ANTECEDENTS ON SAFETY BEHAVIOUR OF TAXI DRIVERS FROM WORK PSYCHOLOGICAL PERSPECTIVES

Nor Azmawati Husain\textsuperscript{1}, Jamilah Mohamad\textsuperscript{2}, and Mohd Awang Idris\textsuperscript{1}

\textsuperscript{1}Department of Antropology and Sociology, Malaya University, Malaysia
\textsuperscript{2}Department of Geography, Malaya University, Malaysia

ABSTRACT
Studies showed that driver’s safety behaviours and attitudes are the most dominants factors in contributing to road accident involvement. Although workers in transportation sectors that are reported to be involved in road accidents are small percentage but these road accidents disasters sometimes involved other parties as the victims especially the public that also the road users. In 2013, Royal Malaysian Police reported that 85.7 percent of road accidents caused by driver’s behaviour. Commercial drivers are highly exposed the road accidents risk since their job characteristics is mostly drive. Taxi drivers for instance, spent most of their working hours on the roads, driving back and forth sending and fetching passengers from origin to destination. Thus, this study aims to discover the influences on job characteristics (job demands and job resources) of taxi drivers towards their driver’s safety behavior (safety compliance). Besides, we try to seek whether the positive job characteristics (skill discretion) and negative job characteristics (emotional demand) can affect of risk taking attitude and safety motivation in relationship between job characteristics and driver’s safety behavior. Based on Job Demands and Job Resources (JD-R) Theory and using a quantitative data from 333 taxi drivers operated within Klang Valley, Malaysia, a conceptual model has been developed and tested using PLS-SEM Partial Least Square (SmartPLS). Findings are discussed and Job Demands (Emotional Demands) is positively levitate in practicing risk taking behavior. Hence, these taxi drivers are expected to have lower safety compliance through safety motivation as the mediator. On the other hand, skill discretion has positively increased safety motivation and reduced the tendency on safety compliance. On the other hand, findings on risk-taking attitude unpredictable whereby risk-taking attitude does not play as the mediator role in JD-R and safety behaviour linkage, instead of mediator, the presence as the moderator is significant to safety motivation, emotional demands and skills.

Keywords: Safety Behaviour, Risk-Taking Attitude, Job Characteristics, Emotional Demand, Skill Discretion

* Presenter: Email: iema800509@gmail.com
1. INTRODUCTION

Taxi driver safety behaviour is pivotal in taxi operations and services. In other words, taxi drivers safety behaviour need central attention since poor in safety behaviour can jeopardize taxi operation and the safety of passengers. However previous studies on taxi drivers focused on concurrent effect (i.e. profiling for the unsafe behaviour) (Newnam, Mamo, & Tulu, 2014) and post-effect of unsafe behaviour (i.e accident involvement and fatalities) of taxi drivers rather than searching for the antecedents for the safety behaviour. Besides, safety behaviour is the dominant predictors in accident involvement (Iversen & Rundmo, 2004; Mearns & Flin, 1995; Neal & Griffin, 2006) . Royal Malaysian Police’s statistics revealed that 85.7 percent of road accident happened caused by human behaviour on the road. It is inevitable facts that studies are needed in continuously searching for the antecedents of safety behaviours especially commercial drivers (i.e. taxi drivers). Although, work characteristics (job demands and job resources) has been explored as the predictors on safety behaviours previously but we extend the concept by searching for another types job demand and job resource that are more specific to taxi drivers.

Literally, taxi driver safety behaviour and their work characteristics (job demands and job resources) logically connected. Several studies presented the findings and of negative effects of job demands and positive effects of job resources in various study setting and work condition (Bakker, Demerouti, & Verbeke, 2004; Dollard & Bakker, 2010) but fewer in transportation industry. Thus, we decided to explore the effect of job demands (emotional demands) and job resources (skill discretion) through JD-R Model towards safety behaviour. Besides, we seek to test the mediation effect of safety motivation and risk-taking attitude on safety behaviour (safety compliance) and possible moderator effect on risk attitude.

Undeniably that safety research trend nowadays is likely to analyse the antecedents of safety behaviours using organizational data compared to individual data. Unlike other typical industry, taxi industry posses a very unique nature where driver safety responsibility is their own, every industry possess different safety factors to be considered (Quinlan & Bohle, 1991) . There are authors that try to integrate and compare the paths between organizational, individual and environment data and all of data are significant on accidents involvement (Machin & De Souza, 2004). Thus, we suggest for this study we use individual data since it is impossible to nest the data by organization.

2. THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

2.1. Job Demands and Job Resources Model (JD-R Model)

JD-R Model is established work-stress model (Schaufeli & Taris, 2014) that been developed by (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Aforementioned, JD-R Model is unique as it is next to the earlier model, Job Demand-Control (JDC) (Karasek Jr, 1979; Karasek, 1985) that focused only on job demand and locus of control to predict organizational outcomes. Meanwhile Effort-Reward Imbalance (ERI) developed by Siegrist (1996) limits the scope by looking at the
imbalance between effort and rewards in the model. Although numerous models been nurtured through these earliest model but still JD-R Model has a distinct luxury for the scholars to use whereby the Job Demands and Job resources elements can be change and flexible enough to fit specific industry (Bakker & Demerouti, 2007; Demerouti et al., 2001)

The Conservation Resource (COR) Theory Model developed by Hobfoll (1989) is very in-line with Job Demand-Resource Model. Resources varied and it depends on the values hold by the workers. Resources can be tangible and intangible. If a lot of effort require for the workers to preserve the resources (i.e income, job stability) then subsequently it will lead to negative organizational well being outcomes. Although (Bakker & Demerouti, 2007; Bakker, Demerouti, & Euwema, 2005; Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007) had a series of studies that based on COR to show the association of job demands and job resources to burnout and engagement, however few studies focus on positive and negative association of job demands towards driving attitude and safety motivation and safety behaviours.

Job Demands varied according to specific profession. The definition of Job Demand as physical, psychological, social or organizational aspects of jobs that required sustained physical or psychological effort (Bakker et al., 2005, p. 170). In this study, we focus on emotional demand of taxi drivers. Emotional demand can be described as a requirement where the workers must portray a standard type of emotions for work (Zapf, 2002) as taxi driver emotions are vulnerable and able to influence others. Mayhew (2000) mentioned taxi drivers as one of the hazardous professions and the association of taxi drivers as being the victims of assault not physically but emotionally and the consequences can be seen in “emotionally” rather than physically. Besides, incorporation of emotion in work is synonymous to service industry as scholar did his first work emotion study on stewardess (Hoschild, 1983)

Job resources as stated by Bakker et al. (2007) as positive work elements that can reduce the negative effect of job demands and induce motivation on workers to achieved organizational goals. Job resource can be found in many aspects comprise of organizational (i.e. salary), social interaction (i.e. coworkers relations, task related (i.e. skills) and personal growth and professional development (self-esteem). One potential aspect that get less attention among scholars is task related job resource; skills. To date, less likely established scales to represent skills can be found. Bakker et al. (2005) did include skills variety as the job resources in his study by establishing their own scale. Skills can be described as the workers feel benefited from the work and it improves his competency (XXXX). Since skill discretion is not commonly tested as the job resources among service workers, we postulate the hypotheses and would like to test it in this study. Lastly it completes the proposed model (JD-R based).
H1a: Emotional demand has significant negative effect of safety motivation
H1b: Emotional demand has significant positive effect on risk attitude
H1c: Skill discretion has significant positive effect on safety motivation
H1d: Skill discretion has significant negative effect on risk attitude

2.2. Safety motivation, Risk Taking Attitude and Safety Compliance

Attitudes commonly associated with behaviours. Consistent with Theory of Planned Behaviour (Ajzen, 1985). This theory is a well-established theory used to measure attitude on driving behaviour. Risk-taking attitude is common in safety behavior studies. The relationship between risk-taking attitude and driver behaviour been tested and it has significant effect on accident involvement (Iversen & Rundmo, 2004; Ma & Yan, 2009).

In a few studies, risk-taking attitude commonly associated with negative driving behavior (Öz, Özkan, & Lajunen, 2010). Currently, safety studies focused on management point of view rather than risk aspects (Flin, Mearns, O'Connor, & Bryden, 2000). Risk-taking attitudes can be operationalised by three subscale; attitudes towards rules violation and speeding, alcohol assumption and careless of others. Since violation has been discussed as significant predictors to accident involvement (Iversen & Rundmo, 2011), we decided to omit the other two scale. Although the attention on risk-taking attitude is continuous but the findings are still debatable whether risk-taking attitude has direct or indirect effect on safety behavior. The findings for risk-taking attitude is inconsistent where some findings find it directly affect behaviours (Ulleberg & Rundmo, 2003) while others found that risk-taking attitude need mediator to run (i.e:intention)(Ma & Yan, 2009). We seek to know whether in option, risk-taking attitude play it role as the endogenous or exogenous in this model.

On the hand, safety motivation is like the soul for the safety compliance and been tested by most authors as positively significant in long-terms basis (Probst & Brubaker, 2001). Safety motivation can be described as individual efforts to enact effort in safety behaviour and the valence associate with that behaviour. (Neal & Griffin, 2006, p. 947). As been mentioned by (Bakker & Demerouti, 2007), Job resources has the intrinsic value on workers motivation. Thus, we seek to contribute to the literature by searching either the value of motivation that lies in the job resource able to affect safety motivation through Skill Discretion.

Safety compliance is an act of safety behaviour besides safety participation (Neal & Griffin, 2006) and safety compliance is the basic tenet of the workplace safety. Although safety compliance been use to predict accident involvement for many years (Nahrgang, Morgeson, & Hofmann, 2011; Neal & Griffin, 2006) and we commonly seen the direct effect of safety motivation to safety compliance. Seldom we saw the linkage been buffer or mediated by any factors. Hence, we like to extend the
study to the roles of safety motivation in safety compliance with addition of risk-taking attitude. Hence safety compliance is the ultimate outcomes that been highlighted in this study:

**H2a:** Risk-Taking Attitude has significant negative effect on safety compliance

**H2b:** Risk-Taking Attitude has significant negative effect on safety motivation

**H2c:** Safety Motivation has significant positive effect on safety compliance

**H3a:** Safety motivation mediates the relationship between Emotional demands and safety compliance

**H3b:** safety motivation mediates the relationship between Skills and safety compliance

**H3c:** Risk-Taking Attitude mediates the relationship between emotional demands and safety compliance

**H3d:** Risk-taking attitude mediates the relationship between skills and safety compliance

**H4a:** Risk-taking attitudes act as a buffer (moderator) for safety motivation and safety compliance linkage

**H4b:** Risk-taking attitudes acts as a buffer (moderator) for emotional demands and safety compliance linkage

**H4c:** Risk-taking attitudes acts as a buffer (moderator) for skill and safety motivation linkage

### 3. METHOD

#### 3.1. Participant and Procedure

Self–administered questionnaire been used to collect data from taxi drivers during their working hours at respective taxi stations within area Klang Valley, Malaysia. Taxi drivers been approached by the researcher and has option either to complete the questionnaires within that time or during their free time. Due to time limitations and taxi drivers need to fetch their passengers, questionnaires with sealable, stamped- envelope with researchers name and address been provided to them to increase the chance of participation. 692 were distributed, and 333 usable replied were obtained and we dropped the incomplete one. This process began at December 2013 and ended in August 2014. Male respondents dominated the sample for 96.4% and their aged scattered between 31-60 years old (80.9%). Most of the respondent with married status that was accounted for (73.9%). They are well experienced drivers with average of 5 years (36.4%) taxi driving experience; and the taxi ownership is mostly belong to the taxi companies (69.1%) either through leasing contract or hire purchase contract.
3.2. Measures

Early stage in setting up the questionnaire, we use a professional interpreter to translate questions from English to our national language, Malay. Prior to administer, the questionnaire has been pre-tested with pilot of 5 taxi drivers and minor changes in wording required.

3.2.1. Emotional Demands

Emotional Demands was measured using four-item scale from Copenhagen psychosocial Questionnaire (COPSOQ) developed by Kristensen, Hannerz, Høgh, and Borg (2005). The scale ranging from (1) Never to (5) Always. Sample of question is “Does your work put you in emotionally disturbing situation?”

3.2.2. Skill Discretion

Skill Discretion represent Job Resources where these six –items scale been adopted from Job Content Questionnaire (Karasek, 1985). The respond range from (1) strongly disagree to (4) strongly agree. Sample of question been asked is “My job require me to learn new things”.

3.2.3. Safety Motivation

Safety Motivation is was measured by three-item scale developed by (Neal & Griffin, 2006). The scale ranged from (1) strongly disagree to (5) strongly agree. The questions includes I feel it is worthwhile to put in effort to improve my driving in a work vehicle”, “I feel that it is important to maintain safety at all times” and I believe that it is important to reduce the risks of accidents and incidents at workplaces”.

3.2.4. Risk-Taking Attitude

Eleven-item scale represented on Risk Taking Attitude is actually sub scale developed by (Iversen, 2004). Risk Taking Attitude in driving originally has three subscale; attitudes on rules violations and speeding, attitudes on alcohol assumptions and attitudes of others but for this study, we only refer to scale on attitude on rules violations and speeding since (Ma & Yan, 2009) findings showed that only these attitude contribute to the accident involvement. Samples of question are “It is acceptable to drive when traffic lights shifts from yellow to red” and “Traffic rules are often too complicated to be carried out in practice”. The scale ranged from (1) strongly disagree to (5) strongly agree.

3.2.5. Safety Compliance

Safety Compliance is part of safety behavior besides safety participation. In this study we only refer the safety compliance construct to represent safety behavior. It comprised of two- items scale and originated from (Neal & Griffin, 2006). The questions are “I put extra effort in improve the safety during driving at work” and “I ensure the highest level of safety when I carry out the job”. The scale ranged from (1) strongly disagree to (5) strongly agree.
3.3. Data Analysis

We analysed the data using the second generation of Structural Equation Modelling that called PLS-SEM. The SmartPLS Version 3.0 developed by Hair Jr, Hult, Ringle, and Sarstedt (2013). This software is does not require a normal distribute data, easy with small numbers of respondents. Since this data is cross-sectional data, we used Harman one-factor test (Philip M Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Philip M. Podsakoff & Organ, 1986) to ensure that data are free from common method biases, if single factor occurred from Exploratory Factor Analysis (EFA) which mean the variance is greater than 0.50 then single factor is occurred. The result revealed that five factor structure and no single factor contribute the variance is greater than 0.50. Hence method bias not occurred for this result. Cronbach Alpha and loading patterns were used as reference to evaluate the validity and reliability of this model. Specifically three items from skill discretion (SKI), one from emotional demands (ED) and six from risk-taking attitude (RSA) were dropped because of low loadings.

4. RESULTS

4.1. Measurement Model

Means and standard deviation of this model been presented in Table 1. The mean score for the items indicated that taxi drivers displayed low level of risk-taking behaviour (mean=2.37, sd=0.018) and experienced low level of emotional demands (mean=2.71, sd=0.021)

In measuring convergent validity for the measurement model, (Hair, Tatham, Anderson, & Black, 2006) suggested to use factor loadings, construct reliability (CR) and Average Variance Extracted (AVE). According to the rule of thumb, factors loading (figure 2) exceeds the critical values of 0.50. It means that items for each construct is reliable. Meanwhile construct reliability (CR) for each latent variable range above critical values of 0.70 (0.80-0.95). the AVE values also meet the requirement whereas been suggested by (Fornell & Larcker, 1981) the value should exceeded 0.50 (0.58-0.91)

Discriminant validity must be measured to assess the degree of differences between each construct. We used Fornell and Larcker table and compare the construct’s correlation with the square roots of AVE (Table 1) and the result shown are for each construct, the square roots AVE is greater than the levels of correlations of others constructs, thus discriminant validity is confirmed. Overall, the results indicate the measurement model is reliable and valid.
### Table 1: Internal Consistency and Discriminant Validity of construct

<table>
<thead>
<tr>
<th>Construct</th>
<th>Mean</th>
<th>SD</th>
<th>AVE</th>
<th>CR</th>
<th>α</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety Compliance (1)</td>
<td>4.54</td>
<td>0.023</td>
<td>0.91</td>
<td>0.95</td>
<td>0.90</td>
<td>0.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety Motivation (2)</td>
<td>4.48</td>
<td>0.025</td>
<td>0.77</td>
<td>0.91</td>
<td>0.85</td>
<td>0.75</td>
<td>0.88</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk-Taking Attitude (3)</td>
<td>2.37</td>
<td>0.018</td>
<td>0.60</td>
<td>0.88</td>
<td>0.83</td>
<td>0.26</td>
<td>0.25</td>
<td>0.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skill Discretion (4)</td>
<td>4.20</td>
<td>0.045</td>
<td>0.58</td>
<td>0.80</td>
<td>0.64</td>
<td>0.42</td>
<td>0.47</td>
<td>0.25</td>
<td>0.76</td>
<td></td>
</tr>
<tr>
<td>Emotional Demand (5)</td>
<td>2.71</td>
<td>0.021</td>
<td>0.71</td>
<td>0.88</td>
<td>0.80</td>
<td>0.22</td>
<td>0.22</td>
<td>0.42</td>
<td>0.10</td>
<td>0.84</td>
</tr>
<tr>
<td>Construct</td>
<td>Code</td>
<td>Items</td>
<td>Mean</td>
<td>S.D</td>
<td>Construct Mean</td>
<td>Loading</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td>------</td>
<td>----------------------------------------------------------------------</td>
<td>------</td>
<td>-----</td>
<td>----------------</td>
<td>---------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Demands</td>
<td>ed4</td>
<td>Does your work put you in emotionally disturbing situations?</td>
<td>2.50</td>
<td>1.04</td>
<td>2.71</td>
<td>0.864</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ed5</td>
<td>Is your work is emotionally demanding?</td>
<td>3.12</td>
<td>1.19</td>
<td></td>
<td>0.781</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ed6</td>
<td>Does your work require that you get personally involved?</td>
<td>2.48</td>
<td>1.04</td>
<td></td>
<td>0.879</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Resources Skill</td>
<td>ski1</td>
<td>My job requires that I learn new things.</td>
<td>4.27</td>
<td>0.79</td>
<td>4.20</td>
<td>0.705</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discretion</td>
<td>ski2</td>
<td>My job involves a lot of repetitive work.</td>
<td>4.23</td>
<td>0.78</td>
<td></td>
<td>0.770</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ski6</td>
<td>I have an opportunity to develop my own special abilities.</td>
<td>4.09</td>
<td>0.92</td>
<td></td>
<td>0.803</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk-Attitude</td>
<td>rsa5</td>
<td>It is acceptable to drive when traffic lights shifts from yellow to red</td>
<td>2.09</td>
<td>1.16</td>
<td>2.37</td>
<td>0.817</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RSA</td>
<td>rsa6</td>
<td>Taking chances and breaking a few rules does not necessarily make bad drivers</td>
<td>2.38</td>
<td>1.23</td>
<td></td>
<td>0.790</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>rsa7</td>
<td>It is acceptable to take chances when no other people are involved</td>
<td>2.70</td>
<td>1.12</td>
<td></td>
<td>0.749</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>rsa8</td>
<td>Traffic rules are often too complicated to be carried out in practice</td>
<td>2.48</td>
<td>1.16</td>
<td></td>
<td>0.752</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>rsa10</td>
<td>When road conditions are good and nobody is around driving in 160 mph is ok</td>
<td>2.04</td>
<td>1.11</td>
<td></td>
<td>0.747</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety Compliance</td>
<td>safcom1</td>
<td>I put extra effort in improve the safety during driving at work</td>
<td>4.50</td>
<td>0.75</td>
<td>4.54</td>
<td>0.952</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAFCOM</td>
<td>safcom2</td>
<td>I ensure the highest level of safety when I carry out the job.</td>
<td>4.57</td>
<td>0.68</td>
<td></td>
<td>0.953</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety Motivation</td>
<td>safety1</td>
<td>I feel it is worthwhile to put in effort to improve my driving in a work vehicle.</td>
<td>4.33</td>
<td>0.69</td>
<td>4.48</td>
<td>0.807</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAFETY</td>
<td>safety2</td>
<td>I feel that it is important to maintain safety at all times.</td>
<td>4.54</td>
<td>0.66</td>
<td></td>
<td>0.939</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>safety3</td>
<td>I believes that it is important to reduce the risks of accidents and incidents in the workplaces</td>
<td>4.57</td>
<td>0.73</td>
<td></td>
<td>0.876</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4.2. Structural Model and Hypotheses Testing

The structural model was assessed using R-square ($R^2$) to explain the total variation in the dependent variables. 56.3 percent of the variance in safety compliance can be explained by these construct model. 25.4 percent in safety motivation and 21.5 percent in risk-taking attitude. As shown in the result (Figure 1 and Table 3), Emotional demand has significant positive effect on risk-taking attitude and significant negative effect on safety motivation. Meanwhile, skill discretion also has significant positive effect on safety motivation and significant negative effect on risk-taking attitude. Thus, all H1(a to d) are all supported.

Risk-taking attitude has no effect on safety motivation and safety compliance. However, safety motivation has significant positive effect on safety compliance. Thus H2a and H2b are not supported while H2c is supported.

Table 3: Summary of Structural Model

<table>
<thead>
<tr>
<th></th>
<th>β value</th>
<th>T Statistics</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED -&gt; RSA</td>
<td>0.395</td>
<td>7.853***</td>
<td>S</td>
</tr>
<tr>
<td>ED -&gt; SAFETY</td>
<td>-0.138</td>
<td>2.861***</td>
<td>S</td>
</tr>
<tr>
<td>RSA -&gt; SAFCOM</td>
<td>-0.078</td>
<td>1.544</td>
<td>NS</td>
</tr>
<tr>
<td>RSA -&gt; SAFETY</td>
<td>-0.086</td>
<td>1.414</td>
<td>NS</td>
</tr>
<tr>
<td>SAFETY -&gt; SAFCOM</td>
<td>0.727</td>
<td>13.369***</td>
<td>S</td>
</tr>
<tr>
<td>SKI -&gt; RSA</td>
<td>-0.209</td>
<td>3.892***</td>
<td>S</td>
</tr>
<tr>
<td>SKI -&gt; SAFETY</td>
<td>0.433</td>
<td>6.739***</td>
<td>S</td>
</tr>
</tbody>
</table>

*p<0.05, **p<0.01, ***p<0.001
S: Significant, NS: Not Significant
In testing the mediation effect, we did some analysis to seek the true result whether safety motivation and risk-taking attitude play its roles as the mediator in this model. We seek the truth to the extent how much the mediator absorb the effect. This can be done through calculating the Variance Accounted For (VAF)(Hair Jr et al., 2013). VAF determine the size of indirect effect from overall total effect. As been stated in Table 4, we calculate the value of direct effect for each path. Both direct effect for Emotional Demand \(\rightarrow\) Safety Compliance and Skills Discretion \(\rightarrow\) Safety Compliance is significant.

Table 4: Significant Analysis of Path Coefficient without Mediators

<table>
<thead>
<tr>
<th>Path Coefficient</th>
<th>T-Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED--SAFCOM</td>
<td>-0.177</td>
</tr>
<tr>
<td>SKI--&gt;SAFCOM</td>
<td>0.420</td>
</tr>
</tbody>
</table>
Then, we test whether safety motivation and risk-taking attitude mediates the relationship between emotional demands and skill discretion towards safety compliance by looking the result of indirect effect. Both indirect effect for emotional demand (-0.156*** and skill discretion (0.344***) toward safety compliance is significant. But individual path for ED→RSA→SAFCOM and SKI→RSA→SAFCOM are not significant, this condition does not permit us to calculate the VAF for both paths. As shown in table 5, results indicate that VAF for ED→SAFETY→SAFCOM and SKI→SAFETY→SAFCOM is each 0.609 and 0.522 (20<VAF<80). It means that Safety Motivation mediation effect can be characterized as partial mediation. Thus H3a and H3b are supported while H3c and H3d are no. Since Risk-Taking attitude is not endogenous variables, we eager to know the exact roles played by risk-taking attitudes in this model.

Table 5: Bootstrapping Result of the indirect model

<table>
<thead>
<tr>
<th>Path</th>
<th>Direct Effect</th>
<th>Indirect effect</th>
<th>Direct *Direct Effect</th>
<th>Total Effect</th>
<th>VAF</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED---&gt;RSA---&gt;SAFCOM</td>
<td>0.395(0.000*)</td>
<td>-0.156(0.000***)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>No mediation</td>
</tr>
<tr>
<td>ED---&gt;RSA</td>
<td>-0.078(0.116)</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>RSA---&gt;SAFCOM</td>
<td></td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>ED---&gt;SAFETY---&gt;SAFCOM</td>
<td>-0.138(0.005*)</td>
<td>0.156(0.000***</td>
<td>0.100</td>
<td>0.256</td>
<td>0.609</td>
<td>Partial mediation 20&lt;VAF&lt;80</td>
</tr>
<tr>
<td>SAFETY---&gt;SAFCOM</td>
<td>0.727(0.000*)</td>
<td>0.344(0.000***</td>
<td>0.315</td>
<td>0.659</td>
<td>0.522</td>
<td>Partial mediation 20&lt;VAF&lt;80</td>
</tr>
</tbody>
</table>

Moderation as been explained by (Dawson, 2014) as variables that able to affect the strength of relationship between two variables. By using values from Ordinary least Square (OLS) regression result, we have plotted the graph using template provided by the (Dawson & Richter, 2006). Safety motivation always has a positive relationship with safety compliance but it is far reduce with the presence of risk-taking attitude. Meanwhile, risk-taking attitude buffer the relationship between skill discretion and safety motivation in a negative ways. Low skill discretion among taxi driver
obviously reduces safety motivation, and it is more reduced by the occurrence of risk-taking attitudes.

Figure 2: Moderating effect of risk-taking attitudes on safety motivation-safety compliance relationship (two-ways interaction with continuous moderator)

Figure 3: moderating effect of risk-taking attitudes on skill discretion –safety motivation relationship (two-ways interaction with continuous moderator)
4.3. Discussion

Studies on safety issues among commercial drivers should not end because the consequences of negative safety behaviour on safety outcomes (accident involvement and fatalities) could be catastrophic the industry and also the passengers. Our study contributes to the safety literature by highlighting the mediating roles of safety motivation. Besides, risk-taking attitudes roles in this study signify a few vague findings prior this.

Consistent with JD-R model findings and COR theory, Job demands (emotional demands) negatively associated safety compliance and job resources (skill discretion) positively associated safety compliance through safety motivation. While emotional demand has significant positive effect on risk-taking attitudes. This findings been supported by findings by (Hu, Xie, & Li, 2013) where emotion especially negative emotions do encourage the risk-taking attitude.

Contrary with our expectation, emotional demands does not has direct effect on safety compliance while skills discretion do. Job resource possess greater positive effect compared to negative effect brought by job demands. Findings from (de Jonge, Le Blanc, Peeters, & Noordam, 2008) supported about the excellent effect of job resources in motivation to overcome the effect of emotional demands. Job resources in this case significantly moderate the relationship between emotional demands and well-being outcomes. Hence, in this study, job resource has strong relationship to safety compliance compared to job demand negative path(not significant). Literally, the instrinisc motivation values in job resources is greater than negative consequences that been brought through job demands towards safety compliance.

Given the non-significant relationship between risk-taking attitude and safety compliance and also the non-significant mediator roles of risk-taking attitude, RSA plays greater role as the
moderator in buffering the relationship between safety motivation–safety compliance, skills discretion–safety motivation and emotional demands–safety motivation. Contrary with previous theory of Planned Behaviour (Ajzen, 1985) predict attitude has an indirect influence on driver behaviour through intention and mediate the perception and behaviour relationship (Ulleberg & Rundmo, 2003). Latest findings by (Hu et al., 2013) revealed the similar non-significant role of risk-taking attitude as the mediator and nor direct effect for culture-risk driving behaviour. But although findings not been supported, the eggs and chickens problems still been an issues for the attitudes and behaviour, which one come first? We contribute to the safety behaviour literature by providing a new role of attitudes “as the moderator” instead of being part of the pathways to safety behaviour.

To sum up the our findings showed what we can do in promoting safe behaviour in workplace especially in transport industry. Instead of we looking at those variables that impossible to change (i.e. personality, traits) we should deviate our focused to the antecedents that are flexible and has greater impacts on promoting safety behaviour (job demands and job resources). Attitude at some point is the inner feeling that able to be influence and also has the ability to influence others if it is stronger. In this case, risk-taking attitudes is strong enough to influence the strength of JD-R and safety compliance relationship. To conclude, this study did contribute few valuable implications to future research directions. Since this study based on cross sectional data, future research should be done on longitudinal based to strengthen the causal relationship of JD-R to safety compliance and to see any changes in risk-taking attitude roles if the data taken in two different times.

5. SUMMARY AND CONCLUSIONS

In this paper, driver compliance is crucial to be as high as possible since it is the intrinsic role of safety behaviour. Refuse to comply with safety rules will associate negative safety outcomes that may affect the transport industry and people at large. Safety motivation in the other hand is significant predictor in influencing safety compliance. Without willingness to carry out safety procedures during works will lead to lower level of compliance. Willingness to do pre check up upon vehicles and the safety features inside the taxi also dominant. This willingness can be induced by injecting potential job resources elements in taxi drivers’ job nature. Skill discretion is individual feelings on how their works benefited them in their skill development. This study does not specific skills into driving skills but skills that they own from their works. Among the potential skills that taxi drivers valued more is the communication skills and personal skills with others.

Our findings been consistent with previous studies on several organizational and well-being outcomes (i.e. burnout and engagement outcomes and health impairment’s findings) except for the risk-taking attitude that does not mediate this linkage. Instead of being inside the system, risk-taking
has greater roles outside the system by buffering the level of safety motivation, safety compliance through skills, emotional demands and safety motivation.

6. ACKNOWLEDGMENTS

This research was part of the project, “Understanding and Quantifying Driver Behaviour Characteristics in Relation to Road Safety”, supported by Malaya University under the grant of Universiti Malaya Research Grant (UMRG). Their financial support is gratefully acknowledged.

REFERENCES

Reference


