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## CASE STUDY\*



**Neutral Management Policies for Engaging, and Retaining Employees in ISA TanTec Ltd, an Environmentally-Conscious Leather Finishing Company with two Facilities:**

**Heshan TanTec (China) and Saigon TanTec (Vietnam)**

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## **DISCLOSING REMARKS**

Results contained within this technical report reflect each participant's honest, voluntary, and informed opinion. Each participant's identifying information (with the exception of job title, gender and facility of employment) is kept confidential. Therefore, there is no financial or employment risk from participating in the creation of this report.

Furthermore, the author has not been compensated by ISA Tantec Ltd, or associated partners, for any analytical opinions. This technical report is strictly data-driven.

## RATIONALE

This report is prepared by UNIDO in order to advise leather tanneries (tanning & finishing) of the potential merits of adopting socially blind, neutral hiring and retaining labor policies, and therefore building a corporate culture in which merit and hard work are valued over simple characteristics. It showcases ISA TanTec, a German-invested group with three leather facilities: Heshan TanTec in China, Saigon TanTec in Vietnam and Mississippi TanTec in United States. However, because Mississippi TanTec's production started in February 2015, quantitative and qualitative data was not collected to avoid potential biases associated with early production challenges.

ISA TanTec is considered a global leader in sustainable, top-quality leather production, recognized by the world's top footwear brands. In addition to excellent corporate social responsibility, they have strong neutral policies and management attitudes in place to hire, engage and retain leather production and administrative employees/technicians

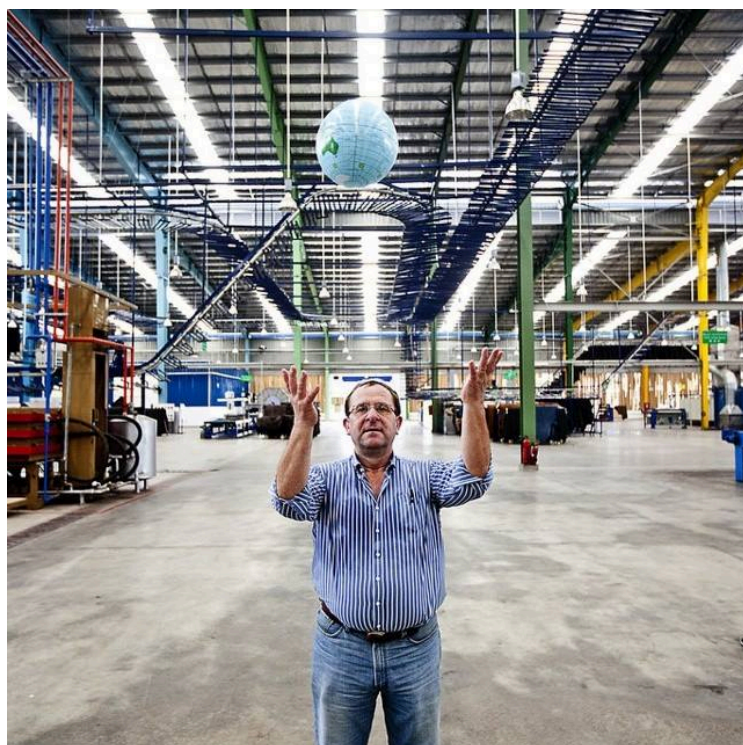
## HISTORY OF ISA TANTEC<sup>1</sup>

ISA TanTec was established in 1995, with the initial focus on leather production for shoe-making and automobile interiors. However, in the current three facilities, special efforts are taken to refine the leather specifically for shoe companies, and as leather accessories (i.e., labels, belts, etc.). The group is the supplier of top quality leathers, including an unrivaled reputation for reliability, service and outstanding corporate social responsibility for environmental protection, earning a Gold Award by Leather Working Group (LWG), a multi-stakeholder group that develops and maintains a protocol which assesses the compliance and environmental performance of tanners. Presently, ISA TanTec's headquarters are established in Macau, China, with its main production facility being Heshan TanTec.

### Guangzhou TanTec<sup>2</sup>

Guangzhou TanTec (GTT), founded in 1996, had an area of 44,000 m<sup>2</sup>, and labor pool of over 700 employees. It was a leader in leather manufacturing for shoes and automobiles, meeting the EU requirement for environmental protection in the industry, including light-fastness, cold resistance, flammability, and ventilation for shoe leather, and fogging prevention and chromium-free nature for

**Figure 1: CEO Thomas Schneider standing in the middle of Saigon TanTec Ltd, one of his three production facilities.**



<sup>1</sup> Fu, Susan, Marketing Director. Interview by Nina Schneider. Personal interview. Email, March 13, 2015

<sup>2</sup> Case study of impact of fully foreign-owned enterprises on China: Guangzhou Tan Tec Leather Ltd.



automobile leather. In 2007, GTT processed 1 million cow hides, with a total output of 24,200,000 m<sup>2</sup>, and revenue of 60.7 million USD (0.38 billion CNY). In 2007, GTT pioneered the new industry-wide transparency standard for environmentally-friendly leather, termed LITE for “Low Impact to Environment,” leading to widespread adoption by top footwear brands and internationally recognized awards.

### Low Impact to Environment (LITE)



LITE© is an ecological leather brand product, as well as the namesake for a production process utilizing natural energies (e.g., solar energy, wind turbine, bio-waste water treatments, etc.). It is the inspiration for ISA’s CO<sub>2</sub> guide, an index for judging each hide’s impact on the environment, including CO<sub>2</sub> emissions (kg CO<sub>2</sub>) and water consumption. This guide serves as data-transparent measurement tool to assess the health of the supply and production chain, by providing information on each hide’s environmental footprint (water, energy and carbon footprints) as part of a transparency initiative. Thereby, allowing consumers to make a decision based on environmental footprint.

LITE standards were established using parameters from the LWG and are primarily used by Rockport, Merrell, Timberland, Lacrosse, Wolverine, Keen, Columbia, UGG, North Face, New Balance, Born, etc. The production process in general, includes: solar systems, bamboo walls, natural light, rain lagoon, wetlands and wind energy, including energy-saving practices such as: one central warehouse, LED night lights, LPG gas, and efficient sludge drying<sup>3</sup>. The underlying practice is constant and consistent monitoring of energy and water consumption<sup>4</sup>. Lite is considered innovative especially compared to the perception of traditional leather industry as being environmentally toxic, dangerous, financially and economically unsustainable.

### Heshan TanTec Ltd.

Heshan TanTec (HTL), located in Heshan City (China) handles the manufacturing bulk; it is also considered production headquarters. Ground-breaking ceremony was in 2010, with production starting in 2012. It was designed on a land size of 58,000 m<sup>2</sup> with 25,000 m<sup>2</sup> reserved for production. Monthly production capacity is 6 million ft<sup>2</sup>, divided into shoe leather (2 mio) and automotive leather (4 mio). As of 2014, Heshan TanTec is expanding production into leather accessories for

**Figure 2: Heshan TanTec Ltd. hang-drying leather.**



<sup>3</sup> Planung einer umweltfreundlichen Modellgerberei in China (May 2011), Diplomarbeit. Prepared by Anton Schwarz for Technische Universität Darmstadt.

<sup>4</sup> Green Production in a medium sized company in China (2010), Presentation. Prepared by Thomas Schneider (CEO and Founder of ISA TanTec), ISA TanTec

garments.

### Saigon TanTec Ltd.

Saigon TanTec (STL), located in Saigon/Ho Chi Minh City (Vietnam) supports leather production. Ground-breaking ceremony was in 2009, with production starting in 2010. It was designed on a land size of 44,000 m<sup>2</sup> with 12,800 m<sup>2</sup> reserved for production. Monthly production capacity is 4 million ft<sup>2</sup>, dedicated entirely to shoe leather. This facility is the most well-received of the three, earning numerous awards such as: Energy Efficiency Award 2010 (by Dena), SATRA Certificate in QC and Lab 2011/2012 (by Satra), SATRA LWG Gold 2012 (by Leather Working Group), Sustainable Supply Chain 2014 (by Vietnam Supply Chain), Tannery of the Year 2014 (by World Leather), etc.

**Figure 3: Saigon TanTec Ltd. production facility.**



## 1998 Status of Women's Participation in Tanning Industry

Comprehensive literature states that developing mainstreaming initiatives can be beneficial for families and communities, especially true of developing nations like Vietnam and China. Financial independence increases women's financial security. This case study is inspired by two 1998 reports performed by UNIDO, which observed the status of women's participation in the tanning industry in China<sup>5</sup> and in South East Asia<sup>6</sup>, including employment/retention rates, distribution of women among managerial and/or technical positions, and suggesting women-oriented training programs.

This case will specifically spotlight ISA Tantec, a strictly leather finishing company (from wet blue – crust), and the executive management, production management and employee experiences in each of the two locations (China and Vietnam). The data will also be unique because of ISA Tantec's heavy focus on environmentally-friendly practices and is a foreign-owned private enterprise.

The result of the 1998 China report was: women are proportionately represented in the tanning industry, with 50% of the total employees in the leather conversion and 35% in the tanning industry. China, being a “socialistic” country, has policies in place in order to guarantee employment, rights, benefits and responsibilities regardless of sex, due to the government system (“iron rice bowl” – lifelong job guarantee). Official policy delineates that institutions are required to maintain a balanced

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<sup>5</sup> Status of Women's Participation in the Tanning Industry in China (April 1997), Regional Programme for Pollution Control in the Tanning Industry in South East Asia, UNIDO Vienna

<sup>6</sup> Status of Women's Participation in the Tanning Industry in South East Asia (June 1997), Regional Programme for Pollution Control in the Tanning Industry in South East Asia, UNIDO Vienna

gender ratio in their production facilities. Therefore, state-owned companies were diligent about employing women; however opportunities for job promotion were weak, despite strong reviews from production managers claiming that female workers are typically more thorough, patient and diligent relative to men, and good recommendations from male colleagues. For a woman to be engaged in technical fields, it is considered an important step towards promoting women's status from "low operational" to "high managerial." The report concludes with recommendations to improve working conditions, primarily in machinery and equipment maintenance, and sanitation of work spaces, as well as suggestions to strengthen women's skills in leather production.

At the time of data collection (1997), the majority of the tanning facilities was Chinese-owned, held by the state, and was unable to reflect the growing reality that foreign-owned private leather production facilities are increasingly laying roots in China. As of 2011, there were 6,000 foreign-invested enterprises, accounting for approximately 25% of market share in leather production<sup>7</sup>. ISA Tantec is considered wholly German-owned, with strong leadership from Brazil in technical departments. In this manner, ISA Tantec is not required by law to employ equal numbers of female and male production workers.<sup>8</sup> On the other hand, ISA Tantec performs only leather finishing activities (e.g., trimming, spraying, effluent treatment ETP, etc.), considerably less labor intensive to leather tanning activities (e.g., beam house, tanning yard, etc.). Due to database restructuring at the time of this technical report, STL's gender ratio is yet unknown. However, HTL's production floor, there are 55 females (41.6%) to 77 males (58.4%). It is clear that a more recent review of female participation in leather production is needed.

The 1998 Southeast Asia regional summary included country surveys in China, India, Indonesia and Nepal of women's participation in the tanning industry. The result of this report is as follows:

**Figure 4: Overview of Women's Participation in Each Country & Sector**

Table 1 - Overview of women's participation in each country and sector

Sector/Area	Country	China	India	Indonesia	Nepal
Tannery (raw to semi-finished)			5%		
Tannery (semi-finished to finished)		35%	15%	5%	8%
Leather conversion		50%	85%	30%	70% <sup>1</sup>
(C)ETP		40%	5%	n.a. <sup>2</sup>	n.a. <sup>3</sup>
R&D, Laboratory		45%	25%	50%	80%
Environmental consulting		not available	1%	not available	0
Chemical supplier		not available	1%	not available	0
Estimated total number of women employed in the tanning /leather industry		400,000	10,000	600	519

Note:

(1) Nepal has only one large shoe manufacturing unit, employing around 100 women.

(2) Only one ETP employs two women.

(3) There are no tannery effluent treatment plants in Nepal

Women's participation in China greatly surpassed India, Indonesia and Nepal. Of great interest are employment rates in leather finishing, ETP, R&D/laboratory, and environmental consulting. While we

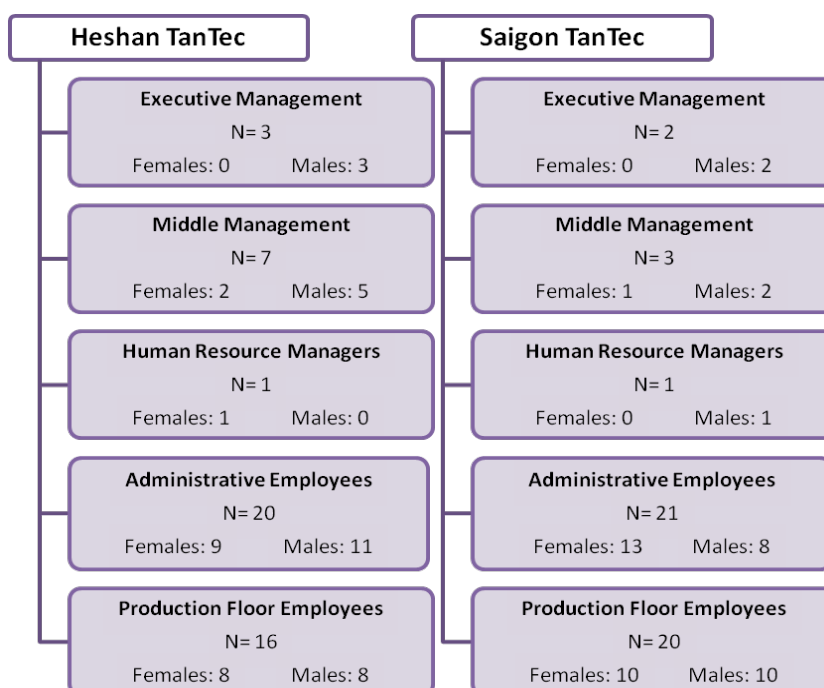
<sup>7</sup> Leather Market in China (August 2011), Commercial Section, Consulate General of Pakistan in Chengdu, China

can directly compare ISA Tantec’s Heshan Tantec facility’s employment figures to the 1997 China report, we don’t have comparable figures for women’s participation in Vietnam. However, given that only China had a strong female presence in leather production, we can assume that Vietnam, in 1997, had figures similar to India, Indonesia, and Nepal. In this case, understanding ISA Tantec’s policies and employment/retention programs in their Saigon Tantec leather production facility will be greatly helpful in creating a starting point in understanding how Vietnam’s leather industry is faring. This is enhanced by recent literature citing that Vietnam is one of the top producers of leather and footwear<sup>9</sup>, and that women make up approximately 85% of the labor force<sup>10</sup>. It is expected that ISA Tantec’s Saigon facility will mirror this fact and offer an explanation and recommendations to business owners in Vietnam.

## Methodology

### Data Collection

With assistance from translators in China and Vietnam, a tri-lingual research tool was devised, combining questions requesting qualitative and quantitative information. The population was stratified into Executive Management, Middle Management, Human Resource Managers, Administration and Production Floor. This research study observed all individuals in Executive Management, Middle Management and Human Resource Manager positions, while remaining positions were randomly sampled to achieve an attempted count of 20 participants per cohort. However, a common limitation was attrition and non-response. Due to time and budget constraints, the researcher was unable to track down those who did not hand in their survey; therefore, the resulting participant pool (n=94) is as follows:



<sup>8</sup> Gu, Iris. Interview by Nina Schneider. Personal interview. Email, March 18, 2015

<sup>9</sup> Vietnam’s leather and footwear production in the first 6 months of 2012 (August 2012), Vietnam Trade Promotion Agency

<sup>10</sup> Vietnam Leather and Footwear Industry – Opportunities & Challenges on the Way of Vietnam Entering WTO (2012), Presentation. Prepared by Dr. Nguyen Thi Tong (General Secretary of LEFASO Vietnam), World Bank



The survey was constructed uniquely for each cohort; however they shared a total of ten quantitative and three qualitative questions in common. The first four quantitative questions asked whether participants believed female or male workers: to be more productive, have better work ethic, be more open to criticism, and be more reliable, respectively. There were three potential answers: “women”, “men”, or “equal”. The remaining six questions were asked on an ordinal scale, how much they believed promotional opportunities should be awarded based on: productivity, technical skills, reliability, willingness-to-work, respect for management, and cultural reasons (e.g., gender, SES, etc.). The potential answers ranged from 1 (low agreement) to 10 (high agreement). The three qualitative questions asked specifically: 1) programs to engage female employees, 2) potential sources of biases in their answers, and 3) what their thoughts were on the amount of female employment in ISA TanTec and whether there should be more, less or no change.

Furthermore, due to the importance of question order, each group received a minimum of one primer question, placed as the first question, to prime respondents to think about one specific issue (management styles with focus on neutrality) while answering any subsequent questions. Administrative and production employees were given an additional five quantitative questions asking what their level of satisfaction was, on an ordinal scale, for: their performance, work conditions, level of training, management and supervision and company policy. There was also space provided to allow respondents to voluntarily dictate their reasons for their specific selection, however during analysis it was found that there were too many unclear responses and/or blank responses therefore these selection of qualitative data has been omitted from analyses. Additionally, both administrative and production employees were also asked two revealing questions: 1) why did they select ISA Tantech as a place of employment and 2) what programs (for all genders) would they like in order to increase their productivity.

## **Data Analysis**

For quantitative data, three analytical tools were used: 1) descriptive statistics, to explain average responses and identify biases, 2) correlations, to determine the strength of variable relationships, and 3) linear regressions to determine the statistically significant predictive nature of gender, title, and facility on dependent variables: productivity, work ethic, openness to criticism, reliability, etc. However only the linear regression will be presented for in the following section because the descriptive statistics and correlations have built a foundation in which the appropriate research assumptions can be made for predictive analyses or lack thereof. Regarding qualitative data, coding was performed to extract commonalities among all responses. Then, the common key words have been analyzed using descriptive statistics to support and elucidate upon the information extracted via quantitative data analyses.

The research goal was to determine whether 1) participants’ gender, job title, and/or production facility contributed to employee engagement (observed via perceptions on productivity, work ethic, openness, and openness to criticism among both female and male employees at all levels); 2) participants’ gender, job title, and/or production facility contributed to employee retention (observed via perceptions on the importance of six traits on promotion opportunities); and finally, 3) qualitative questions aimed

at recording the participant's perception of management, company programs and work space as a whole.

The operational assumption was if one found statistically insignificant results in the quantitative section, it would reveal that neutral management policies were at work, minimizing Joshua Aronson's theory of "Stereotype Threat"<sup>11</sup> which had the possibility of negatively impacting work engagement, productive work flow, and feelings of agency/adequacy. Stereotype Threat claims that if a component of an individual's identity (e.g., gender, work title, or place of employment) is made salient for them, then depending on the stereotype (e.g., women can't perform technical work, production line workers aren't intelligent, etc.), they may inadvertently prove the stereotype true through the stress of trying to avoid it. It is similar to the common Pink Elephant experiment, in which one is instructed not to think of a Pink Elephant, but in doing so, triggers the brain to produce an image of the rosy animal, despite explicit instructions.

If neutral management policies and corporate culture are in practice at ISA TanTec, then it should translate to good feelings of satisfaction (with level of training and supervision, performance and company policy), and productivity, but not divisible between the administrative and production floor cohort.

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<sup>11</sup> Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African-Americans. *Journal of Personality and Social Psychology*, 69, 797-811.

## Significant Quantitative Results: Linear Regression (Part 1)

The following involves linear regression/predictive analyses involving data from *all five participant cohorts*: Executive Management, Middle Management, Human Resource Manager, Administrative Employees and Production Floor Employees. Unlike the norm in social science, the statistically insignificant results will provide more information, although both will be presented accordingly. There are 6 unique significant results in Part 1 of linear regression analyses, quantitative results.

**Table 1: Significant Results from all 5 Participant Cohorts**

<i>Independent Variable</i>	<i>IV Coding</i>	<i>Dependent Variable</i>	<i>DV Coding</i>	<i>P-Value (Significance)</i>	<i>Results</i>
Gender	Female: 0 Male: 1	Perception of Work Ethic	Female: 0 Equal: 1 Male: 2	0.019	<sup>1</sup> Female: y=0.341 Male: y=0.7
		Perception of Openness to Criticism		0.010	<sup>2</sup> Female: y=0.818 Male: y=1.3
		Perception of Reliability		0.001	<sup>3</sup> Female: y=1.04 Male: y=1.56
Status	Administrative: 0 Production: 1 HR: 2 Middle Mgmt: 3 Exec Mgmt: 4	Perception of Productivity	Female: 0 Equal: 1 Male: 2	0.009	<sup>4</sup> Admin: y=1.69 Prod: y=1.54 HR: y=1.37 Middle Mgmt: y=1.21 Exec Mgmt: y=1.05
		Importance of Cultural Reasons for Promotions		1 = Low 10 = High	0.03
Facility	HTL: 0 STL: 1	Perception of Openness to Criticism	Female: 0 Equal: 1 Male: 2	0.017	<sup>6</sup> HTL: y=0.595 STL: y=0.935

### <sup>1</sup>Gender and Gendered Perceptions of Work Ethic

Here we find that Gender *is a statistically significant* ( $p < 0.05$ ;  $p = 0.019$ ) predictor of the gendered perceptions of Work Ethic. Given the linear regression formula, we can conclude that if the participant was female, the average predicted response would be the belief biased towards females have better work ethic ( $y = 0.341$ ) relative to males. If the participant was male, the average predicted response would be the belief slightly biased towards both genders have equally strong work ethic ( $y = 0.7$ ). Dependent variable coding is as follows: females (0), equal (1), and males (2).

## **<sup>2</sup>Gender and Gendered Perceptions of Openness to Criticism**

Here we find that Gender *is a statistically significant* ( $p < 0.05$ ;  $p = 0.010$ ) predictor of the gendered perceptions of Openness to Criticism. Given the linear regression formula, we can conclude that if the participant was female, the average predicted response would be the belief biased towards both genders having equal openness to criticism ( $y = 0.818$ ). If the participant was male, the average predicted response would be the belief biased towards both genders have equally strong work ethic ( $y = 1.3$ ). Dependent variable coding is as follows: females (0), equal (1), and males (2).

## **<sup>3</sup>Gender and Gendered Perceptions of Reliability**

Here we find that Gender *is a statistically significant* ( $p < 0.05$ ;  $p = 0.001$ ) predictor of the gendered perceptions of Reliability. Given the linear regression formula, we can conclude that if the participant was female, the average predicted response would be the belief that both genders have equal reliability ( $y = 1.04$ ). If the participant was male, the average predicted response would be the belief biased towards males have stronger reliability ( $y = 1.56$ ) relative to females. Dependent variable coding is as follows: females (0), equal (1), and males (2).

## **<sup>4</sup>Status and Gendered Perceptions of Productivity**

Here we find that Status (job title) *is a statistically significant* ( $p < 0.05$ ;  $p = 0.009$ ) predictor of the gendered perceptions of Productivity. Given the linear regression formula, we can conclude that if the participant was an administrative employee, the average predicted response would be the belief biased towards males having a higher level of productivity ( $y = 1.69$ ) relative to females. If the participant was from the production floor, the average predicted response would be the belief biased towards males having a higher level of productivity ( $y = 1.54$ ) relative to females, but to a lesser degree. If the participant was from HR, the average predicted response would be the belief slightly biased towards males having a higher level of productivity ( $y = 1.37$ ). If the participant was from middle management, the average predicted response would be the belief biased towards both genders having equal productivity ( $y = 1.209$ ). If the participant was from executive management, the average predicted response would be the belief firmly situated in both genders having equal productivity ( $y = 1.05$ ). Dependent variable coding is as follows: females (0), equal (1), and males (2).

## **<sup>5</sup>Status and the Importance of Cultural Reasons for Promotion Considerations**

Here we find that Status (job title) *is a statistically significant* ( $p < 0.05$ ;  $p = 0.03$ ) predictor of the importance of Cultural Reasons for promotional considerations. Given the linear regression formula, we can conclude that if the participant was an administrative employee, the average predicted response would be “medium-high importance” ( $y = 6.831$ ). If the participant was from the production floor, the average predicted response would be “medium-high importance” ( $y = 6.285$ ) but to a lesser degree compared to administrative employees. If the participant was from HR, the average predicted response would be “medium importance” ( $y = 5.741$ ). If the participant was from middle management, the average predicted response would be “medium importance” ( $y = 5.196$ ). If the participant was from executive management, the average predicted response would be “medium importance” ( $y = 4.65$ ). Dependent variable coding is as follows: importance scale 1= Low; 5=Medium; 10=High.

## **<sup>6</sup>Production Facility and Gendered Perceptions of Openness to Criticism**

Here we find that Production Facility *is a statistically significant* ( $p < 0.05$ ;  $p = 0.017$ ) predictor of the gendered perceptions of Openness to Criticism. Given the linear regression formula, we can conclude that if the participant was from HTL, the average predicted response would be the belief slightly

biased towards both genders having equal openness to criticism ( $y=0.595$ ). If the participant was from STL, the average predicted response would be the belief biased towards both genders have equally strong work ethic ( $y=0.935$ ). Dependent variable coding is as follows: females (0), equal (1), and males (2).

### Significant Quantitative Results: Linear Regression (Part 2)

The following involves linear regression/predictive analyses involving data from *two participant cohorts*: Administrative Employees and Production Floor Employees. Unlike the norm in social science, the statistically insignificant results will provide more information, although both will be presented accordingly. There are 3 unique significant results in Part 2 of linear regression analyses, quantitative results.

**Table 2: Significant Results from 2 Participant Cohorts**

<i>Independent Variable</i>	<i>IV Coding</i>	<i>Dependent Variable</i>	<i>DV Coding</i>	<i>P-Value (Significance)</i>	<i>Results</i>
Status	Administrative: 0 Production: 1	Satisfaction with Job Performance	1 = Low 10 = High	0.003	<sup>7</sup> Admin: $y=8.073$ Prod: $y=8.722$
		Satisfaction with Level of Training		0.000	<sup>8</sup> Admin: $y=6.902$ Prod: $y=8.444$
		Satisfaction with Company Policies		0.010	<sup>9</sup> Admin: $y=7.878$ Prod: $y=8.611$

#### <sup>7</sup>Status and Satisfaction with Personal Job Performance

Here we find that Status (job title) *is a statistically significant* ( $p < 0.05$ ;  $p = 0.003$ ) predictor of satisfaction with Personal Job Performance. Given the linear regression formula, we can conclude that if the participant was an administrative employee, the average predicted response would be “high satisfaction” ( $y=8.073$ ). If the participant was from the production floor, the average predicted response would be “high satisfaction” ( $y=8.722$ ) but to a higher degree compared to administrative employees. Dependent variable coding is as follows: satisfaction scale 1= Low; 5=Medium; 10=High. Despite the significant result, the analysis indicates that ISA TanTec is considered a good employer.

#### <sup>8</sup>Status and Satisfaction with Level of Training

Here we find that Status (job title) *is a statistically significant* ( $p < 0.05$ ;  $p = 0.000$ ) predictor of satisfaction with their Level of Training. Given the linear regression formula, we can conclude that if the participant was an administrative employee, the average predicted response would be “medium-high satisfaction” ( $y=6.902$ ). If the participant was from the production floor, the average predicted response would be “high satisfaction” ( $y=8.444$ ) comparably higher compared to administrative employees. Dependent variable coding is as follows: satisfaction scale 1= Low; 5=Medium; 10=High. Despite the significant result, the analysis indicates that ISA TanTec is considered a good employer.



### **<sup>9</sup>Status and Satisfaction with Company Policies**

Here we find that Status (job title) *is a statistically significant* ( $p < 0.05$ ;  $p = 0.01$ ) predictor of satisfaction with Company Policies. Given the linear regression formula, we can conclude that if the participant was an administrative employee, the average predicted response would be “medium-high satisfaction” ( $y = 7.878$ ). If the participant was from the production floor, the average predicted response would be “high satisfaction” ( $y = 8.611$ ), comparably higher to administrative employees. Dependent variable coding is as follows: satisfaction scale 1=Low; 5=Medium; 10=High. Despite the significant result, the analysis indicates that ISA TanTec is considered a good employer.

### Non-Significant Quantitative Results: Linear Regression (Part 1)

The following involves linear regression/predictive analyses involving data from *all five participant cohorts*: Executive Management, Middle Management, Human Resource Manager, Administrative Employees and Production Floor Employees. Unlike the norm in social science, the statistically insignificant results will provide more information, although both will be presented accordingly. There are 24 unique nonsignificant results in Part 1 of linear regression analyses, quantitative results.

**Table 3: Non-Significant Results from all 5 Participant Cohorts**

<b>Independent Variable</b>	<b>IV Coding</b>	<b>Dependent Variable</b>	<b>DV Coding</b>	<b>P-Value (Significance)</b>
Gender	Female: 0 Male: 1	Perception of Productivity	Female: 0 Equal: 1 Male: 2	<sup>10</sup> 0.264
		Importance of Performance and Productivity for Promotions	1=Low 10=High	<sup>11</sup> 0.478
		Importance of Technical Skills & Education for Promotions		<sup>12</sup> 0.385
		Importance of Reliability/Dependability for Promotions		<sup>13</sup> 0.439
		Importance of Willingness-To-Work for Promotions		<sup>14</sup> 0.071
		Importance of Respect for Management for Promotions		<sup>15</sup> 0.555
		Importance of Cultural Reasons for Promotions		<sup>16</sup> 0.175
Status	Administrative: 0 Production: 1	Perception of Work Ethic	Female: 0 Equal: 1 Male: 2	<sup>17</sup> 0.159
		Perception of Openness to Criticism		<sup>18</sup> 0.202
		Perception of Reliability		<sup>19</sup> 0.118
		Importance of Performance and Productivity for Promotions	1=Low 10=High	<sup>20</sup> 0.241

		Importance of Technical Skills & Education for Promotions		<sup>21</sup> 0.06
		Importance of Reliability/Dependability for Promotions		<sup>22</sup> 0.885
		Importance of Willingness-To-Work for Promotions		<sup>23</sup> 0.071
		Importance of Respect for Management for Promotions		<sup>24</sup> 0.182
Facility	HTL: 0 STL: 1	Perception of Productivity	Female: 0 Equal: 1 Male: 2	<sup>25</sup> 0.717
		Perception of Work Ethic		<sup>26</sup> 0.331
		Perception of Reliability		<sup>27</sup> 0.651
		Importance of Performance and Productivity for Promotions	1=Low 10=High	<sup>28</sup> 0.492
		Importance of Technical Skills & Education for Promotions		<sup>29</sup> 0.782
		Importance of Reliability/Dependability for Promotions		<sup>30</sup> 0.342
		Importance of Willingness-To-Work for Promotions		<sup>31</sup> 0.721
		Importance of Respect for Management for Promotions		<sup>32</sup> 0.160
		Importance of Cultural Reasons for Promotions		<sup>33</sup> 0.442

#### <sup>10</sup> Gender and Gendered Perceptions of Productivity

Gender is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.264$ ) predictor of the gendered perceptions of Productivity. This indicates that participants of a specific gender did not, significantly, choose one gender as being more productive over the other. In other words, gender was not a salient, impactful construct to them due to neutral management policies.

**<sup>11</sup>Gender and the Importance of Performance and Productivity for Promotion Considerations**

Gender is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.478$ ) predictor of the importance of Performance and Productivity for promotional considerations. This indicates that participants of a specific gender did not, significantly, rate the importance of performance and productivity non-randomly. In other words, gender was not a salient, impactful construct in the consideration of performance and productivity due to neutral management policies.

**<sup>12</sup>Gender and the Importance of Technical Skills and Education for Promotion Considerations**

Gender is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.385$ ) predictor of the importance of Technical Skills and Education for promotional considerations. This indicates that participants of a specific gender did not, significantly, rate the importance of technical skills and education non-randomly. In other words, gender was not a salient, impactful construct in the consideration of technical skills and education due to neutral management policies.

**<sup>13</sup>Gender and the Importance of Reliability/Dependability for Promotion Considerations**

Gender is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.439$ ) predictor of the importance of Reliability/Dependability for promotional considerations. This indicates that participants of a specific gender did not, significantly, rate the importance of reliability and dependability non-randomly. In other words, gender was not a salient, impactful construct in the consideration of reliability and dependability due to neutral management policies.

**<sup>14</sup>Gender and the Importance of Willingness-To-Work for Promotion Considerations**

Gender is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.071$ ) predictor of the importance of Willingness-To-Work for promotional considerations. This indicates that participants of a specific gender did not, significantly, rate the importance of willingness-to-work non-randomly. In other words, gender was not a salient, impactful construct in the consideration of willingness-to-work due to neutral management policies.

**<sup>15</sup>Gender and the Importance of Respect for Management for Promotion Considerations**

Gender is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.555$ ) predictor of the importance of Respect for Management for promotional considerations. This indicates that participants of a specific gender did not, significantly, rate the importance of respect for management non-randomly. In other words, gender was not a salient, impactful construct in the consideration of respect for management due to neutral management policies.

**<sup>16</sup>Gender and the Importance of Cultural Reasons for Promotion Considerations**

Gender is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.175$ ) predictor of the importance of Cultural Reasons for promotional considerations. This indicates that participants of a specific gender did not, significantly, rate the importance of cultural reasons non-randomly. In other words, gender was not a salient, impactful construct in the consideration of cultural reasons due to neutral management policies.

**<sup>17</sup>Status and Gendered Perceptions of Work Ethic**

Status (job title) is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.159$ ) predictor of the gendered perceptions of Work Ethic. This indicates that participants of a specific status/job title did not,

significantly, choose one gender as having better work ethic over the other. In other words, their status/title was not a salient, impactful construct to them due to neutral management policies.

#### **<sup>18</sup>Status and Gendered Perceptions of Openness to Criticism**

Status (job title) is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.202$ ) predictor of the gendered perceptions of Work Ethic. This indicates that participants of a specific status/job title did not, significantly, choose one gender as being more open to criticism over the other. In other words, their status/title was not a salient, impactful construct to them due to neutral management policies.

#### **<sup>19</sup>Status and Gendered Perceptions of Reliability**

Status (job title) is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.118$ ) predictor of the gendered perceptions of Reliability. This indicates that participants of a specific status/job title did not, significantly, choose one gender as being more reliable over the other. In other words, their status/title was not a salient, impactful construct to them due to neutral management policies.

#### **<sup>20</sup>Status and the Importance of Performance and Productivity for Promotion Considerations**

Status (job title) is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.241$ ) predictor of the importance of Performance and Productivity for promotional considerations. This indicates that participants of a specific status/job title did not, significantly, rate the importance of performance and productivity non-randomly. In other words, status/title was not a salient, impactful construct in the consideration of performance and productivity due to neutral management policies.

#### **<sup>21</sup>Status and the Importance of Technical Skills and Education for Promotion Considerations**

Status (job title) is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.06$ ) predictor of the importance of Technical Skills and Education for promotional considerations. This indicates that participants of a specific status/job title did not, significantly, rate the importance of technical skills and education non-randomly. In other words, status/title was not a salient, impactful construct in the consideration of technical skills and education due to neutral management policies.

#### **<sup>22</sup>Status and the Importance of Reliability/Dependability for Promotion Considerations**

Status (job title) is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.885$ ) predictor of the importance of Reliability/Dependability for promotional considerations. This indicates that participants of a specific status/job title did not, significantly, rate the importance of reliability and dependability non-randomly. In other words, status/title was not a salient, impactful construct in the consideration of reliability and dependability due to neutral management policies.

#### **<sup>23</sup>Status and the Importance of Willingness-To-Work for Promotion Considerations**

Status (job title) is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.08$ ) predictor of the importance of Willingness-To-Work for promotional considerations. This indicates that participants of a specific status/job title did not, significantly, rate the importance of willingness-to-work non-randomly. In other words, status/title was not a salient, impactful construct in the consideration of willingness-to-work due to neutral management policies.

#### **<sup>24</sup>Status and the Importance of Respect for Management for Promotion Considerations**

Status (job title) is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.182$ ) predictor of the importance of Respect for Management for promotional considerations. This indicates that participants of a specific



status/job title did not, significantly, rate the importance of respect for management non-randomly. In other words, status/title was not a salient, impactful construct in the consideration of respect for management due to neutral management policies.

**<sup>25</sup>Production Facility and Gendered Perceptions of Productivity**

Production Facility is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.717$ ) predictor of the gendered perceptions of Productivity. This indicates that participants from a specific production facility did not, significantly, choose one gender as being more productive over the other. In other words, place of employment was not a salient, impactful construct to them due to neutral management policies.

**<sup>26</sup>Production Facility and Gendered Perceptions of Work Ethic**

Production Facility is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.331$ ) predictor of the gendered perceptions of Work Ethic. This indicates that participants from a specific production facility did not, significantly, choose one gender as having better work ethic over the other. In other words, place of employment was not a salient, impactful construct to them due to neutral management policies.

**<sup>27</sup>Production Facility and Gendered Perceptions of Reliability**

Production Facility is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.651$ ) predictor of the gendered perceptions of Reliability. This indicates that participants from a specific production facility did not, significantly, choose one gender as being more reliable over the other. In other words, place of employment was not a salient, impactful construct to them due to neutral management policies.

**<sup>28</sup>Production Facility and the Importance of Performance and Productivity for Promotion Considerations**

Production Facility is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.492$ ) predictor of the importance of Performance and Productivity for promotional considerations. This indicates that participants from a specific production facility did not, significantly, rate the importance of performance and productivity non-randomly. In other words, place of employment was not a salient, impactful construct in the consideration of performance and productivity due to neutral management policies.

**<sup>29</sup>Production Facility and the Importance of Technical Skills and Education for Promotion Considerations**

Production Facility is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.782$ ) predictor of the importance of Technical Skills and Education for promotional considerations. This indicates that participants from a specific production facility did not, significantly, rate the importance of technical skills and education non-randomly. In other words, place of employment was not a salient, impactful construct in the consideration of technical skills and education due to neutral management policies.

**<sup>30</sup>Production Facility and the Importance of Reliability/Dependability for Promotion Considerations**

Production Facility is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.342$ ) predictor of the importance of Reliability/Dependability for promotional considerations. This indicates that participants from a specific production facility did not, significantly, rate the importance of reliability and dependability non-randomly. In other words, place of employment was not a salient, impactful construct in the consideration of reliability and dependability due to neutral management policies.

<sup>31</sup>**Production Facility and the Importance of Willingness-To-Work for Promotion Considerations**  
 Production Facility is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.721$ ) predictor of the importance of Willingness-To-Work for promotional considerations. This indicates that participants from a specific production facility did not, significantly, rate the importance of willingness-to-work non-randomly. In other words, place of employment was not a salient, impactful construct in the consideration of willingness-to-work due to neutral management policies.

<sup>32</sup>**Production Facility and the Importance of Respect for Management for Promotion Considerations**

Production Facility is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.160$ ) predictor of the importance of Respect for Management for promotional considerations. This indicates that participants from a specific production facility did not, significantly, rate the importance of respect for management non-randomly. In other words, place of employment was not a salient, impactful construct in the consideration of respect for management due to neutral management policies.

<sup>33</sup>**Production Facility and the Importance of Cultural Reasons for Promotion Considerations**

Production Facility is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.442$ ) predictor of the importance of Cultural Reasons for promotional considerations. This indicates that participants from a specific production facility did not, significantly, rate the importance of cultural reasons non-randomly. In other words, place of employment was not a salient, impactful construct in the consideration of cultural reasons due to neutral management policies.

Non-Significant Quantitative Results: Linear Regression (Part 2)

The following involves linear regression/predictive analyses involving data from *two participant cohorts*: Administrative Employees and Production Floor Employees. Unlike the norm in social science, the statistically insignificant results will provide more information, although both will be presented accordingly. There are 3 unique insignificant results in Part 2 of linear regression analyses, quantitative results.

Table 4: Non-Significant Results from 2 Participant Cohorts

<i>Independent Variable</i>	<i>IV Coding</i>	<i>Dependent Variable</i>	<i>DV Coding</i>	<i>P-Value (Significance)</i>
Gender	Female: 0 Male: 1	Satisfaction with Job Performance	1=Low 10=High	<sup>34</sup> 0.351
		Satisfaction with Working Conditions		<sup>35</sup> 0.220
		Satisfaction with Level of Training		<sup>36</sup> 0.515
		Satisfaction with Level of Management/Supervision		<sup>37</sup> 0.501

		Satisfaction with Company Policies		<sup>38</sup> 0.976
Status	Administrative: 0 Production: 1	Satisfaction with Working Conditions		<sup>39</sup> 0.148
		Satisfaction with Level of Management/Supervision		<sup>40</sup> 0.549
Facility	HTL: 0 STL: 1	Satisfaction with Job Performance		<sup>41</sup> 0.137
		Satisfaction with Working Conditions		<sup>42</sup> 0.147
		Satisfaction with Level of Training		<sup>43</sup> 0.462
		Satisfaction with Level of Management/Supervision		<sup>44</sup> 0.549
		Satisfaction with Company Policies		<sup>45</sup> 0.976

#### <sup>34</sup> Gender and Satisfaction with Personal Job Performance

Gender is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.351$ ) predictor of satisfaction with Personal Job Performance. This indicates that participants of a specific gender did not, significantly, rate their satisfaction with personal job performance non-randomly. In other words, gender was not a salient, impactful construct in the consideration of personal job performance due to neutral management policies.

#### <sup>35</sup> Gender and Satisfaction with Working Conditions

Gender is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.220$ ) predictor of satisfaction with Working Conditions. This indicates that participants of a specific gender did not, significantly, rate their satisfaction with working conditions non-randomly. In other words, gender was not a salient, impactful construct in the consideration of working conditions due to neutral management policies.

#### <sup>36</sup> Gender and Satisfaction with Level of Training

Gender is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.515$ ) predictor of satisfaction with their Level of Training. This indicates that participants of a specific gender did not, significantly, rate their satisfaction with their level of training non-randomly. In other words, gender was not a salient, impactful construct in the consideration of their level of training due to neutral management policies.

#### <sup>37</sup> Gender and Satisfaction with Level of Management/Supervision

Gender is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.501$ ) predictor of satisfaction with their Level of Management/Supervision. This indicates that participants of a specific gender did not, significantly,

rate their satisfaction with the level of management/supervision non-randomly. In other words, gender was not a salient, impactful construct in the consideration of the level of management/supervision due to neutral management policies.

### **<sup>38</sup>Gender and Satisfaction with Company Policies**

Gender is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.976$ ) predictor of satisfaction with Company Policies. This indicates that participants of a specific gender did not, significantly, rate their satisfaction with company policies non-randomly. In other words, gender was not a salient, impactful construct in the consideration of company policies due to neutral management policies.

### **<sup>39</sup>Status and Satisfaction with Working Conditions**

Status (job title) is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.148$ ) predictor of satisfaction with Working Conditions. This indicates that participants of a specific status/job title did not, significantly, rate their satisfaction with working conditions non-randomly. In other words, status/title was not a salient, impactful construct in the consideration of working conditions due to neutral management policies.

### **<sup>40</sup>Status and Satisfaction with Level of Management/Supervision**

Status (job title) is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.549$ ) predictor of satisfaction with their Level of Management/Supervision. This indicates that participants of a specific status/job title did not, significantly, rate their satisfaction with the level of management/supervision non-randomly. In other words, status/title was not a salient, impactful construct in the consideration of the level of management/supervision due to neutral management policies.

### **<sup>41</sup>Production Facility and Satisfaction with Personal Job Performance**

Production Facility is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.137$ ) predictor of satisfaction with Personal Job Performance. This indicates that participants from a specific production facility did not, significantly, rate their satisfaction with personal job performance non-randomly. In other words, place of employment was not a salient, impactful construct in the consideration of personal job performance due to neutral management policies.

### **<sup>42</sup>Production Facility and Satisfaction with Working Conditions**

Production Facility is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.147$ ) predictor of satisfaction with Working Conditions. This indicates that participants from a specific production facility did not, significantly, rate their satisfaction with working conditions non-randomly. In other words, place of employment was not a salient, impactful construct in the consideration of working conditions due to neutral management policies.

### **<sup>43</sup>Production Facility and Satisfaction with Level of Training**

Production Facility is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.462$ ) predictor of satisfaction with their Level of Training. This indicates that participants from a specific production facility did not, significantly, rate their satisfaction with their level of training non-randomly. In other words, place of employment was not a salient, impactful construct in the consideration of their level of training due to neutral management policies.

**<sup>44</sup>Production Facility and Satisfaction with Level of Management/Supervision**

Production Facility is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.575$ ) predictor of satisfaction with their Level of Management/Supervision. This indicates that participants from a specific production facility did not, significantly, rate their satisfaction with their level of management/supervision non-randomly. In other words, place of employment was not a salient, impactful construct in the consideration of their level of management/supervision due to neutral management policies.

**<sup>45</sup>Production Facility and Satisfaction with Company Policies**

Production Facility is *not a statistically significant* ( $p > 0.05$ ;  $p = 0.866$ ) predictor of satisfaction with their Company Policies. This indicates that participants from a specific production facility did not, significantly, rate their satisfaction with company policies non-randomly. In other words, place of employment was not a salient, impactful construct in the consideration of company policies due to neutral management policies.



Qualitative Results: Descriptive Statistics (Part 1)

The following involves descriptive statistics involving coded data from *all five participant cohorts*: Executive Management, Middle Management, Human Resource Manager, Administrative Employees and Production Floor Employees. Kindly be aware that missing values have not been factored in.

**1) What kind of company programs do you think would help female employees be more engaged at work?**

**Table 5: Company Programs for Female Employees**

		Executive/Middle Management n=15 / 15	Human Resource Managers n=2 / 2	Production & Administration n=65 / 77
Mother Program	Kindergarten	3	1	4
	Maternity Leave	1	-	1
	Wife-Husband Locating in Same Facility	1	-	1
Woman Program	Menses Mandatory Rest	1	-	4
	Women’s Day Activities	1	-	22
Team-Building Program	Respect	2	-	18
Management	Supervisor’s Attitude	-	-	1
	Facility Improvements	-	-	4
	Employee Recognition	-	-	1
Training	Physical	1	-	-
	Legal Matters	1	-	1
	Work-Life Balance	1	-	2
	Job-Related	1	-	6
	General Business	-	1	2
No Need	-	3	-	2
Other Programs	-	-	-	5

It seems that among Executive & Middle management, there was a significant diversity of answers with peaks being: Kindergartens for young mothers, and the lack of need for a program. This may

reflect a lack of consensus among upper management levels regarding strategies to engage employees, especially women. For Production and Administrative employees, the peaks were: Women’s Day programs and team-building programs organized the concept of respect. Women’s Day is a phenomenon specific to Asian culture , and seemingly an important occasion to be remembered.

## 2) Do you believe your answers are skewed by your culture?

**Table 6: Culture Skewness**

		Executive/Middle Management n=12 / 15	Human Resource Managers n=2 / 2	Production & Administration n=64 / 77
Yes	-	2	-	17
No	-	10	2	47

The percentage of executive and middle management believing their answers to be skewed by culture (13%) is significantly lower than the percentage of production and administrative employees believing their answers to be skewed by culture (22%). This may reflect strength in management, in which a culturally-sensitive has been conscientiously undertaken to mobilize core departments.

## 3) What do you think about the amount of female employment in ISA Tantec? Should there be more, less, or no change? Why?

**Table 7: Opinions about Female Employment**

		Executive/Middle Management n=15 / 15	Human Resource Managers n=2 / 2	Production & Administration n=71 / 77
No Change	Gender Neutral Policies	12	2	48
	“Perfect Team”	1	-	4
More	Females are efficient	1	-	7
Less	Males are efficient	-	-	9
	Work unsuitable	1	-	3

Across all population cohorts, the peaks seem to be a lack of desire to alter the amount of female employment, given that most participants do not believe hiring based on gender to be an appropriate policy. This clearly reflects a strong corporate culture rooted in ability, learning and intellectual growth over simple characteristics.

#### 4) Any further comments?

**Table 8: Further Comments**

		Executive/Middle Management n=5 / 15	Human Resource Managers n=1 / 2	Production & Administration n=23 / 77
Suggestion	Improve our team (technical)	1	-	2
	Team-building	2	-	12
	Infrastructure improvements	-	-	3
Comment	Gender Neutral Policies are important	2	1	-
	Gratitude to ISA	-	-	8

The majority of responders in production and administration stress a need for inter-departmental team building activities, events and exercises in order to strengthen the social capital necessary for good communication and productivity.

## Qualitative Results: Descriptive Statistics (Part 2)

The following involves descriptive statistics involving coded data from *two participant cohorts*: Administrative Employees and Production Floor Employees. Kindly be aware that missing values have not been factored in.

### 1) Why did you come to HTL/STL?

**Table 9: Reasons for Entering the Company**

		Administrative Employees n=39 / 41	Production Employees n=33 / 36
Opportunities	Career development	15	4
	Incentives		
	Benefits	9	4
	Salary	3	24
Environment	Safety/Hygiene	3	1
	Scenery	1	-
	Happiness from work	6	12
	Friendly environment	9	8
Organization	Good management	9	4
	CSR/Values	2	-
	Company's strength	7	1
Practicality	Proximity	1	-
	Referral from trusted source	2	1

Among administrative employees, it seems that the main reason for working at HTL and STL production facilities is the potential for learning and career development, with secondary minor peaks being: benefits, having a friendly environment and good management. Among production employees, it seems that the main reason for working at HTL and STL production facilities is the salary baseline level with a secondary peak at gaining happiness from the work. The high level of responders indicates a willingness to be transparent about each employee's incentives. This may be a good by-product of corporate culture.

## 2) What do you think would help increase your productivity?

**Table 10: Programs to Increase Productivity**

		Administrative Employees n=37 / 41	Production Employees n=33 / 36
Environment	Infrastructure	5	11
	Technology	6	14
	Cafeteria	-	2
Incentives	Benefits	1	-
Team-Building Program	Respect	2	-
Management	Supervisor	1	-
Training	Job-Related	28	28
Other	-	1	2

Among administrative employees, the primary request is for increased job-related training programs in order to build up one's own abilities and productivity. Among production employees, the primary request is also for increased job-related training programs with secondary peaks being better infrastructure (e.g., safety, hygiene, etc.) and better technology. It seems that most responses centre on the concept of better productivity for the company.



## Limitations

The core strength of this technical report lies in linear regression as an analytical tool and the methodology of analyzing each of the 45 relationships between the independent variable and the dependent variable. It is powerful in its predictive nature for significant results. However, there are several limitations which the reader should be aware of.

Due to time, budget and labor constraints, a comprehensive literature review could not be realized. This means that there may have been more recent research which had the possibility to mitigate underlying research assumptions, especially regarding foreign-owned enterprises and its management culture. Additionally, the total participant size was 94 respondents. If they were taken as one participant pool, it would have provided a rich source of unique data; however, they were ultimately sorted into five cohorts: executive management, middle management, human resource managers, administrative employees and production floor employees. This resulted in a small participant sample from each cohort, and could have the ability to skew results especially during qualitative analyses.

Furthermore, special efforts were made to achieve a random sampling, but it was ultimately done only on one day and was based on convenience, especially in the production floor. This means that variance from individuals who were sick, absent, or worked the night-shift were not captured within this report.

Finally, the instrument was designed with the researcher's background in social science/applied psychology research in mind. However it had to be translated into both Chinese and Vietnamese, and linguistics are not fully transferrable across cultures and therefore the new translated words can not be assumed to capture the full meaning of the original English words.

## Conclusion

Literature and experience has both shown that within the leather industry, males have always been favored over females for their ability to handle more labor-intensive tasks. While in tanning sectors, this may have been true at one point in history, it has become a stereotype which prevents qualified females from taking positive ownership in this field. On the assumption that most production-oriented companies have management attitudes and behaviors that trickle down into generalized corporate culture, this technical report was prepared to answer two core questions: 1) whether ISA Tantec, a leader in the leather industry, has positive management policies (e.g., gender-neutral, job-title-neutral, and facility-neutral), and 2) whether it trickles-down into the work attitude of all levels of employees.

It is based on the foundational research on stereotype threat by Joshua Aronson, which states that if an individual is made aware (read: salient) of a personal characteristic which has been associated with a negative stereotype (e.g, females can't perform mathematics as well as males), then they will unintentionally perform badly on the task which mobilizes that particular stereotype (e.g., math problems). Therefore it is in the best interest of the individual if their personal characteristic is minimized, so there is no mental block towards the completion of a specific task.

In classic research, only significant results are analyzed but due to the nature of the questions and specific research assumptions, all 45 significant and non-significant results are worthy of mention. In Part 1 and starting off with positive results (non-significant) on Gender, the participant's gender did not predict their opinions of which gender was more productive. It also did not predict importance placed on 1) performance & productivity; 2) technical skills & education; 3) reliability/dependability; 4) willingness-to-work; 5) respect for management; and 6) cultural reasons for promotion. The important implication here is that gender as a personal characteristic was not made salient to either

males or females, so they did not have specific inclinations to answer whether it was females or males who were more productive. *In other words, productivity was not measured based on gender. The second implication is that gender does not factor into the respondent's answer on importance placed on various attributes necessary for promotion, suggesting that a larger mechanism (e.g., corporate culture) is in place which de-emphasizes gender as an important pre-requisite for career advancement opportunities and promotions.*

Regarding positive (non-significant) results on Status, the participant's status (or job title) did not predict their opinions of which gender had better work ethic, open to criticism, and was more reliable. It also did not predict importance placed on 1) performance & productivity; 2) technical skills & education; 3) reliability/dependability; 4) willingness-to-work; and 5) respect for management for promotion. Similar to the predictor of Gender, status or job title as a personal characteristic was not made salient on any of the levels of employee. In other words, one's personal job title and level of responsibility did not encourage the individual to answer that a specific gender had better work ethic, was more open to criticism, and was more reliable compared to the opposite sex. *Therefore, the implication can be made that work ethic, openness to criticism and reliability are not measured based on status/job title.* The second implication is that status does not factor into the respondent's answer on importance placed on various attributes necessary for promotion, suggesting that *a larger mechanism (e.g., corporate culture) is in place which de-emphasizes status/job title as an important pre-requisite for career advancement opportunities and promotion.*

Regarding positive (non-significant) results on Facility, the participant's place of employment, whether STL or HTL, did not predict their opinions of which gender was more productive, had better work ethic, and was more reliable. It also did not predict importance placed on 1) performance & productivity; 2) technical skills & education; 3) reliability/dependability; 4) willingness-to-work; 5) respect for management; and 5) cultural reasons. Similar to the predictors of Gender and Status, facility (or place of employment) as a personal characteristic was not made salient to any employee working in either facility. In other words, where one worked whether HTL or STL, did not encourage the individual to answer that a specific gender was more productive, had better work ethic and was more reliable compared to the opposite sex. *Therefore the implication can be made that productivity, work ethic, and reliability was not measured based on where one worked.* The second implication is that facility does not factor into the respondent's answer on importance placed on various attributes necessary for promotion, suggesting that *a larger mechanism (e.g., corporate culture) is in place which de-emphasizes place of employment as an important pre-requisite for career advancement opportunities and promotions.*

In Part 2, the positive (non-significant) results only measured the responses of administrative and production employees. It was found that Gender was not a significant predictor of satisfaction with 1) job performance; 2) working conditions; 3) level of training; 4) level of management; and 5) company policies. The core implication is that the respondent's gender did not encourage different results; therefore it can be assumed that both genders are both equally satisfied with their job performance, working conditions, level of training, level of management, and company policies. *A corporate culture is in place to treat all employees equally regardless of gender.*

It was also found that Status was not a significant predictor of satisfaction with 1) working conditions; and 2) level of management. The core implication is that the respondent's job title/status did not encourage different results; therefore it can be assumed that all levels of employees are both equally satisfied with the working conditions, and level of management. *A corporate culture is in place to treat all employees equally regardless of their job title.*

Additionally, Facility was not a significant predictor of satisfaction with 1) job performance; 2) working conditions; 3) level of training; 4) level of management; and 5) company policies. The core implication is that the respondent's facility did not encourage different results; therefore it can be

assumed that all employees from each facility are equally satisfied with their job performance, working conditions, level of training, level of management and company policies. *A corporate culture is in place to treat all employees equally regardless of their place of employment.*

In both Part 1 and Part 2, the significant results indicate potential weaknesses in the management structure as, for example, the respondent's gender had an effect on their opinion on whether a specific gender had better work ethic. For more information on all the significant relationships, please refer to pages 10-14. Out of 45 linearly regressed relationships, 9 had significance, which indicates that there is space for further research into the reasons why gender, status, and facility, as personal characteristics, are causing differences in the participant's opinion on a variety of issues.

### Recommendations for Leather Finishing Industry

The underlying assumption is that when an employee feels secure that their gender, job title or place of employment will not scrutinized or precede their career reputation, there is more freedom to express their productive potential as valued employees, trusting it is what they do and not who they are that characterizes them. Because this technical report is based on data collected within a leather finishing firm, the leather finishing industry is where its results are most applicable, however the underlying assumption holds true for all firms. Therefore it is worthwhile, in order to achieve the best production and efficiency from labor resource, it is recommended that higher levels of management invest time and capital into building a corporate culture which values their corporate family as unique individuals, celebrating learning potential, intrapreneurship, creativity and strategic thinking over hard-wired personal characteristics, as ISA Tantec has done in both their facilities in Heshan, China and Saigon, Vietnam.