

# **How does Work Motivation Impact Employees' Investment at Work and their Job Engagement? A Moderated-Moderation perspective through an International Lens**

## **Abstract**

This paper aimed to shed light on the effects of intrinsic and extrinsic motivation, as predictors, have on Heavy-Work Investment of time and efforts and Job Engagement. In a moderated-moderation analysis, two conditional effects were taken into consideration – worker's status (working students vs. non-student employees) and country (Israel vs. Japan). Data were gathered from 242 Israeli and 171 Japanese participants. The results support the moderated-moderation rationale, showing interesting findings. For example, the associations between intrinsic/extrinsic motivation and Heavy-Work Investment or Job Engagement were found stronger for working students vs. their counterparts, and these links are very different for the Israeli and Japanese sample. Theoretical and practical implications and future research suggestions are discussed.

*Keywords:* Intrinsic and extrinsic motivation; heavy-work investment; job engagement; work status; moderation-moderation; cultural differences.

## **Introduction**

Our world today has been described by an acronym VUCA (Volatile, Uncertain, Complex and Ambiguous). In this rapidly-changing world, it is necessary for organizations and

individuals to engage in continuous learning. To achieve competitive advantage, organizations need to achieve organizational learning, and it can be done by learning individuals. From the latter's viewpoint, it is getting more necessary for workers to learn continuously in order to enhance and maintain their employability. As shown in previous research, the number of people engaging in lifelong learning have significantly increased (Corrales-Herrero, & Rodríguez-Prado, 2018).

In such an era, it is vital for an organization to acquire and retain learning individuals. However, it is not an easy task because they might have turnover intentions even when they are motivated to work. Since learning individuals enhance their skill continuously and have a "third place" to new encounters (e.g., school), they are likely to find other attractive job opportunities. Therefore, it is valuable for us to explore how motivation affects the learning individuals' attitudes and behaviour. However, to the best of our knowledge, researchers have not addressed this issue.

Recently, researchers and practitioners have paid much attention to employees' job engagement (Bailey, Madden, Alfes, Fletcher, 2017). Previous studies suggested that engaged workers are likely to achieve high performance and have low intention to leave (Alarcon & Edwards, 2011; Rich, Lepine, & Crawford, 2010). However, job engagement does not necessarily represent the worker's favourable attitude (van Beek, Taris, & Schaufeli, 2011). In the case of working individuals, it is possible that their appearance of "highly-engaged" is caused by time constraint or impression management motive.

Recognizing the ambiguous nature of "engaged workers," this study also focuses on a relatively new construct called heavy work investment (HWI). People high in HWI are apparently similar to those high in job engagement. However, as will be discussed later, these

two constructs are distinctive. By focusing on both engagement and HWI, we can reveal the underlying mechanism of how motivation affects the learning individuals' engagement.

To address these issues, we analysed quantitative data which include both learning individuals (hereafter we call it as “working student”) and non-student workers. In addition, since the contexts of lifelong learning and work in an organization can affect the focal mechanism, we collected data from two countries—Israel and Japan—and conduct a between-country comparative analysis. The sample and analysis of this study can provide insightful implication because those two countries are widely different in their national cultural context.

### **Work Motivation**

A general definition of motivation is the psychological force that generates complex processes of goal-directed thoughts and behaviours. These processes revolve around an individual's internal-psychological forces alongside external-environmental/contextual forces and determine the direction, intensity, and persistence of personal behaviour aimed at a specific goal(s) (Kanfer, 2009, Kanfer, Frese, & Johnson, 2017). In the work domain, work motivation is "a set of energetic forces that originate within individuals, as well as in their environment, to initiate work-related behaviours and to determine their form, direction, intensity and duration" (after Pinder, 2008, p. 11). As mentioned, work motivation is derived from an interaction between individual differences and their environment, (e.g., cultural, societal, work-organizational) (Latham & Pinder, 2005). In addition, motivation has been shown to be affected by personality traits, needs and even work fit, while affecting various outcomes and attitudes, such as satisfaction, OCBs, engagement, and more (for further reading see: Tziner, Fein, & Oren, 2012).

Moreover, work motivation, as an umbrella term under the self-determination theory (SDT), is usually broken down into two main constructs – intrinsic vs. extrinsic motivation (Ryan & Deci, 2000). On the one hand, intrinsic motivation is an internal drive. Employees work out of the excitement, feeling of accomplishment, joy and personal satisfaction they derive both from the processes of work-related activities and their results (Bauer, Orvis, Ely, & Surface, 2016; Deci & Ryan, 1985; Legault, 2016). On the other hand, extrinsic motivation maintains that the individual's drive to work is influenced by the organization, the work itself, and the employee's environment. These can range from social norms, peer influence, financial needs, promises of reward and more. As such, being extrinsically motivated is being focused on the utility of the activity rather than the activity itself (see: Deci & Ryan, 1985; Legault, 2016). However, this does not, by any means, point that extrinsic motivation is less effective than intrinsic motivation (Deci, Koestner, & Ryan, 1999).

Furthermore, the SDT theory (Ryan & Deci, 2000) argues that each type of motivation is an opposite pole of a single continuum. However, we agree with follow the notion that they are mutually independent, as Rockmann and Ballinger (2017) wrote:

“...there is increasing evidence that intrinsic and extrinsic motivations are independent, each with unique antecedents and outcomes... in organizations, because financial incentives exist alongside interesting tasks, individuals can simultaneously experience extrinsic and intrinsic motivation for doing their work. (p. 11)

Literature-wise, the intrinsic-extrinsic outlook of motivation lacks coherent research, and most of the past research mostly addressed the intrinsic part, as far as we know (e.g., Bauer et al., 2016; Rich et al., 2010). As such, we would align with the approach to distinguish the two work motivations as was reviewed in this section, and consequently treat it as an interesting predictor in our research.

## **Job Engagement (JE)**

Work engagement is typically defined as "a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (Schaufeli, Salanova, González-Romá, & Bakker, 2002, p. 74). As such, engaged employees appears to be hard working (*vigor*), are more involved in their work (*dedication*), and are more immersed in their work (*absorption*) (see also: Bakker, Schaufeli, Leiter & Taris, 2008; Chughtai & Buckley, 2011; Taris, van Beek, & Schaufeli, 2015). JE was initially proposed as a positive construct (Kahn, 1990), and empirical studies revealed that a high level of JE leads to positive work outcomes. For example, recent studies exhibited its positive effect on individual job performance and adverse effect on turnover intention (Breevaart, Bakker, Demerouti, and Derks, 2016; Kumar, Jauhari, Rastogi, & Sivakumar, 2018; Owens, Baker, Sumpter, Cameron, 2016; Shahpouri, Namdari, & Abedi, 2016). Therefore, employees' JE has been regarded as one of the performance indicators of human resource management.

In terms of antecedents and predictors, it is broadly accepted that JE may be affected by both – individual differences (e.g., Basit, 2017; Latta & Fait, 2016; Sharoni, Shkoler, & Tziner, 2015) and environmental/contextual elements (e.g., Basit, 2017; Gyu Park, Sik Kim, Yoon, & Joo, 2017, Lebron, Tabak, Shkoler, & Rabenu, 2018; Sharoni et al., 2015) (See also: Macey & Schneider, 2008) or even an interaction between these two factors (e.g., Hernandez & Guarana , 2018; Sharoni et al., 2015).

## **Intrinsic/Extrinsic Motivation and JE**

To the best of our knowledge, it is surprising there has yet to be a paper on the association between work motivation and job engagement. For instance, however, Rich et al.

(2010) tested a model in which both – intrinsic motivation and JE – were tested “vertically,” meaning they were both mediators [in the model] rather than two factors in a predictor-outcome relationship. That offers a further incentive to examine the association between (intrinsic/extrinsic) work motivation and JE.

Because JE is “... driven by perceptions of psychological meaningfulness, safety, and availability at work” (Hernandez & Guarana, 2018, p. 1), a vital notion behind work motivation is the perception of the job as a place for fulfilling different needs: Extrinsic needs, such as income and status, and intrinsic needs, such as enjoyment, and personal challenge. This perception, very likely, bolsters the association between the employee’s drive to work and the workplace or the work themselves, increasing the involvement and the amount of work they put into their work (i.e., JE). These assumptions lead us to hypothesize that:

*H1: Intrinsic motivation positively associates with JE.*

*H2: Extrinsic motivation positively associates with JE.*

### **Heavy Work Investment (HWI)**

Fundamentally different from being immersed or involved at work (e.g., JE), employees usually invest time and energy at their workplace with different manifestations, which ultimately barrel down to the concept of Heavy Work Investment (HWI). This umbrella-term was introduced encompasses two major core aspects: (1) investment of time (i.e., working long hours), and (2) investment of effort and energy (i.e., devoting substantial efforts, both physical and mental, at work) (Snir & Harpaz, 2012, 2015). These dimensions are, respectively, called (a) Time Commitment (HWI-TC) and Work Intensity (HWI-WI). Notably, many studies deal with

the implications of working overtime (e.g., Caruso 2014; Stimpfel, Sloane, & Aiken, 2012). However, to the best of our knowledge, empirical studies, regarding the investment of efforts at work as an indicator of Heavy Work Investment (e.g., Tziner, Buzea, Rabenu, Truta, & Shkoler, in press), are scarce. Therefore, the current research addresses both of the core dimensions of HWI (i.e., *time* [HWI-TC] and *effort* [HWI-WI]).

In reality, HWI is comprised of many different constructs (e.g., workaholism and work addiction, passion to work), but conclusively revolves around the devotion of time and effort at work (see: Snir & Harpaz, 2015, p. 6). HWI is apparently similar to JE, but these two constructs are distinctive. As shown in previous studies, the correlation between workaholism—one component of HWI—and JE is generally weak, and engaged individuals can be not only high in HWI but also low in HWI (van Beek et al., 2011).

With respect to HWI's possible predictors, Snir and Harpaz (2012, 2015) have differentiated between situational and dispositional types of HWI (based on Weiner's [1985] attributional framework). Examples of situational types are financial-needs or employer-directed contingencies (external factors), while dispositional types are characterized by individual differences (internal factors), such as work-motivation.

### ***Intrinsic/Extrinsic Motivation and HWI***

As previously mentioned, employees may be driven to work by both – intrinsic and extrinsic forces, motivating them to engage in work activities in order to fulfil different needs (e.g., salary, enjoyment, challenge, promotion). Ultimately, these two mutually exclusive elements would translate into the same outcome – increased investment at work. At this juncture, however, we cannot say what type of Work Motivation (Intrinsic/Extrinsic) would be more

tightly linked to either (1) the heavier devotion of time (HWI-TC) or (2) the heavier investment of efforts (HWI-WI), at work. Consequently, we hypothesize further that:

*H3: Intrinsic motivation positively associates with both HWI-TC and HWI-WI.*

*H4: Extrinsic motivation positively associates with both HWI-TC and HWI-WI.*

## **HWI and JE**

It is important to emphasize that, again, HWI and JE are mutually independent constructs. Nevertheless, HWI points at two different investment “types” – in time and effort. Theoretically, we see that although both aspects of investment are, probably, linked to JE, we may also conclude that these associations would differ based on the type of investment. For example, while workers may allegedly spend a great deal of time on the job, in actuality they may not really be working (studiously) on their given tasks at all, a situation labelled as “presenteeism” (see: Rabenu & Aharoni-Goldenberg, 2017). However, exerting more effort at work, by definition, means that one is more engaged, to whatever extent, in work (e.g., investing more effort, basically, means making an investment of time as well, but *not* vice versa). In other words, while we expect that JE will be positively related to with dimensions of HWI (one must devote time and invest more efforts in order to be engaged at work), we also assume JE will be more strongly correlated with the *effort* dimension, rather than *time*. As such, we hypothesize:

*H5a: JE positively associates with HWI-TC.*

*H5b: JE positively associates with HWI-WI.*

*H5c: JE has a stronger association to HWI-WI than to HWI-TC.*



The purpose of H5a-H5c is to differentiate JE from HWI-WI and HWI-TC, as they may have some overlaps, but they are still standalone constructs, which is the reason the current research gauge them both, and correlate them, though they are both outcome variables (an issue of convergent and discriminant validity).

### **Worker's status – Buffering Effect**

An organization or a workplace is usually comprised of several types of employees, albeit not all of them exhibit the same attitudes and behaviours at work. For example, temporary workers report greater job insecurity and lower well-being than permanent employees (Dawson, Veliziotis, & Hopkins, 2017). Another example is of students (i.e., working students vs. non-student employees). The motivators and incentives needed to drive corporate/working students differ from others. They, for instance, are more interested in salary, promotion, tangible rewards in their job, and other such benefits (Palloff & Pratt, 2003). In addition, working students are under severer time constraints than non-student employees because they face “work-study conflict.” Therefore, compared to non-student workers, working students have difficulty in devoting so much time and physical as well as psychological effort to work. Specifically, working students with a low level of motivation may take an interest in studies and thus not be likely to devote much effort to work. However, motivated working students will maintain their effort through effective time management because they highly value their current work. Thus, JE and HWI of working students will depend on their motivation to a greater degree than non-student workers. Ergo, we posit that the associations between intrinsic/extrinsic motivation to HWI and JE are conditioned by the type of worker under investigation.

For the purpose of the current study, the notion of working students vs. non-student employees would be gauged, as not much attention was given to distinguishing both groups in

research. Usually, samples were comprised of either group distinctively, not in tandem with one another. Hence, we hypothesize the following, based on our previous hypotheses:

*H6: Worker's status moderates the relationship between intrinsic motivation and HWI- TC, HWI-WI, and JE, such that for working students, the relationship will be weaker than for non-student employees.*

*H7: Worker's status moderates the relationship between extrinsic motivation and HWI-TC, HWI-WI, and JE, such that for working students, the relationship will be weaker than for non-student employees.*

### **Country Difference – Buffering Effect**

Worker's status' moderation of the links between intrinsic/extrinsic motivation to HWI and JE, as mentioned above, does not appear in a vacuum. This conditioning may also be dependent on international cultural differences. That is to say, we assume we would receive different results based on the country under investigation. Firstly, culture, in this sense, may be defined as “common patterns of beliefs, assumptions, values, and norms of behaviour of human groups (represented by societies, institutions, and organisations)” (Aycan et al., 2000, p. 194). To elaborate, countries differ from one another in many aspects. The most prominent example is the cultural/national dimensions devised by Hofstede (1980, 1991). Different countries display different cultural codes, norms, and behaviors. As such, it is safe to assume that work-related norms and codes differ from one country to another to the extent that working students may exhibit certain attitudes and behaviors in a country X, but different ones in country Y. the same goes for non-student (or “regular”) workers, as well.

In this study, we examine the case of Israel vs. Japan. Japan's culture is more hierarchical and formal than the Israeli counterpart. Japanese believe efforts and hard work may bring "anything" (e.g., prosperity, health, happiness), while in Israel there is much informal communication, and "respect" is earned by (hands-on) experience, not necessarily by a top-down hierarchy. Japanese emphasize loyalty, cohesion, and teamwork (Deshpandé & Farley, 1999; Deshpandé, Farley, & Webster, 1993). Compared to Israeli, Japanese employees are more strongly required to conform to the organization's norm and dedicate themselves to the organization's future. Such cultural characteristics may affect the working attitudes and behavior of working students. Specifically, in Japan, working students try to devote as much time as possible even if they are under intense time constraints caused by the study burden. Moreover, sometimes they experience guilt because they use their time for themselves (i.e., study) rather than firms (e.g., socializing with colleagues). Thus, they engage in much overtime work as a tactic of impression management (Leary & Kowalski, 1990) in order to make themselves perceived being loyal and hard-working.

In addition, in Israel, there is high value to performance, while in Japan competition (between groups, usually) is rooted in society, and drives for excellence and perfection. Also, Israelis respect tradition and normative cognitions and tend to "live the present", rather than save for the future, while Japanese tend to invest more (e.g., R&D) for the future, even in economically difficult periods, prioritizing steady growth and own capitals rather than short-term revenues such that "companies are not here to make money every quarter for the shareholders, but to serve the stakeholders and society at large for many generations to come" (for further reading, see: Hofstede, 2018). These cultural differences are both clear and interesting, which led us to formulate the hypotheses that:

*H8: Country differences condition the moderation of worker's status on the relationship between intrinsic motivation and HWI-TC, HWI-WI and JE, such that for Japanese, the effect of worker's status suggested in H6 will be weaker than for Israelis.*

*H9: Country differences condition the moderation of worker's status on the relationship between extrinsic motivation and HWI-TC, HWI-WI and JE, such that for Japanese, the effect of worker's status suggested in H7 will be weaker than for Israelis.*

It is important to note, however, that H8 and H9 are also done in order to increase the external validity of the research and its generalizability beyond a single culture, as Barrett and Bass (1976) noted that “most research in industrial and organisational psychology is done within one cultural context. This context puts constraints upon both our theories and our practical solutions to the organisational problem” (p. 1675).

Figure 1 portrays the overall model.

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## **Method**

### **Participants**

The research constitutes of 242 Israeli (70.9% response rate) and 171 Japanese (56.6% response rate) participants, from various industries and organizations. The demographical and descriptive statistics, for each sample, are presented in Table 1.

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## Measures

*Work Motivation* was gauged by the Work Extrinsic and Intrinsic Motivation Scale (WEIMS; Tremblay, Blanchard, Taylor, Pelletier & Villeneuve, 2009), consisting of 18 Likert-type items ranging from 1 (“Does not correspond at all”) to 6 (“Corresponds exactly”). *Intrinsic Motivation* had a high reliability ( $\alpha_{\text{Israel}} = .92$ ,  $\alpha_{\text{Japan}} = .86$ ; e.g., “... Because I derive much pleasure from learning new things”) as did *Extrinsic Motivation* ( $\alpha_{\text{Israel}} = .73$ ,  $\alpha_{\text{Japan}} = .75$ ; e.g., “... For the income it provides me”).

*Heavy-Work Investment* (HWI; see: Snir & Harpaz, 2012) was tapped by 10 Likert-type items ranging from 1 (“Strongly disagree”) to 6 (“Strongly agree”), 5 items for each dimension, namely, *Time Commitment* (HWI-TC; e.g., “Few of my peers/colleagues put in more weekly hours to work than I do”) and *Work Intensity* (HWI-WI; e.g., “When I work, I really exert myself to the fullest”), respectively. *HWI-TC* had a high reliability ( $\alpha_{\text{Israel}} = .85$ ,  $\alpha_{\text{Japan}} = .92$ ) as did *HWI-WI* ( $\alpha_{\text{Israel}} = .95$ ,  $\alpha_{\text{Japan}} = .91$ ).

*Job Engagement* was gauged by the Utrecht Work Engagement Scale – 9 (UWES-9; Schaufeli Bakker, & Salanova, 2006) consisting of 9 Likert-type items ranging from 1 (“Strongly disagree”) to 6 (“Strongly agree”). The measure had a very high reliability ( $\alpha_{\text{Israel}} = .95$ ,  $\alpha_{\text{Japan}} = .94$ ; e.g., “I am immersed in my work”).

## Procedure

For the *Israeli* sample, a pencil-and-paper research survey was distributed to 341 total potential participants in two universities and one college. One of the authors provided the questionnaire in several courses (M.B.A and management, human resource management, psychology, and more), at the end of each class-session. Those wishing to participate replied affirmatively and were included in the total sample. Of course, we assured the anonymity and discretion of the participants and the data derived from the research, and also included a conscious consent question at the beginning of the survey asking for their agreement to participate in the research. No incentives were given whatsoever to the participants for their cooperation. A total of 341 surveys were distributed yet, only 242 came back fully-filled.

For the *Japanese* sample, the data were collected by using the online questionnaire system of Google spreadsheet. Invitation messages were sent to the potential respondents via email or SNS messenger with the link of the questionnaire. One of the authors contacted 189 full-time workers who participated in one or more of the following (1) strategic management and/or organization management classes of a Japanese private university, (2) human resource management course in an educational service company, or (3) one-off lectures conducted by the author. All of them were non-student workers and, ultimately, 97 of them answered the questionnaire in full (51.3% response rate). As for the working students, the same author reached three graduate schools through personal networks. Then, he asked the liaison of each school to list up working students and send them the questionnaire link by emails or SNS messengers. In total, the link was sent to 113 working students (in said three universities), and 74 completed the questionnaire (65.5% response rate). Thus, the overall response rate was 56.6%

Data analyses were conducted utilizing SPSS (v. 23) software package and PROCESS macro for SPSS (v. 2.16.3).

## Common-method bias

Harman's one-factor test (Podsakoff, MacKenzie, Lee & Podsakoff, 2003) was used to assess the degree to which inter-correlations among the variables might be an artifact of common method variance. The first general factor that emerged from the analysis accounted only for 35.19% of the explained variance in the Israeli sample, and 37.27% in the Japanese sample. While this result does not rule out completely the possibility of same-source bias (CMV), according to Podsakoff et al. (2003) less than 50% of the explained variance accounted for by the first emerging factor indicates that CMB is an unlikely explanation of our investigation findings.

## Results

First, we explored descriptive statistics and associations between the variables. These results are displayed in Tables 2 and 3, for each sample.

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As shown in Table 2, regarding the Israeli sample:

- JE positively correlates with HWI-TC for working students:  $r(77) = .55, p = .000$ , and for non-student employees  $r(165) = .30, p = .000$  (supporting H5a, in Israel).

- JE positively correlates with HWI-WI for working students:  $r(77) = .76, p = .000$ , and for non-student employees  $r(165) = .77, p = .000$  (supporting H5b, in Israel).

These differences in correlation coefficients are in line with our H5c, meaning JE has stronger links to HWI-WI as opposed to HWI-TC. Ergo, in order to gauge whether these differences are statistically significant, we used Fisher's Z transformation and significance test. For working students, the difference is indeed significant ( $Z = 2.31, p = .021$ ), and is also for the non-student employees' group ( $Z = 6.41, p = .000$ ). This supports H5c, in Israel.

Moreover, as shown in Table 3, regarding the Japanese sample:

- JE positively correlates with HWI-TC *only* for non-student employees  $r(74) = .30, p = .001$ , but is non-significant for working students:  $r(94) = .15, p = .146$  (partially supporting H5a, in Japan).
- JE positively correlates with HWI-WI for working students:  $r(94) = .72, p = .000$ , and for non-student employees  $r(74) = .62, p = .000$  (supporting H5b, in Japan).

These differences in correlation coefficients are in line with our H5c, meaning JE has stronger links to HWI-WI as opposed to HWI-TC. Ergo, in order to gauge whether these differences are statistically significant, we used Fisher's Z transformation and significance test. For working students, the difference is indeed significant ( $Z = 5.12, p = .000$ ), and is also for the non-student employees' group ( $Z = 2.48, p = .013$ ). This supports H5c, in Japan.

In order to test the rest of our hypotheses (i.e., H1-H4 and H6-H9), we utilized the PROCESS macro for SPSS, and using model no. 3 for moderated-moderation (95% bias-corrected bootstrapping with 5,000 resamples). The results from the analyses are presented in Tables 4-6. However, it is important to note that we also used heteroscedasticity-consistent



standard error (SE) estimators, as suggested by Hayes and Cai (2007), in order to ensure that the estimator of the covariance matrix of the parameter estimates will not be biased and inconsistent under heteroscedasticity violation.

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Firstly, the findings shown in Tables 4-6 support for H1-H4, meaning both Intrinsic and Extrinsic motivations positively link to HWI-TC, HWI-WI and JE, in all samples (Israel and Japan)

Additionally, the interaction effects (most of them) are significant, which is the most essential and important part of any moderation analysis (see Appendix in: Shkoler, Rabenu, & Tziner, 2017). Figures 2-7 portray the moderation effects.

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Figures 2-7 display surprising findings:

- 1) The behaviors of the correlations (for instance, between intrinsic motivation and JE or HWI-TC) are different between the two countries, in general, such that means and correlations are, both, higher in the Israeli sample as opposed to the Japanese one.
- 2) The behaviors of the correlations (for instance, between intrinsic motivation and JE or HWI-TC) are different between the two groups of worker status, in each country *on its own*, such that (a) working students, in Israel, exhibit stronger links to the outcome

variables (i.e., HWI-TC, HWI-TC and JE) as opposed to non-student employees, and (b) however, in most cases, these associations were not so different between said groups, in the Japanese sample.

- 3) The behaviors of the correlations (for instance, between intrinsic motivation and JE or HWI-TC) are different between the two groups of worker status, when *comparing* each country, such that (a) working students, in Israel, exhibit stronger links to the outcome variables as opposed their Japanese counterparts, and (b) however, in most cases, these associations were not so different between non-student employees (in Israel vs. Japan).
- 4) The only analysis in which points 1-3 above do not apply to is the when using Intrinsic Motivation to predict HWI-WI (again, in a moderated-moderation model). This suggest that Intrinsic Motivation's impact on increased effort at work does not change based on neither worker status nor the ountry/culture.

These findings support our hypotheses H6-H9, (1) Worker status does moderate the links between Work Motivation and the outcome variables (HWI-TC, HWI-TC and JE), (2) county/cultural differences can moderate said relationships as well, but more importantly, they work as a conditioning moderator on the previous moderation (i.e., moderated-moderation) in all of the analyses done

## **Discussion**

The aim of the current paper was to shed light on (1) the relationship between intrinsic/extrinsic motivation and Heavy-Work Investment of Time (HWI-TC) and Effort (HWI-WI), and Job Engagement (JE), (3) assess convergent and discriminant properties of JE in relation to HWI-TC and HWI-WI, and (4) gauge the moderation effects of both worker status (working students vs. non-student employees) and country/culture (Israel vs. Japan) on said

relationships (point no. 1) in a moderated-moderation analyses type. Our research hypotheses were supported to a great extent, suggesting very interesting and important theoretical and practical notions.

To summarize the finding, we revealed that: (1) intrinsic and extrinsic motivations, each, positively link to HWI-TC, HWI-WI and JE, (2) JE positively associates with HWI-WI and HWI-TC (except for one instance) and significantly stronger with the former, (3) worker status and country moderate the relationships between work motivation and the outcome variables, separately and conjunctionally.

### **Theoretical Implications**

Our research adheres to the very few studies that have tested and validated Snir and Harpaz's (2015) HWI conceptual model between its various predictors (i.e., Intrinsic/Extrinsic Motivation) with regards to specific moderators (e.g., worker's status and country/culture). Our findings support the model (see: Snir & Harpaz, 2015, p. 6) and contributed to its incremental validity. Apart from realizing parts of the model's structure and processes, we have also showed that the moderation effects suggested in the model may be conditioned by other moderators as well (in our study – country/culture differences), leading to more need for further research.

Although not the main focus of the current research, we have established some convergent and discriminant validity relationship between JE and HWI, such that JE has a high convergent validity with HWI-WI, yet low convergent-borderline-discriminant validity with HWI-TC, increasing the need for exploring these issues further.

We have provided more evidence as to the important role of culture in differentiating model and relationship behaviors. Our findings regarding the between-country differences found

in the moderating effects of worker's status supported our hypotheses suggesting that compared to Israeli workplaces, those in Japan, indeed, put much emphasis in loyalty and cohesion. Japanese working students show similar work behavior (i.e., JE and HWI) as non-student workers. Attitudes, norms, and behavioral codes accepted in a country X may be quite different in country Y, not only in the general society, but at the workplace as well. With respect to the workers' status, it seems plausible that employees' differentiating perceptions of the work context may affect their "readiness" to translate a drive to work to actual heavy-work investment of JE, alone of in conjunction with cultural perceptions as well.

Furthermore, our findings on between-country difference have important insights for research in organizational learning. Employees' continuous learning is essential for organizations to be competitive in the current and future VUCA world. Therefore, an organization needs to provide employees with opportunities to learn and support which enables them to manage their work-study conflict effectively. However, as suggested in the results of the Japanese sample, it may be possible that cultural norms restrain workers from dedicating their time to learn. In addition to the effects of organization-level human resource development climate (Chaudhary, Rangnekar, Barua, 2012), we also need to consider the effects of national-level culture in the examination of organizational learning practices and their consequences.

### **Practical Implications**

If Job Engagement is an organizational goal towards which many workplaces strive, their respective managers may very well need to enhance employees' work motivation (such as offering more rewards and/or challenge), thus increasing the employees' propensity for translating that motivation into actual HWI or JE.

The moderation effects emphasize the need for smart and careful management in workplaces with international employees, as we notice how different Israel is from Japan, for example. Managers and even service-givers must pay attention to these cultural differences when doing work with or for an entity (e.g., country, organization, group) from outside the providing side's national boundaries.

In addition, the clearly stronger associations between work motivation and JE or HWI in Israeli sample (see: Figures 2-7) suggest that working students virtually actuate more of their working drives into the behavioral expressions of their drives to work, thus investing heavier in them. This may be so because working students are keener on proving themselves to the organization toward the end-goal of being recruited as permanent employees (supported by the results in Israel, as opposed to Japan). Hence, those who have less occupational security are more likely to translate their drive to work into actual HWI and JE. Nevertheless, in today's economy, in which "occupational sense of security" appears to be declining, it seems plausible that in the future the moderated association between motivation and HWI, found in our paper, will diminish in strength or even dissipate entirely. This argumentation finds support in recent publications (e.g., Koene, Galais, & Garsten, 2014; Weil, 2014; Neuner, 2013). Perhaps working students are also more susceptible to organizational incentives (i.e., intrinsic or extrinsic), as opposed to their non-student counterparts (i.e., "regular" employees).

On the other hand, Japanese workers showed relatively weak relationships between work motivation and JE or HWI. These findings suggest that the Japanese workplace norm restrains working students from putting much effort to study, and thus they work long hours for managing impression or making up for their "violation" of the workplace norm. Therefore, to encourage employees' continuous learning and associating organizational learning, managers in Japanese

firms need to reconstruct the workplace norm into such where working students will not feel guilty by studying outside of their organization.

### **Limitations and Future Research Directions**

While our study has strength in the newness of findings and the use of international sample, we should mention its limitations. First, our data is cross-sectional and single-sourced. This limits the generalizability of the research and does not let us see if the findings are stable across time. Although it may not be a major limitation, our research was not focused on a specific industry, sector or types of workers (e.g., high-tech, low-tech, services, marketing and sales), and while this bolsters the external validity of the research, it limits the construct validity of the results.

In our model, we included only individual differences as predictors, and only contextual elements as moderators, and as such we recommend using a mix of said variables such that in either “place” in the model, as predictors and moderators, so as not to be limited to one direction of explanations. As per Snir and Harpaz’s (2015) model of HWI (p. 6), we only validated a part of it, but did not included HWI as a mediator, but only as an outcome. Thus, we recommend using the full model to shed light on its possible processes, beyond predictor-outcome relationships. In addition, we urge researchers to investigate and identify more potential interesting and relevant moderators, as we shown in our model (i.e., country/culture differences).

To expand our understanding of cultural difference, we recommend replicate our study in other countries with cultural similarities or differences to the ones used in the research, in order to broaden the generalizability and validity of our findings. In future international comparative

studies, researchers can explore why and how each country's cultural and institutional components influence the differences that would exist between countries.

In relation to our findings regarding convergent and discriminant validity between JE and HWI, we also encourage more research be done in order to provide a clearer picture regarding these validity issues we raised in the current study.

We suggest conducting longitudinal studies, incorporating other potential moderator variables (such as: work ethic and gender) or mediators (as previously mentioned) and further investigating processes – that we enumerated in the discussion section – as likely to connect Work Motivation to JE, HWI, and potential outcomes.

It is also safe to assume that the associations we discovered in the research would be dependent on which industry we focus on (e.g., high-tech, low-tech, marketing, service), and as such, would also suggest to incorporate this element in future research.

### **Conflict of Interest**

The authors of this article declare no conflict of interest.



## References

- Alarcon, G. M., & Edwards, J. M. (2011). The relationship of engagement, job satisfaction and turnover intentions. *Stress and Health, 27*, e294-e298. doi: [10.1002/smi.1365](https://doi.org/10.1002/smi.1365)
- Aycan, Z., Kanungo, R., Mendonca, M., Yu, K., Deller, J., Stahl, G., & Kurshid, A. (2000). Impact of culture on human resource management practices: A 10-country comparison. *Applied Psychology, 49*, 192-221. doi: [10.1111/1464-0597.00010](https://doi.org/10.1111/1464-0597.00010)
- Bailey, C., Madden, A., Alfes, K., & Fletcher, L. (2017). The meaning, antecedents and outcomes of employee engagement: A narrative synthesis. *International Journal of Management Reviews, 19*, 31-53. doi: [10.1111/ijmr.12077](https://doi.org/10.1111/ijmr.12077)
- Bakker, A. B., Schaufeli, W. B., Leiter, M. P., & Taris, T. W. (2008). Work engagement: An emerging concept in occupational health psychology. *Work and Stress, 22*, 187-200. doi: [10.1080/02678370802393649](https://doi.org/10.1080/02678370802393649)
- Barrett, G. V., & Bass, B. M. (1976). Cross-cultural issues in industrial and organizational psychology. In M. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 1639-1686). Chicago, IL: Rand McNally.
- Basit, A. A. (2017). Trust in supervisor and job engagement: Mediating effects of psychological safety and felt obligation. *The Journal of Psychology, 151*, 701-721. doi: [10.1080/00223980.2017.1372350](https://doi.org/10.1080/00223980.2017.1372350)
- Bauer, K. N., Orvis, K. A., Ely, K., & Surface, E. A. (2016). Re-examination of motivation in learning contexts: Meta-analytically investigating the role type of motivation plays in the

- prediction of key training outcomes. *Journal of Business and Psychology*, 31, 33-50. doi: [10.1007/s10869-015-9401-1](https://doi.org/10.1007/s10869-015-9401-1)
- Breevaart, K., Bakker, A. B., Demerouti, E., & Derks, D. (2016). Who takes the lead? A multi - source diary study on leadership, work engagement, and job performance. *Journal of Organizational Behavior*, 37, 309-325. doi: [10.1002/job.2041](https://doi.org/10.1002/job.2041)
- Caruso, C. C. (2014). Negative impacts of shiftwork and long work hours. *Rehabilitation Nursing*, 39, 16-25. doi: [10.1002/rnj.107](https://doi.org/10.1002/rnj.107)
- Chaudhary, R., Rangnekar, S., & Barua, M. K. (2012). Relationships between occupational self efficacy, human resource development climate, and work engagement. *Team Performance Management: An International Journal*, 18, 370-383. doi: [10.1108/13527591211281110](https://doi.org/10.1108/13527591211281110)
- Chughtai, A. A., & Buckley, F. (2011). Work engagement: Antecedents, the mediating role of learning goal orientation and job performance. *Career Development International*, 16, 684-705. doi: [10.1108/13620431111187290](https://doi.org/10.1108/13620431111187290)
- Corrales-Herrero, H., & Rodríguez-Prado, B. (2018). The role of non-formal lifelong learning at different points in the business cycle. *International Journal of Manpower*, 39, 334-352. doi: [10.1108/IJM-08-2016-0164](https://doi.org/10.1108/IJM-08-2016-0164)
- Dawson, C., Veliziotis, M., & Hopkins, B. (2017). Temporary employment, job satisfaction and subjective well-being. *Economic and Industrial Democracy*, 38, 69-98. doi: [10.1177/0143831X14559781](https://doi.org/10.1177/0143831X14559781)

- Deci, E. L., Koestner, R., & Ryan, R. M. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*, *125*, 627–668. doi: [10.1037/0033-2909.125.6.627](https://doi.org/10.1037/0033-2909.125.6.627)
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York, NY: Plenum Press.
- Deshpande, R., & Farley, J. U. (1999). Corporate culture and market orientation: Comparing Indian and Japanese firms. *Journal of International Marketing*, *7*, 111-127. Retrieved from: <http://www.jstor.org/stable/25048788>
- Deshpandé, R., Farley, J. U., & Webster Jr, F. E. (1993). Corporate culture, customer orientation, and innovativeness in Japanese firms: a quadrad analysis. *Journal of Marketing*, *57*, 23-37. doi: [10.2307/1252055](https://doi.org/10.2307/1252055)
- Gyu Park, J., Sik Kim, J., Yoon, S. W., & Joo, B. K. (2017). The effects of empowering leadership on psychological well-being and job engagement: The mediating role of psychological capital. *Leadership & Organization Development Journal*, *38*, 350-367. doi: [10.1108/LODJ-08-2015-0182](https://doi.org/10.1108/LODJ-08-2015-0182)
- Hayes, A. F., & Cai, L. (2007). Using heteroskedasticity-consistent standard error estimators in OLS regression: An introduction and software implementation. *Behavior Research Methods*, *39*, 709-722. doi: [10.3758/BF03192961](https://doi.org/10.3758/BF03192961)
- Hernandez, M., & Guarana, C. L. (2018). An examination of the temporal intricacies of job engagement. *Journal of Management*, *44*, 1711-1735. doi: [10.1177/0149206315622573](https://doi.org/10.1177/0149206315622573)

- Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. Beverly Hills, CA: Sage.
- Hofstede, G. (1991). *Cultures and organization: Software of the mind*. London, UK: McGraw-Hill.
- Hofstede, G. (2018). The 6-D model – countries comparison. Retrieved from: <https://www.hofstede-insights.com/country-comparison/israel,japan/>
- Kanfer, R. (2009). Work Motivation: Identifying use-inspired research directions. *Industrial and Organizational Psychology*, 2, 77-93. doi: [10.1111/j.1754-9434.2008.01112.x](https://doi.org/10.1111/j.1754-9434.2008.01112.x)
- Kanfer, R., Frese, M., & Johnson, R. E. (2017). Motivation related to work: A century of progress. *Journal of Applied Psychology*, 102, 338-355. doi: [10.1037/apl0000133](https://doi.org/10.1037/apl0000133)
- Koene, B. A., Galais, N., & Garsten, C. (Eds.). (2014). *Management and organization of temporary agency work*. New York, NY: Routledge.
- Kumar, M., Jauhari, H., Rastogi, A., & Sivakumar, S. (2018). Managerial support for development and turnover intention: Roles of organizational support, work engagement and job satisfaction. *Journal of Organizational Change Management*, 31, 135-153. doi: [10.1108/JOCM-06-2017-0232](https://doi.org/10.1108/JOCM-06-2017-0232)
- Latham, G. P., & Pinder, C. C. (2005). Work Motivation theory and research at the dawn of the twenty-first century. *Annual Review of Psychology*, 56, 485-516. doi: [10.1146/annurev.psych.55.090902.142105](https://doi.org/10.1146/annurev.psych.55.090902.142105)
- Latta, G. F., & Fait, J. I. (2016). Sources of motivation and work engagement: A cross-industry analysis of differentiated profiles. *Journal of Organizational Psychology*, 16, 29-44.

- Leary, M. R., & Kowalski, R. M. (1990). Impression management: A literature review and two-component model. *Psychological Bulletin*, *107*, 34-47. doi: [10.1037/0033-2909.107.1.34](https://doi.org/10.1037/0033-2909.107.1.34)
- Lebron, M., Tabak, F., Shkoler, O., & Rabenu, E. (2018) Counterproductive work behaviors toward organization and leader-member exchange: The mediating roles of emotional exhaustion and work engagement. *Organization Management Journal*, 1-15. doi: [10.1080/15416518.2018.1528857](https://doi.org/10.1080/15416518.2018.1528857)
- Legault, L. (2016). Intrinsic and extrinsic motivation. In Z. H. Virgil, & T. K. Shackelford (Eds.), *Encyclopedia of personality and individual differences* (pp. 1-3). New York, NY: Springer.
- Macey, W. H., & Schneider, B. (2008). The meaning of employee engagement. *Industrial and Organizational Psychology*, *1*, 3-30. doi: [0.1111/j.1754-9434.2007.0002.x](https://doi.org/0.1111/j.1754-9434.2007.0002.x)
- Neuner, J. (2013). *40% of America's workforce will be freelancers by 2020*. Retrieved from: <https://qz.com/65279/40-of-americas-workforce-will-be-freelancers-by-2020/>
- Owens, B. P., Baker, W. E., Sumpter, D. M., & Cameron, K. S. (2016). Relational energy at work: Implications for job engagement and job performance. *Journal of Applied Psychology*, *101*, 35-49. doi: [10.1037/apl0000032](https://doi.org/10.1037/apl0000032)
- Palloff, R. M., & Pratt, K. (2003). *The virtual student: A profile and guide to working with online learners*. San Francisco, CA: John Wiley & Sons.
- Pinder, C. C. (2008). *Work Motivation in organizational behavior* (2<sup>nd</sup> edition). New York, NY: Psychology Press.

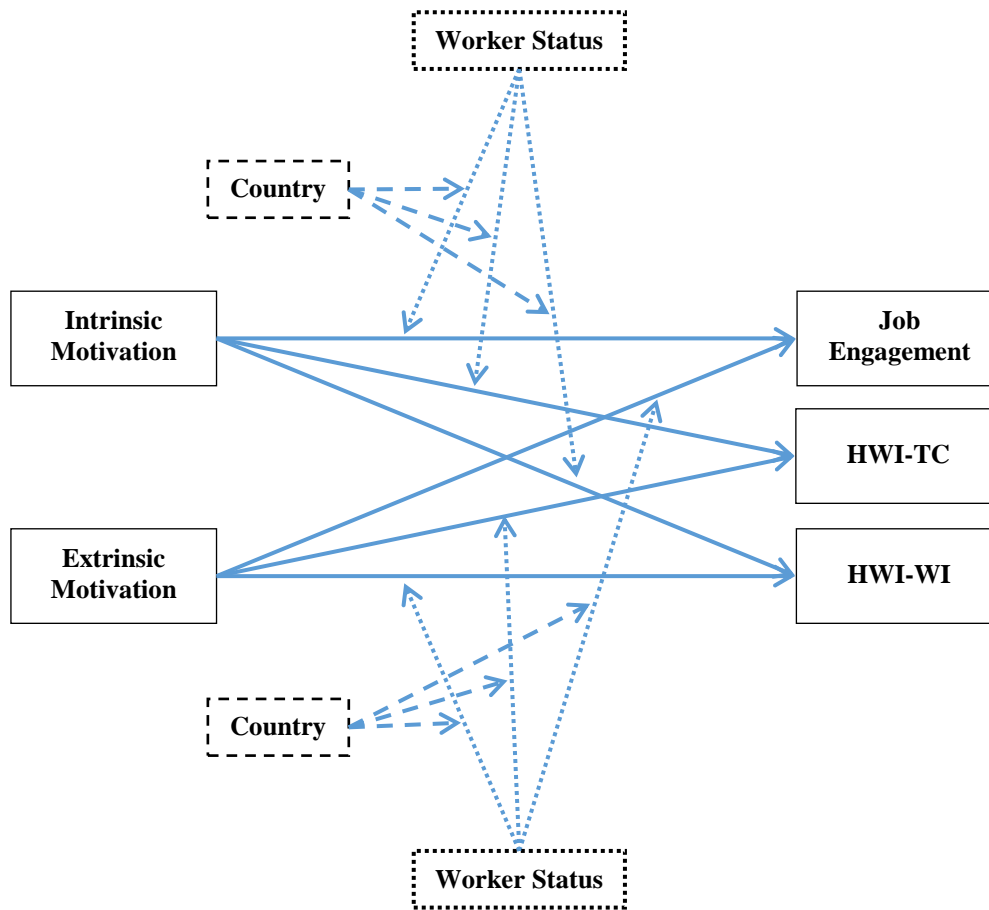
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*, 879-903. doi: [10.1037/0021-9010.88.5.879](https://doi.org/10.1037/0021-9010.88.5.879)
- Rabenu, E., & Aharoni-Goldenberg, S. (2017). Understanding the relationship between overtime and burnout. *International Studies of Management & Organization, 47*, 324-335. doi: [10.1080/00208825.2017.1382269](https://doi.org/10.1080/00208825.2017.1382269)
- Rich, B. L., LePine, J. A., & Crawford, E. R. (2010). Job engagement: Antecedents and effects on job performance. *Academy of Management Journal, 53*, 617-635. doi: [10.5465/amj.2010.51468988](https://doi.org/10.5465/amj.2010.51468988)
- Rockmann, K. W., & Ballinger, G. A. (2017). Intrinsic motivation and organizational identification among on-demand workers. *The Journal of Applied Psychology, 102*, 1305-1316. doi: [10.1037/apl0000224](https://doi.org/10.1037/apl0000224)
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*, 68-78. doi: [10.1037/0003-066X.55.1.68](https://doi.org/10.1037/0003-066X.55.1.68)
- Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire. *Educational and Psychological Measurement, 66*, 701-716. doi: [10.1177/0013164405282471](https://doi.org/10.1177/0013164405282471)
- Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies, 3*, 71-92. doi: [10.1023/A:1015630930326](https://doi.org/10.1023/A:1015630930326)

- Shahpouri, S., Namdari, K., & Abedi, A. (2016). Mediating role of work engagement in the relationship between job resources and personal resources with turnover intention among female nurses. *Applied Nursing Research, 30*, 216-221. doi: [10.1016/j.apnr.2015.10.008](https://doi.org/10.1016/j.apnr.2015.10.008)
- Sharoni, G., Shkoler, O., & Tziner, A. (2015). Job engagement: Antecedents and outcomes. *Journal of Organizational Psychology, 15*, 34-48.
- Shkoler, O., Rabenu, E., & Tziner, A. (2017). The dimensionality of workaholism and its relations with internal and external factors. *Journal of Work and Organizational Psychology (Revista de Psicología del Trabajo y de las Organizaciones), 33*, 193-203. doi: [10.1016/j.rpto.2017.09.002](https://doi.org/10.1016/j.rpto.2017.09.002)
- Snir, R., & Harpaz, I. (2012). Beyond workaholism: Towards a general model of heavy work investment. *Human Resource Management Review, 22*, 232-243. doi: [10.1016/j.hrmr.2011.11.011](https://doi.org/10.1016/j.hrmr.2011.11.011)
- Snir, R., & Harpaz, I. (2015). A general model of heavy work investment. In I., Harpaz & R., Snir (Eds.), *Heavy work investment: Its nature, sources, outcomes, and future directions* (pp. 3-30). New York, NY: Routledge.
- Stimpfel, A. W., Sloane, D. M., & Aiken, L. H. (2012). The longer the shifts for hospital nurses, the higher the levels of burnout and patient dissatisfaction. *Health Affairs, 31*, 2501-2509. doi: [10.1377/hlthaff.2011.1377](https://doi.org/10.1377/hlthaff.2011.1377)
- Taris, T., van Beek, I., & Schaufeli, W. B. (2015). The Beauty versus the Beast: On the motives of engaged and workaholic employees. In I., Harpaz & R., Snir (Eds.), *Heavy work investment: Its nature, sources, outcomes, and future directions* (pp. 121-138). New York, NY: Routledge.

- Tremblay, M. A., Blanchard, C. M., Taylor, S., Pelletier, L. G., & Villeneuve, M. (2009). Work Extrinsic and Intrinsic Motivation Scale: Its value for organizational psychology research. *Canadian Journal of Behavioural Science (Revue canadienne des sciences du comportement)*, *41*, 213-226. doi: [10.1037/a0018176](https://doi.org/10.1037/a0018176)
- Tziner, A., Buzea, C., Rabenu, E., Truta, C., & Shkoler, O. (in press). Understanding the relationship between antecedents of heavy work investment (HWI) and burnout. *Economic Amphitheatre (Amfiteatru Economic)*.
- Tziner, A., Fein, E., & Oren, L. (2012). Human motivation and performance outcomes in the context of downsizing. In C. L. Cooper, A. Pandey, & J. C. Quick (Eds.), *Downsizing: Is less still more?* (pp. 103-133). Cambridge, UK: Cambridge University Press.
- Weil, D. (2014). *The fissured workplace: Why work became so bad for so many and what can be done to improve it?* (Master's thesis). Cambridge, MA, Harvard University Press. doi: [10.1111/wusa.12149](https://doi.org/10.1111/wusa.12149) .
- van Beek, I., Taris, T. W., & Schaufeli, W. B. (2011). Workaholic and work engaged employees: Dead ringers or worlds apart?. *Journal of Occupational Health Psychology*, *16*, 468-482. doi: [10.1037/a0024392](https://doi.org/10.1037/a0024392)
- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, *92*, 548-573. doi: [10.1037/0033-295X.92.4.548](https://doi.org/10.1037/0033-295X.92.4.548)



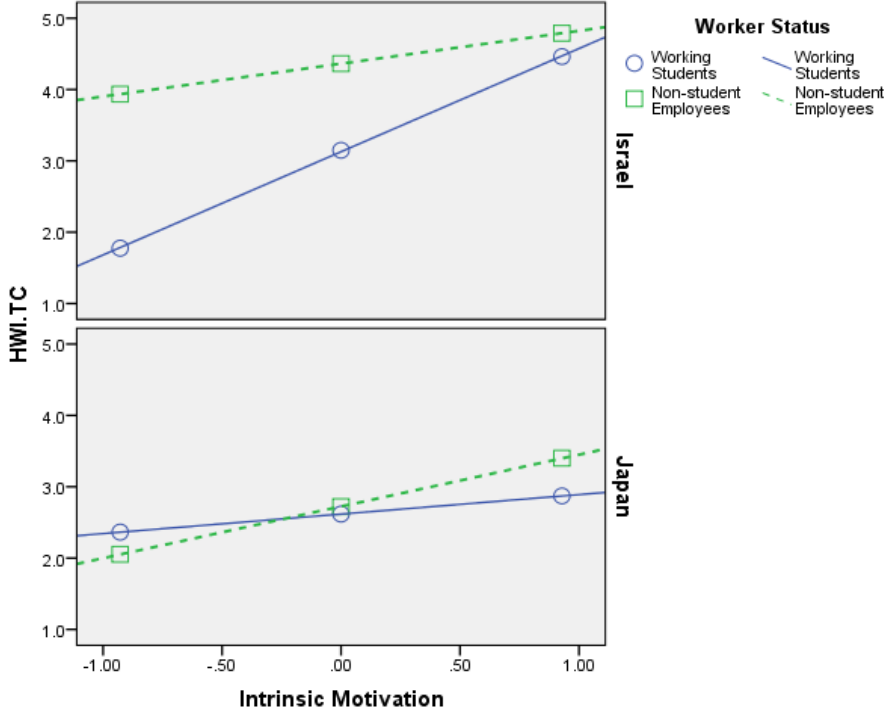
**Figure 1: Research model**



*Notes.* Worker status: 1 = working students, 2 = non-student employees. Country: 1 = Israel, 2 = Japan. HWI-TC = Time Commitment dimension

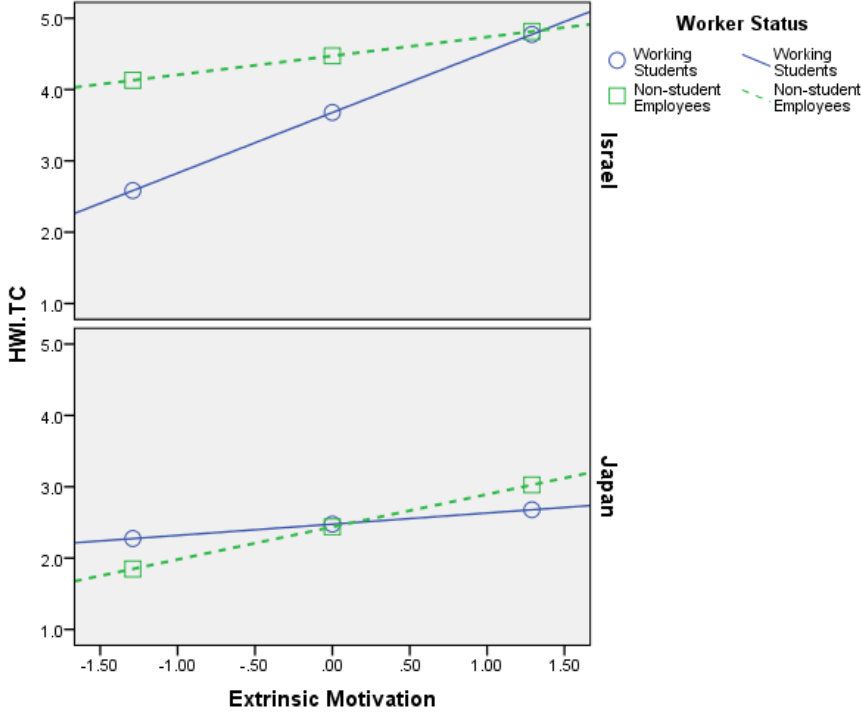
of Heavy-Work Investment. HWI-WI = Work Intensity dimension of Heavy-Work Investment.

**Figure 2: Interaction effects of Intrinsic Motivation × Worker Status × Country in predicting HWI-TC**



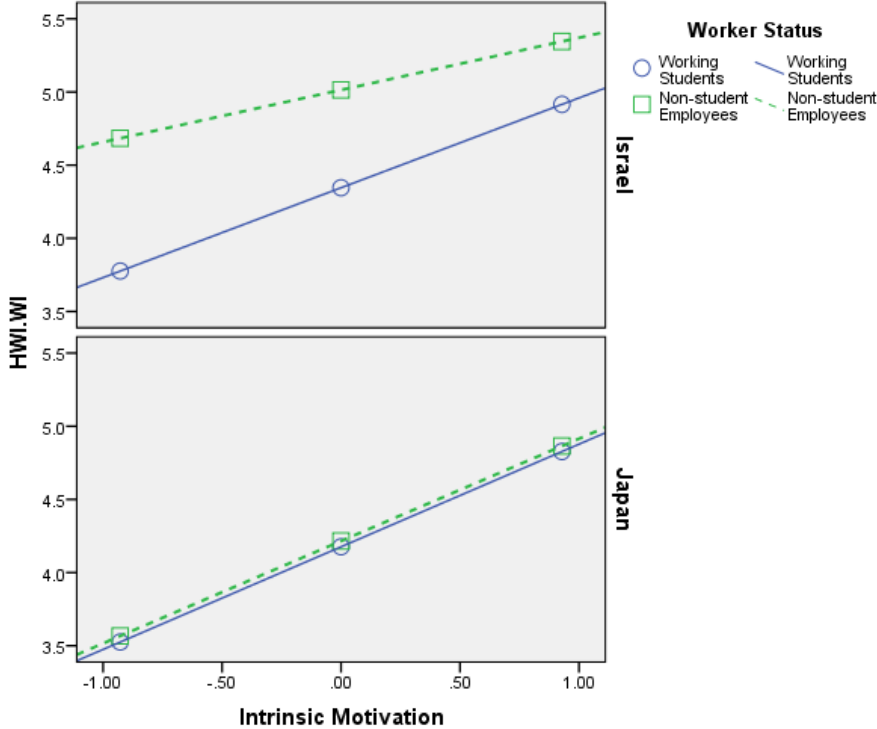
Notes. HWI-TC = Time Commitment dimension of Heavy-Work Investment.

**Figure 3: Interaction effects of Extrinsic Motivation × Worker Status × Country in predicting HWI-TC**



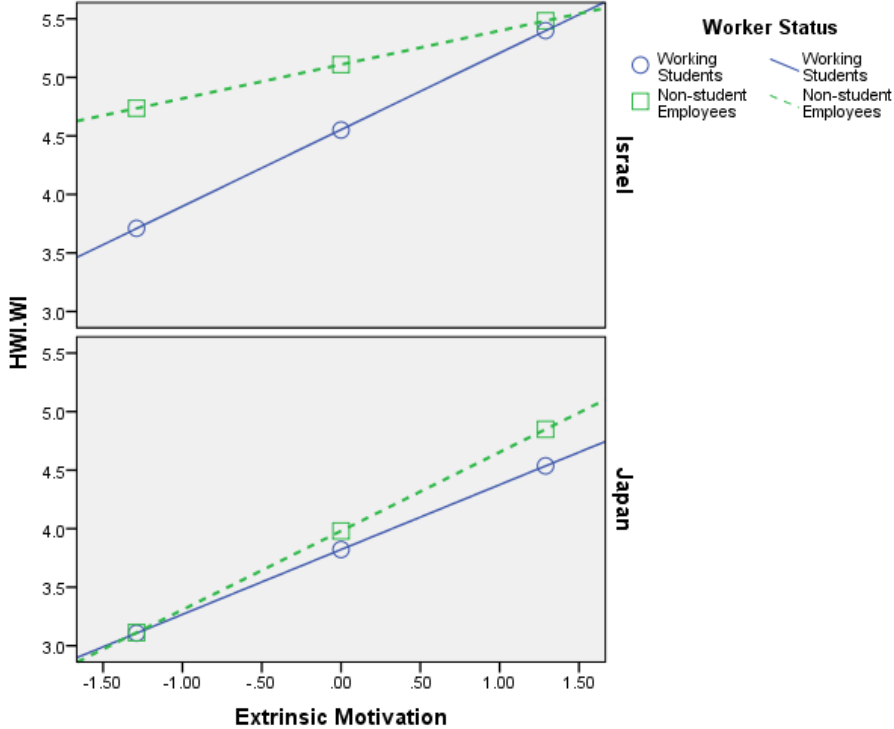
Notes. HWI-TC = Time Commitment dimension of Heavy-Work Investment.

**Figure 4: Interaction effects of Intrinsic Motivation × Worker Status × Country in predicting HWI-WI**



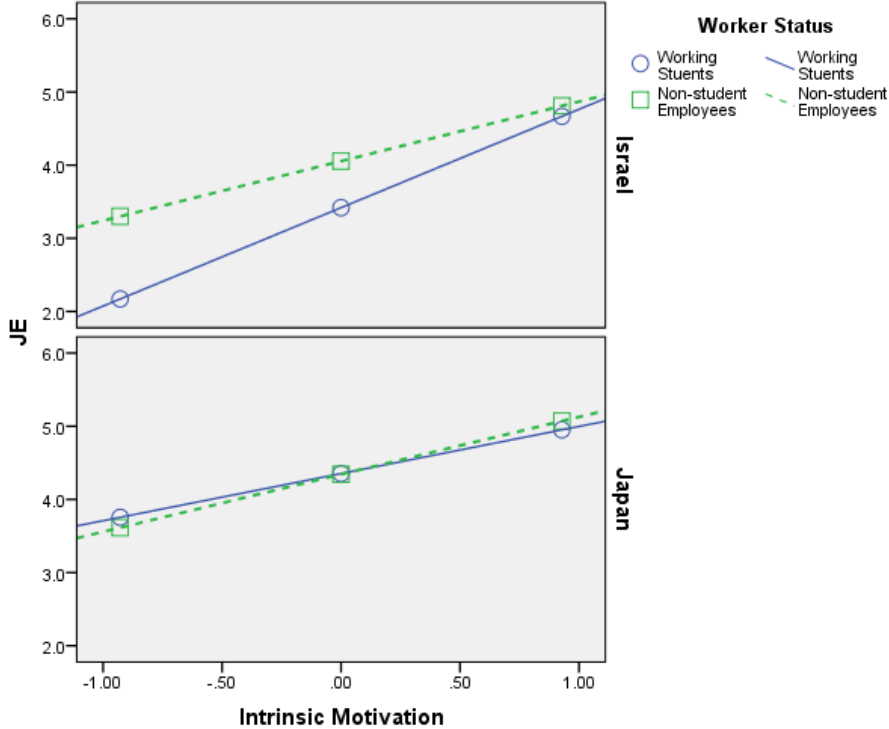
Notes. HWI-WI = Work Intensity dimension of Heavy-Work Investment.

**Figure 5: Interaction effects of Extrinsic Motivation × Worker Status × Country in predicting HWI-WI**

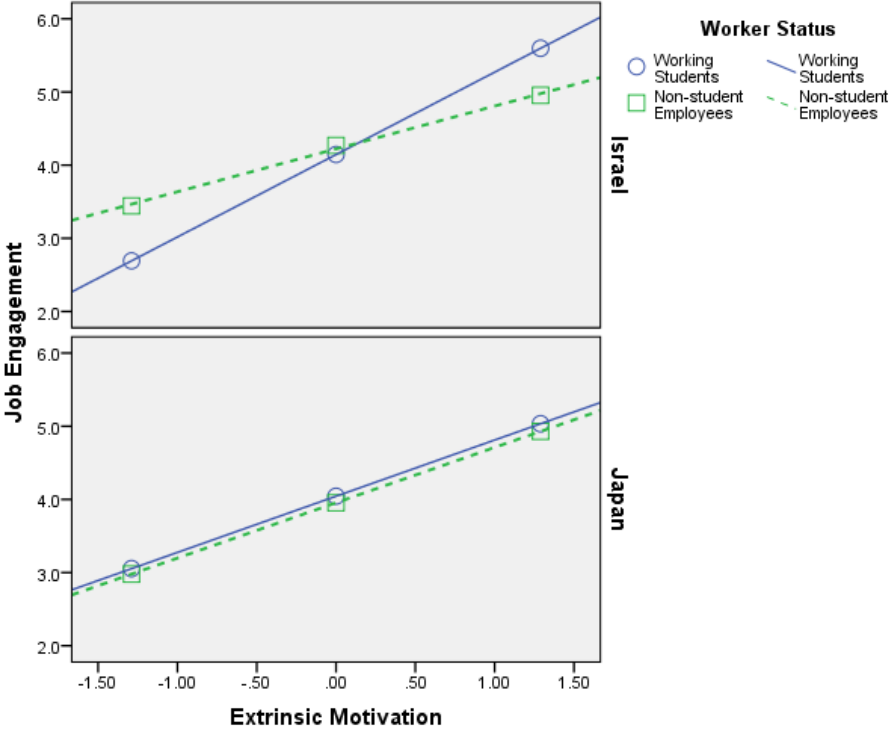


Notes. HWI-WI = Work Intensity dimension of Heavy-Work Investment.

**Figure 6: Interaction effects of Intrinsic Motivation × Worker Status × Country in predicting Job Engagement**



**Figure 6: Interaction effects of Extrinsic Motivation × Worker Status × Country in predicting Job Engagement**



**Table 1: Demographical and descriptive statistics for the Israeli ( $N = 242$ ) and the Japanese ( $N = 171$ ; in parenthesis) samples**

Parameter	Category	%	Range	$M$	$SD$
<i>Gender</i>	Female	36.8 (49.7)	-	-	-
	Male	63.2 (50.3)	-	-	-
<i>Marital status</i>	Single	49.2 (31.0)	-	-	-
	Married	45.9 (64.3)	-	-	-
	Divorced	5.0 (4.7)	-	-	-
<i>Job position</i>	Non-managerial	74.0 (42.7)	-	-	-
	Managerial	26.0 (57.3)	-	-	-
<i>Worker status</i>	Working student	31.8 (56.7)	-	-	-
	Regular employees <sup>1</sup>	68.2 (43.3)	-	-	-
Age	-	-	22-55 (24-70)	35.26 (45.57)	9.95 (8.93)
Number of children	-	-	0-6 (0-4)	1.47 (0.87)	1.75 (1.02)
Tenure	-	-	0.5-19 (1-40)	5.60 (12.38)	4.99 (9.80)



**Table 2: Pearson correlation matrix for working students (*below* the diagonal;  $n = 77$ ) and non-student employees (*above* the diagonal;  $n = 165$ ), means and standard deviations in the Israeli sample ( $N = 242$ )**

	1	2	3	4	5	$M_{ws}$ ( $M_{nse}$ )	$SD_{we}$ ( $SD_{nse}$ )
1. Intrinsic Motivation	-	.87	.39	.29	.59	4.50 (3.98)	0.90 (0.84)
2. Extrinsic Motivation	.87	-	.36	.38	.74	4.27 (3.94)	1.48 (1.36)
3. HWI-TC	.78	.85	-	.33	.30	3.85 (4.44)	1.48 (1.00)
4. HWI-WI	.47	.73	.69	-	.77	4.77 (5.07)	1.66 (1.03)
5. Job Engagement	.76	.88	.55	.76	-	4.25 (4.04)	1.72 (1.28)

*Notes.* All correlations are significant at  $p < .001$ . HWI-TC = Time Commitment dimension of Heavy-Work Investment. HWI-WI = Work

Intensity dimension of Heavy-Work Investment. An indication of *ws* in the mean and standard deviation columns = working students' group. An

indication of *nse* in the mean and standard deviation columns = non-student employees' group.

**Table 3: Pearson correlation matrix for working students (*below* the diagonal;  $n = 97$ ) and non-student employees (*above* the diagonal;  $n = 74$ ), means and standard deviations in the Japanese sample ( $N = 171$ )**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	$M_{ws} (M_{nse})$	$SD_{we} (SD_{nse})$
<b>1.</b> Intrinsic Motivation	-	.69	.36	.48	.60	3.26 (3.45)	0.72 (0.81)
<b>2.</b> Extrinsic Motivation	.65	-	.38	.58	.81	4.00 (4.20)	1.09 (1.14)
<b>3.</b> HWI-TC	<b>.14</b>	<b>.12</b>	-	.50	.30	2.47 (2.50)	1.36 (1.36)
<b>4.</b> HWI-WI	.46	.55	.50	-	.62	3.79 (3.96)	1.09 (1.17)
<b>5.</b> Job Engagement	.45	.81	<b>.15</b>	.71	-	3.99 (4.10)	1.04 (1.06)

*Notes.* All correlations are significant at  $p < .001$ , apart from **bolded correlations** which are non-significant ( $p > .05$ ). HWI-TC = Time Commitment dimension of Heavy-Work Investment. HWI-WI = Work Intensity dimension of Heavy-Work Investment. An indication of *ws* in the mean and standard deviation columns = working students' group. An indication of *nse* in the mean and standard deviation columns = non-student employees' group.

**Table 4: Moderated-moderation regression coefficients and CIs for predicting HWI-TC**

Predictors	DV: <i>HWI-TC</i>			<i>HWI-TC</i>	
	<i>b</i>	95% CI <sup>1</sup>		<i>b</i>	95% CI
I-Motivation	0.67	[0.55], [0.79] <sup>***</sup>	E-Motivation	0.43	[0.34], [0.53] <sup>***</sup>
Worker status <sup>2</sup>	0.86	[0.57], [1.15] <sup>***</sup>	Worker status	0.45	[0.23], [0.66] <sup>***</sup>
Country <sup>3</sup>	-1.10	[-1.39], [-0.10] <sup>**</sup>	Country	-1.65	[-1.92], [-1.45] <sup>***</sup>
<b>INT<sub>1</sub></b> (Motivation×Status)	-0.34	[-0.59], [-0.09] <sup>***</sup>	<b>INT<sub>1</sub></b>	-0.22	[-0.40], [-0.04] <sup>*</sup>
<b>INT<sub>2</sub></b> (Motivation×Country)	-0.33	[-0.61], [-0.07] <sup>*</sup>	<b>INT<sub>2</sub></b>	-0.18	[-0.38], [0.02]
<b>INT<sub>3</sub></b> (Status×Country)	-1.29	[-1.90], [-0.68] <sup>***</sup>	<b>INT<sub>3</sub></b>	-0.83	[-1.30], [-0.36] <sup>***</sup>
<b>INT<sub>4</sub></b> (Motivation×Status×Country)	1.16	[0.62], [1.70] <sup>***</sup>	<b>INT<sub>4</sub></b>	0.88	[0.49], [1.28] <sup>***</sup>

Notes. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ . DV = dependent variable. HWI-TC = Time Commitment dimension of Heavy-Work Investment. I-

Motivation = Intrinsic Motivation. E-Motivation = Extrinsic Motivation. INT = interaction effect. (1) 95% CI with 5,000 resampling via bias-corrected bootstrapping. (2) Worker status (1 = working student, 2 = non-student employee). (3) Country (1 = Israel, 2 = Japan).

**Table 5: Moderated-moderation regression coefficients and CIs for predicting HWI-WI**

Predictors	DV: <i>HWI-WI</i>		<i>HWI-WI</i>	
	<i>b</i>	95% CI <sup>1</sup>	<i>b</i>	95% CI
I-Motivation	0.56	[0.42], [0.71] <sup>***</sup>	E-Motivation	0.48 [0.40], [0.56] <sup>***</sup>
Worker status <sup>2</sup>	0.41	[0.08], [0.74] <sup>*</sup>	Worker status	0.29 [0.10], [0.48] <sup>**</sup>
Country <sup>3</sup>	-0.53	[-0.82], [-0.25] <sup>***</sup>	Country	-1.06 [-1.25], [-0.87] <sup>***</sup>
<b>INT<sub>1</sub></b>	-0.15	[-0.46], [0.15]	<b>INT<sub>1</sub></b>	-0.15 [-0.30], [0.01]
(Motivation×Status)				
<b>INT<sub>2</sub></b>	0.24	[-0.06], [0.53]	<b>INT<sub>2</sub></b>	0.17 [0.01], [0.33] <sup>*</sup>
(Motivation×Country)				
<b>INT<sub>3</sub></b>	-0.63	[-1.25], [0.08]	<b>INT<sub>3</sub></b>	-0.40 [-0.79], [-0.02] <sup>*</sup>
(Status×Country)				
<b>INT<sub>4</sub></b>	0.26	[-0.35], [0.86]	<b>INT<sub>4</sub></b>	0.33 [0.02], [0.65] <sup>***</sup>
(Motivation×Status×Country)				

Notes. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ . DV = dependent variable. HWI-WI = Work Intensity dimension of Heavy-Work Investment. I-

Motivation = Intrinsic Motivation. E-Motivation = Extrinsic Motivation. INT = interaction effect. (1) 95% CI with 5,000 resampling via bias-corrected bootstrapping. (2) Worker status (1 = working student, 2 = non-student employee). (3) Country (1 = Israel, 2 = Japan).

**Table 6: Moderated-moderation regression coefficients and CIs for predicting JE**

Predictors	DV: <i>JE</i>		<i>JE</i>	
	<i>b</i>	95% CI <sup>1</sup>	<i>b</i>	95% CI
I-Motivation	0.91	[0.78], [1.03] <sup>***</sup>	E-Motivation	0.77 [0.71], [0.83] <sup>***</sup>
Worker status <sup>2</sup>	0.37	[0.09], [0.64] <sup>**</sup>	Worker status	0.04 [-0.12], [0.20]
Country <sup>3</sup>	0.56	[0.32], [0.80] <sup>***</sup>	Country	-0.22 [-0.38], [-0.07] <sup>**</sup>
<b>INT<sub>1</sub></b> (Motivation×Status)	-0.25	[-0.51], [-0.06] <sup>*</sup>	<b>INT<sub>1</sub></b>	-0.20 [-0.32], [-0.08] <sup>**</sup>
<b>INT<sub>2</sub></b> (Motivation×Country)	-0.32	[-0.57], [-0.05] <sup>*</sup>	<b>INT<sub>2</sub></b>	-0.02 [-0.14], [0.10]
<b>INT<sub>3</sub></b> (Status×Country)	-0.65	[-1.16], [-0.13] <sup>*</sup>	<b>INT<sub>3</sub></b>	-0.21 [-0.52], [0.09]
<b>INT<sub>4</sub></b> (Motivation×Status×Country)	0.67	[0.15], [1.19] <sup>*</sup>	<b>INT<sub>4</sub></b>	0.32 [0.08], [0.55] <sup>**</sup>

Notes. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ . DV = dependent variable. JE = Job Engagement. I-Motivation = Intrinsic Motivation. E-Motivation =

Extrinsic Motivation. INT = interaction effect. (1) 95% CI with 5,000 resampling via bias-corrected bootstrapping. (2) Worker status (1 = working student, 2 = non-student employee). (3) Country (1 = Israel, 2 = Japan).