>For most tasks I get to decide who I will work with. (POSITIVE)</b>
<b>7</b>	<b>AUTONOMY 4</b>	<b>I rarely get to choose the way that an activity is carried out. (NEGATIVE)</b>
<b>8</b>	<b>SIGNIFICANCE 1</b>	<b>My job is one that affects few other colleagues. (NEGATIVE)</b>
<b>9</b>	<b>SIGNIFICANCE 2</b>	<b>If not done well my job will have little impact on the project. (NEGATIVE)</b>

<b>10</b>	<b>IDENTITY 1</b>	<b>My job allows me to see projects through to completion. (POSITIVE)</b>
<b>11</b>	<b>IDENTITY 2</b>	<b>I often start tasks but then pass them on to colleagues before I finish them. (NEGATIVE)</b>
<b>12</b>	<b>VARIETY 1</b>	<b>My job comprises a relatively small number of different tasks. (NEGATIVE)</b>
<b>13</b>	<b>VARIETY 2</b>	<b>In my job I get the chance to work on many interesting projects. (POSITIVE)</b>
<b>14</b>	<b>MASTERY 1</b>	<b>My job does not challenge or stretch me. (NEGATIVE)</b>
<b>15</b>	<b>MASTERY 2</b>	<b>I have mastered most of the skills required to perform my job. (NEGATIVE)</b>
<b>16</b>	<b>MASTERY 3</b>	<b>I often become so engaged in my work that I forget the time. (POSITIVE)</b>
<b>17</b>	<b>PURPOSE 1</b>	<b>My job includes the opportunity to work for the good of the wider community (beyond my employer). (POSITIVE)</b>
<b>18</b>	<b>PURPOSE 2</b>	<b>My organization is primarily focused on increasing its profits. (NEGATIVE)</b>
<b>19</b>	<b>PERCEPTION</b>	<b>I am highly motivated to do my job in testing. (POSITIVE)</b>
<b>20</b>	<b>ENVIRONMENT</b>	<b>My work environment encourages me to perform my job better. (POSITIVE)</b>