

The Differential Contribution of Self-Determination Motivation to Work-Level Versus Organization-Level Behaviors

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Abstract

This study aimed to extend self-determination motivation research in work settings (why we work) by examining the antecedents of each of the motivation types and exploring how each type of the motivation contribute to behaviors in view of the work and organizational perspective. The four types of motivation included in the study were intrinsic motivation, identified regulation, introjected regulation, and external regulation. The antecedents of the four types of the motivation were reviewed and found to be an association between the self, the work itself, and the organization's role. Based on these antecedents, it was hypothesized that each of the motivation types would have differential effects on work-level (passion for work) and organization-level (loyal boosterism) behaviors. Four hundred and forty-three full-time workers, employed by organizations in Bangkok responded to the questionnaires. PLS-SEM was employed to test the hypotheses. Results showed intrinsic motivation and introjected regulation both contributed to work-level behavior (passion for work), with introjected regulation contributing more weight. For organization-level behavior, intrinsic motivation and identified regulation were found to contribute to loyal boosterism, with more weight from intrinsic motivation. External regulation, for the model tested, however, had no contribution to both of the work-level and organization-level behaviors. Theoretical contributions and practical implications are discussed.

Keywords: self-determination theory, employee motivation, passion for work, loyalty, organizational behavior

Introduction

Much organizational behavior research has investigated the effect of motivation on various organizational outcomes (Gagné & Deci, 2005) e.g. well-being (Gagné et al., 2010; Burton et al., 2006), performance (Zhang et al., 2016; Burton et al., 2006), satisfaction (Vansteenkiste et al., 2007), and organization citizenship behavior or OCB (Lazauskaite-Zabielske, Urbanaviciute, & Bagdziuniene, 2015; Tremblay et al., 2009). Self-determination theory is developed in the extent of intrinsic-extrinsic motivation, arguing that within extrinsic motivation, there are different degrees of autonomy and internalization (Ryan & Deci, 2000a). Although self-determination theory was formed on the basis of three basic psychological human needs for autonomy, competence, and relatedness (Ryan & Deci, 2000b), other studies have investigated the antecedents of

one's self-determination in work, management, and organization environment (for example, Wilkesmann & Schmid, 2014; Wang & Zheng, 2012; Kuvaas, 2009; Lam & Gurland, 2008; Deci, Connell, & Ryan, 1989). In the review of antecedents to self-determination motivation, it was found that there was an association among the individual, the work itself, and the organization's role. This association took part in forming one's self-determination motivation and the association was hypothesized to manifest itself in the differential impact of motivation types on work-level and organization-level behaviors. By categorizing the endogenous constructs into work and organization levels, findings of this study could help extend the body of self-determination theory research in viewing the effects of self-determination motivation in terms of work versus organizational perspective.

Research Objective

The purpose of this study is to investigate the differential contribution of each of the self-determination motivation types (intrinsic motivation, identified, introjected, and external regulations) on passion for work (work-level behavior) and loyal boosterism (organization-level behavior).

Literature Review

Intrinsic and Extrinsic Motivation

Motivation is defined as "being moved to do something (Ryan & Deci, 2000a)." By understanding employees' motivation, organizations ultimately wish to increase their performance. Skinner's operant conditioning (1953) was among the prominent studies in the field that shed light on the impact of external causes as a consequence of behavior. Behavior is viewed to be guided in accordance to what one expected to receive or avoid in return. The impacts of his study are still heavily evident as commonly seen in today's organization practices – financial rewards and organization discipline for example. The external cause shares the same principle with extrinsic motivation in self-determination theory. Ryan & Deci (2000a) defined extrinsic motivation as "doing something because it leads to a separable outcome." On the other end of the extrinsic motivation spectrum, there is the intrinsic motivation – where the joy of doing an activity itself is viewed as a consequence (reward) one receives by performing that very activity (Deci & Ryan, 2000). In short, people are said to be intrinsically motivated when they do an activity because they enjoy it and find it interesting. The satisfaction they receive from doing the activities does not require any external instrumentality (Gagné & Deci, 2005). According to Deci and Ryan (2000)'s review, researchers have begun to explore this type of motivation more closely since the 1970s.

Because the activity is interesting and people do it without any external instrumentality, intrinsic motivation is a form of the most autonomous motivation, whereas in extrinsic motivation – doing an activity because of the external instrumental

reasons – extrinsic motivation is a form of controlled motivation. This distinction in autonomous-controlled continuum is a core concept to the self-determination theory (Gagné & Deci, 2005; Deci & Ryan, 2008).

Self-Determination Theory

Intrinsic and extrinsic motivations are hardly dichotomous (Sheldon et al., 2003). The degree of autonomous-controlled motivation and internalization moves along the intrinsic-extrinsic motivation continuum. When people's behavior is fully regulated by the external forces, they are said to be extrinsically motivated. They operate in a fully controlled orientation. Once they start to internalize the regulation by identifying themselves with the regulation, they operate in a certain degree of autonomous orientation. And the degree of internalization and autonomy is greater when they start to integrate the regulation and accept it as part of who they are. In other words, "the more fully the regulation has been internalized, the more autonomous will be the subsequent, extrinsically motivated behavior" (Gagné & Deci, 2005).

The Self-Determination Continuum

The self-determination continuum runs from intrinsic motivation – extrinsic motivation – amotivation.

Intrinsic motivation involves doing an activity for the joy and satisfaction it brings to an individual with an absence of external forces. For example, teachers may choose teaching as their profession because they find teaching as an activity itself interesting and enjoyable.

Extrinsic motivation is when an individual does an activity for instrumentality between the activity and the consequences (Gagné & Deci, 2005). There are four types of extrinsic motivations, based on the degree of autonomy and internalization.

External regulation occurs when an individual does an activity fully because of the rewards or punishment he or she receives e.g. teachers only teach because it provides them with income.

Introjected regulation is when an individual does an activity because of internal pressure i.e. to avoid the feeling of guilt or to enhance one's own self-esteem. This form of regulation is partially internalized but in a very controlled orientation. For example, when teachers feel like they should or ought to teach because they would feel guilty otherwise or because they want to enhance their self-esteem (ego-involvement). This "should" or "ought to" indicates minimal self-determination (Lam & Gurland, 2008).

Identified regulation involves some degree of internalization. It occurs when an individual has identified and internalized an activity with personal importance of behavior (Ryan & Deci, 2000a). For example, teachers teach because they value education.

Integrated regulation happens when an individual has fully accepted and incorporated the regulation to one's self. For example, when teachers feel teaching is a part of who they are, they integrate their job with their sense of self.

Finally, amotivation is a lack of motivation.

Self-Determination Motivation as a Multidimensional Construct

Concerning the effect of self-determination motivation, researchers have taken different approaches on how to investigate the self-determination motivation construct. Some investigated self-determination motivation as a one-dimensional construct by aggregating all types of motivation into one score (sometimes with weights attached to each type of motivation), for example, see Lam and Gurland (2008) for the use of relative autonomy index (RAI). Other researchers categorized self-determination motivation into self-determined (autonomous) and non-self-determined (controlled) by splitting the continuum in half. The self-determined is calculated by summing the means of intrinsic motivation, integrated, and identified regulations. And the calculation for non-self-determined is done by summing the means of introjected regulation, external regulation, and amotivation, see Tremblay et al. (2009), for example. Finally, increasingly, researchers started to treat self-determination motivation as a multidimensional construct (see Chemolli & Gagné, 2014; Gagné et al., 2010; and Burton et al., 2006 for example).

Chemolli and Gagné (2014) ran a study and showed evidence against the use of the single continuum structure. This is in agreement with Deci and Ryan (2008) that self-determination theory is based on the type of motivation rather than the total amount. And the use of the types may be more useful in predicting behaviors.

Autonomous and intrinsic motivation has been associated with better outcomes than controlled motivation. Tremblay et al. (2009) found both self- and non-self-motivation offered predictive ability to organizational outcomes. Gagné et al. (2010) found that autonomous motivation showed positive predictability to perceived organization support and well-being, and negative predictability to turnover intention and psychological distress. And Vansteenkiste et al. (2007) found that extrinsic work value orientation had negative predictability to dedication and vitality, and positive predictability to emotional exhaustion, work-family conflict, and turnover intention.

In more detail, treating self-determination motivation as a multidimensional construct, each type of motivation may have a different (or some overlap) effect on outcomes. For example, intrinsic motivation has been shown to have impact on job performance (Kuvaas, 2009), well-being (Burton et al., 2006), and organizational citizenship behavior (Lazauskaite-Zabielske et al., 2015). Identified regulation has been shown to be a predictor of work outcomes and performance (Zhang et al., 2016; Burton et al., 2006). Moran et al. (2012) approached the self-determination motivation with a person-centered approach (instead of variable-centered approach) using cluster analysis. The analysis formed five clusters. What is interesting is that, in their study, there were two clusters (one with low introjected regulation and the other with low intrinsic

motivation and identified regulation) that consistently showed the lowest means for almost all the dependent variables e.g. all three types of need satisfaction, social support, and performance. Their results underlined the importance of a distinctive relationship between identified regulation (autonomous) and introjected regulation (controlled), and performance.

The Present Study

Antecedents of self-determination motivation

Much research has tested self-determination motivation as exogenous constructs. A closer look at what influences one's self-determination motivation (self-determination motivation as an endogenous construct) is particularly interesting. Kuvaas (2009) found that job autonomy, supervisory support for competence, development and autonomy, and task interdependence have positive effects on intrinsic motivation. Wang and Zheng (2012) ran an experimental study on the role of work pressure and social identity on self-determination motivation. They found that, under work pressure (deadline), participants reported less identified motivation than those without work pressure. But with the presence of social identity, participants with strong social identity reported more identified motivation when facing work pressure than those with lower social identity. Wilkesmann and Schmid (2014) ran a test on teaching motivation. They reported that perceived autonomy, perceived relatedness, and perceived competence, as well as workload had effects on intrinsic motivation. When tested for introjected motivation, the R-squared value of their introjection model was too low such that introjected motivation model could not be explained by those influencing factors. The finding from Wilkesmann and Schmid (2014) on introjected regulation, in conjunction with causality orientation perspective – which was stated by Sheldon et al. (2003) that “causality orientation refers to a person's beliefs about the extent to which his/her actions are determined by external forces (control orientation) or by the self (autonomy orientation)”, makes the introjected regulation interesting because introjected regulation is forced internally but it is not autonomous. This interest has also been expressed by Deci and Ryan (2000), Gagné and Deci (2005), and Chemolli and Gagné (2014). Drawing upon the definitions and principles of self-determination concepts and the review above, it is clear that the association between the self (what one likes, maintains interest, and values), the nature of the work itself (activities and tasks involved in the work), and the role of the organization (e.g. support, development, and pressure) exists and this association helps determine the type of self-determination motivation one possesses.

Antecedents of self-determination motivation and the self-determination motivation as exogenous constructs

Although the antecedents of self-determination motivation could be from the self, the work itself, or the organization's role, how each type of motivation varies in contribution to work-level and organization-level behavior has not been widely tested. In other words, fewer studies have tested the effect of self-determination motivation to

behavior in terms of work versus organizational perspectives. For example, Tremblay et al. (2009) investigated the effects of extrinsic and intrinsic motivation on organization-related outcome. Although their motivation measurement was based on self-determination theory, they categorized all types of self-determination motivation into self- and non-self. Therefore, they did not fully exploit the richness and uniqueness of each of the motivation's sub-constructs. One problematic issue concerning "introjected regulation" also still remained in their study – the inclusion of introjected regulation in non-self (controlled) motivation did not represent the internalization process of the regulation. For these reasons, the present study aims to explore the relationship between self-determination motivation and the work itself versus organizations, that is, how each of the regulations contribute to the work-level and organization-level behavior.

Passion for work

Passion for work was selected as an endogenous construct. Vallerand (2008) defined passion as "a strong inclination toward an activity that people like, and in which they invest time and energy". Vallerand's statement showed a strong and clear connection between the self and the work. Baum and Locke (2004) also expressed that passion for work could be witnessed in working long hours for tendency that one could experience successes and difficulties as personal events. Although their study was in the area of entrepreneurial traits, but given today's business world, intrapreneurship (entrepreneurship within organizations) has shown to be beneficial to an organization's performance (Antoncic & Hisrich, 2001, for example). Therefore, passion for work was selected to represent work-level behavior. The type of self-determination motivation in association with the self and the work itself (intrinsic motivation, identified, and introjected regulations) were hypothesized to have effects on passion for work.

Loyal boosterism

This study followed Niehoff et al. (2001)'s rationale in selecting loyal boosterism to represent the active aspect of loyalty – which could be shown in both active and passive forms. Loyal boosterism underlined behaviors such as defending an organization against criticism, emphasizing the positive aspect of the organization, refraining from complaining about the organization, and showing pride when representing the organization publicly as Moorman and Blakely (1995) defined (as part of OCB multidimensional construct). Loyal boosterism, whether as a representative of active loyalty behavior or as part of OCB, has been studied as an endogenous construct and was found to be related to an organization's environment and values. Moorman and Blakely (1995) found a relationship between employees' valuing of working in collectivistic environment and loyal boosterism. Management practices such as empowerment and job enrichment also influenced loyalty (Niehoff et al., 2001). At the individual level, the personality type of openness to experience was also found to be related to loyal boosterism. Abu Elanian (2010) explained this relationship that people who were high in openness to experience would be likely to exhibit positive behavior that were in a match with today's business environment e.g. promoting creativity, innovativeness, and

changes. Therefore, the type of self-determination motivation in an association between the self and organization's role (identified, and external regulations) were hypothesized to have effects on loyal boosterism.

Hypothesized effects of each of the motivation types on passion for work and loyal boosterism

According to Ryan and Deci (2000a), "intrinsic motivation exists in the nexus between a person and a task". Their statement shows that there must be a connection between the self and the work itself. To be intrinsically motivated, one must find his or her work interesting and enjoy doing it. Thus, intrinsic motivation is hypothesized to have an effect on work-level behavior – passion for work. In conjunction with evidence from past research that the effect of intrinsic motivation might go beyond the connection between the self and the work itself i.e. on OCB (Lazauskaite-Zabielske et al., 2015) and social support (Moran et al., 2012), which portray some degree of organization-level behaviors, it was also hypothesized that intrinsic motivation might have some degree of an effect on organization-level behavior – loyal boosterism.

Hypothesis 1: Intrinsic motivation will have an effect on passion for work.

Hypothesis 2: Intrinsic motivation will have less effect on loyal boosterism than passion for work.

For identified regulation, the motivation occurs by "doing an activity because one identifies with its value or meaning" (Tremblay et al., 2009). The connections between the self (personal values and goals), and the work (values of tasks) and the organization's role are discussed here. To demonstrate the connection between personal value and the value of the work itself, again, teachers may teach just because they value education, the identified regulation ties with the identity of the work itself (teaching). Two examples to demonstrate the connection between personal value and the organization's role are as follows: First, clerical workers (who value education) working at a university may identify themselves with the university because the university is an institution that values education. In this case, the identified regulation ties with the institution's identity. The second example deals with goal attainability. Entry level workers may do their jobs, even though the job itself is not so enjoyable, because they see the development of necessary skills and experience as relevant to a career path to higher level positions, which they value as their career goals. In this case, the same job-typed with an organization offering career development and a clear career path and another without, may cause differences in motivational degree. Therefore, identified regulation was hypothesized to have an effect on both work-level (passion for work) and organization-level behavior (loyal boosterism).

Hypothesis 3: Identified regulation will have an effect on passion for work.

Hypothesis 4: Identified regulation will have an effect on loyal boosterism.

Introjected regulation is within the person (Gagné & Deci, 2005) and deals with ego-involvement. Unlike the external regulation, the control of behavior comes from

consequences administered by the individuals themselves (Deci & Ryan, 2000). As stated above in defining passion for work, the tendency that one could experience successes and difficulties as a personal event reflected on long hours of work (Baum & Locke, 2004), introjected regulation was hypothesized to have an effect on work-level behavior. In addition, when employed in an organization, there is an existence of shared goals among an employee, his or her workgroup, and the organization. Because one experiences work outcome as a personal event, an effect of one's introjected regulation motivation might go beyond just one's work behavior, as evident in Moran et al. (2012)'s finding that low introjected regulation motivation showed low social support. Therefore, it was hypothesized that there might be some degree of an effect of introjected regulation on organization-level behavior i.e. loyal boosterism.

Hypothesis 5: Introjected regulation will have an effect on passion for work.

Hypothesis 6: Introjected regulation will have less effect on loyal boosterism than passion for work.

On the other hand, for external regulation, Deci and Ryan (2000) stated that "control of behavior comes from consequences administered by others." The statement clearly implies the association between the self (what one wants or cares for) and what an organization offers (e.g. compensation, rewards, or discipline). Therefore, external regulation was hypothesized to have an effect on organization-level behavior i.e. loyal boosterism. But with the popularity of employing external regulation for behavioral interventions (for example, organizations often use incentive as a tool to modify employees' behaviors), it was hypothesized that external regulation might have some degree of an effect on work-level behavior i.e. passion for work.

Hypothesis 7: External regulation will have less effect on passion for work than loyal boosterism

Hypothesis 8: External regulation will have an effect on loyal boosterism.

Beyond testing the hypotheses, this study also aims to explore the amount of contribution (weight) each of the motivation types contribute to both of the work-level and organization-level behaviors.

Research Methodology

Data Collection and Participants

The population of the study is full-time workers employed by organizations in Bangkok. To ensure the representation of this population, the study employed a multi-stage sampling method: geography, days of the week, and time of the day. And to secure the adequacy of sample size (to be used in the model analysis), prior to data collection, the study followed Comfrey and Lee (1992) on adequacy of sample size for factor

analysis method – sample size of 300 is considered good for analysis. Data collection was then done during September to November, 2017. Five hundred and fifty six questionnaires were distributed. Of those, 443 questionnaires were used. Participants were 142 males, 300 females, and one unidentified gender – accounted for 32.1, 67.7, and 0.20 percent accordingly. The age of participants ranged from 21 to 59 years ($M = 32$, $SD = 6.50$). Participants' tenure ranged from 6 months to 29 years ($M = 4.9$, $SD = 4.86$).

Measures

Self-determination motivation. Motivation at Work Scale (MAWS) developed by Gagné et al. (2010) was used in this study. They excluded integrated regulation and amotivation in the measurement. The reasons for the exclusion were, first, the difficulty to psychometrically distinguish integrated regulation from identified regulation, and, second, they only focused on active motivation to keep the scale brief (omission of amotivation). Participants were asked to indicate each of the following statements to what degree they presently correspond to one of the reasons for which they are doing specific job on a 7-point scale from not at all to exactly. Three indicators represented each type of motivation. Examples of statements are as follows: “because I have fun doing my job” for intrinsic motivation, “because the job fits my personal values” for identified regulation, “because my reputation depends on it” for introjected regulation, and “because it allows me to make a lot of money” for external regulation.

Passion for work

This study followed a five-item self-report scale from Baum and Locke (2004). Participants were asked to indicate the level of their agreement to five statements on a 7-point scale ranging from extremely disagree to extremely agree (e.g., “I derive most of my life satisfaction from working hard” and “I love to work hard.”)

Loyal boosterism

Five-item scale from Niehoff et al. (2001) was employed. Their scale was drawn from Moorman and Blakely (1995) with slight adjustments, which fit better with the context of this study. Again, participants were asked to indicate the level of their agreement to five statements on 7-point scale ranging from extremely disagree to extremely agree (e.g., I emphasize to people outside the organization the positive aspects of working for the organization” and “I defend the organization when outsiders criticize it.”

Translation of measures

All of the original scales were translated into Thai language by the author. The Thai version of the scales was independently back-translated by two of the language experts. The translation was then reviewed by two organizational behavior experts for appropriateness. Finally, pre-testing and cognitive interviewing were conducted to ensure the final measurements and obtain the final version of the questionnaire.

Pilot Testing

After obtaining the final version of the questionnaire, pilot testing was conducted on 41 participants. The test showed all constructs are reliable with Cronbach's alpha reliability scores of 0.95 for intrinsic motivation, 0.84 for identified regulation, 0.72 for introjected regulation, 0.77 for external regulation, 0.81 for passion for work, and 0.85 for loyal boosterism.

Analyses

Initially, it was necessary to select the most appropriate method. All variables in this study are latent constructs, structural equation modeling (SEM) was employed. Because the nature of this study is exploratory, aiming to identify the relationships and contribution of self-determination motivation (rather than confirming them) and to extend the theory, the appropriate method is PLS-SEM over the CB-SEM (Hair, Ringle, & Sarstedt, 2011; Richter et al., 2016). Second, it was necessary to determine the types of constructs. Analyses underlining outer and inner models are different based upon whether the constructs included in the model are formative, reflective, or both. In this study, both exogenous and endogenous variables are reflective constructs. In contrast to formative constructs (where formative indicators cause a construct), reflective indicators are caused by the construct (Hair et al., 2014).

Once the model specification was established, this study followed Hair et al. (2014) and Wong (2013) for general guidelines, Hair et al. (2011) for rules of thumb for model evaluation, and Hair et al. (2012) for the software setup.

To minimize the probability of errors, two guidelines were taken into consideration to ensure that the 443 cases were adequate: (1) minimum total sample size by Comfrey and Lee (1992) as mentioned earlier; and (2) subject to item ratio (10 cases per predictor) from Chin (1998) stating that the requirement for sample size would be ten times the dependent latent variable with the largest number of independent latent variables impacting it.

Outer model evaluation.

The first outer model evaluation was performed, indicators with loading between 0.40 – 0.70 should be considered eliminated from the scale if it leads to an increase in composite reliability (Hair et al, 2011). Since all variables are reflective constructs in this study and reflective indicators are interchangeable because they represent the common theme, removing some reflective indicators can be expected (Davicik, 2014). One indicator from each of three constructs (one indicator with outer loading value of 0.35 from external regulation, one with value of 0.59 from passion for work, and one with 0.56 outer loading's value from loyal boosterism) were removed before the final model was computed. The removal of three indicators also resulted in an increase in all three composite reliability values.

Table 1

Outer Model Evaluation

Construct	Indicators	Convergent validity		Internal consistency reliability
		Outer loadings	AVE	CR
Intrinsic motivation	IM1	0.95	0.90	0.96
	IM2	0.97		
	IM3	0.93		
Identified regulation	ID1	0.89	0.77	0.91
	ID2	0.90		
	ID3	0.84		
Introjected regulation	IN1	0.78	0.73	0.89
	IN2	0.88		
	IN3	0.89		
External regulation	EX1	0.92	0.75	0.86
	EX2	0.81		
Passion for work	PW1	0.77	0.69	0.90
	PW2	0.83		
	PW3	0.89		
	PW4	0.83		
Loyal boosterism	LB1	0.82	0.72	0.91
	LB2	0.87		
	LB3	0.91		
	LB4	0.79		

Outer loading

Hair et al. (2014) suggested using composite reliability (CR) when evaluating internal consistency reliability for reflective constructs instead of using Cronbach's alpha. Table 1 shows all CR values are acceptable (higher than 0.70).

Convergent validity

Hair et al. (2014) also suggested using average variance extracted (AVE) and outer loading to test convergent validity. All of the AVE values in the study are above 0.50 and the outer loadings have values range from 0.77 to 0.97, as shown in Table 1.

Table 2

The Fornell-Larcker Criterion

Construct	Intrinsic	Identified	Introjected	External	Passion	Loyalty
Intrinsic	0.95					
Identified	0.61	0.88				
Introjected	0.36	0.50	0.85			
External	0.21	0.41	0.48	0.87		
Passion	0.41	0.34	0.48	0.27	0.83	
Loyalty	0.41	0.40	0.28	0.20	0.33	0.85

Table 3

Cross Loadings

Indicator	Intrinsic	Identified	Introjected	External	Passion	Loyalty
IM1	0.95	0.58	0.34	0.18	0.36	0.38
IM2	0.97	0.58	0.33	0.19	0.38	0.40
IM3	0.93	0.59	0.37	0.21	0.41	0.39
ID1	0.50	0.89	0.40	0.39	0.28	0.39
ID2	0.51	0.90	0.43	0.36	0.28	0.31
ID3	0.59	0.84	0.47	0.33	0.33	0.35
IN1	0.30	0.38	0.78	0.31	0.35	0.15
IN2	0.33	0.43	0.88	0.39	0.46	0.27
IN3	0.30	0.46	0.89	0.51	0.42	0.27
EX1	0.18	0.38	0.47	0.92	0.27	0.20
EX2	0.18	0.33	0.35	0.81	0.18	0.14
PW1	0.31	0.29	0.36	0.26	0.77	0.24
PW2	0.30	0.26	0.36	0.14	0.84	0.16
PW3	0.39	0.31	0.48	0.26	0.89	0.34
PW4	0.35	0.27	0.39	0.22	0.83	0.32
LB1	0.29	0.29	0.19	0.06	0.25	0.82
LB2	0.34	0.32	0.23	0.13	0.27	0.87
LB3	0.36	0.34	0.22	0.15	0.28	0.91
LB4	0.38	0.39	0.29	0.28	0.30	0.79

Discriminant validity

Fornell-Larcker criterion and cross loadings were performed to assess the discriminant validity. First, Fornell-Larcker criterion in Table 2 shows the latent constructs sharing more variance with its assigned indicators than any other latent variables. The second criterion is cross loadings. All of the indicators' loadings are higher with their assigned constructs than with other variables, as shown in Table 3. Results confirmed that the scales measuring the constructs are not correlated.

Results

Table 4 shows means, standard deviations, and correlations among variables. The types of motivation upheld a quasi-simplex pattern i.e. each type is more positively correlated to the type next to it than to the further type of regulation. This evidence confirmed an underlying of the autonomy continuum (Gagné & Deci, 2005).

Table 4

Means, Standard Deviations, and Correlations of Studied Variables

Construct	M	SD	1	2	3	4	5	6
1. Intrinsic	4.16	1.49	1					
2. Identified	4.43	1.35	.61**	1				
3. Introjected	4.18	1.51	.36**	.50**	1			
4. External	4.94	1.42	.21**	.40**	.45**	1		
5. Passion	4.35	1.45	.40**	.34**	.46**	.25**	1	
6. Loyalty	5.07	1.25	.40**	.39**	.26**	.18**	.31**	1

Note. **p < .01, “passion” = passion for work; “loyalty” = loyal boosterism

Evaluation of Structural Model (inner model evaluation)

Note that PLS-SEM does not have a standard goodness-of-fit (Hair et al., 2011). Hair et al. (2014) suggested the use of coefficient determination (R^2), cross-validated redundancy (Q^2), path coefficients, and the effect size (f^2) for the assessment of model’s quality.

Coefficient of determination (R^2)

Regardless of the rules of thumb for what R^2 value is considered high, it depends on the discipline of the research. R^2 value of 0.20 is considered high in consumer behavior (Hair et al., 2011). Hair et al. (2014) also suggested that the decision of the model should be based on adjusted R^2 . The adjusted R^2 are 0.29 and 0.20 for passion for work and loyal boosterism respectively. In other words, 29 percent of total variance of passion for work and 20 percent for loyal boosterism can be explained by the four types of self-determination motivation (i.e. intrinsic motivation, identified, introjected, and external regulations).

Table 5

Cross-Validated Redundancy

Construct	Construct cross-validated redundancy		
	<i>SSO</i>	<i>SSE</i>	$Q^2 (=1-SSE/SSO)$
Intrinsic	1332.00	1332.00	
Identified	1332.00	1332.00	
Introjected	1332.00	1332.00	
External	888.00	888.00	
Passion	1776.00	1444.43	0.19
Loyalty	1776.00	1536.74	0.14

Note. “passion” = passion for work; “loyalty” = loyal boosterism

Cross-validated redundancy (Q^2)

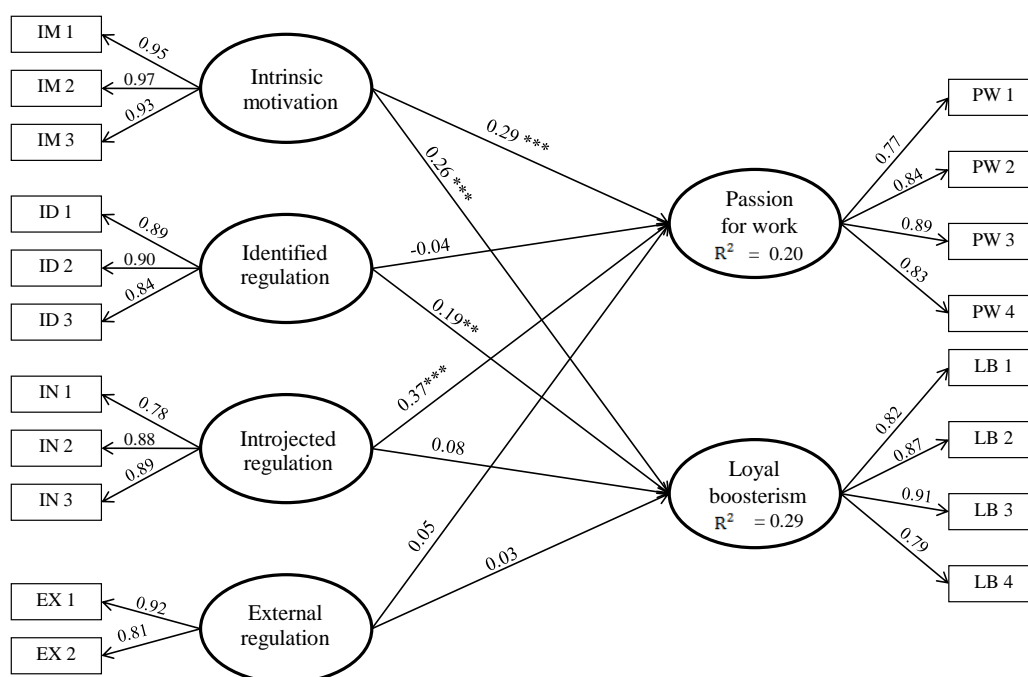
To indicate the model’s predictive relevance, blindfolding test was performed (d value equals 7), cross-validated redundancy (Q^2) values are all higher than zero, 0.19 and 0.14 for passion for work and loyal boosterism accordingly, as shown in Table 5.

Table 6

Path Coefficients, T-Statistics, P-Values, and Effect Size

Hypotheses	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Effect Size (f^2)
H1: IM→PW	0.29	0.29	0.06	5.01	0.000	0.07
H2: IM→LB	0.26	0.26	0.06	4.45	0.000	0.05
H3: ID→PW	-0.04	-0.04	0.06	0.64	0.524	0.00
H4: ID→LB	0.19	0.19	0.06	3.24	0.001	0.02
H5: IN→PW	0.37	0.38	0.05	7.09	0.000	0.13
H6: IN→LB	0.08	0.08	0.06	1.35	0.176	0.01
H7: EX→PW	0.05	0.05	0.05	0.89	0.372	0.00
H8: EX→LB	0.03	0.03	0.06	0.56	0.573	0.00

Note. “IM” = intrinsic motivation; “ID” – identified regulation; “IN” = introjected regulation; “EX” = external regulation; “PW” = passion for work; “LB” = loyal boosterism.



Note. ** p < .01, *** p < .001

Figure 1. Structural Model Results

Path coefficient's significance

Bootstrapping was performed with 5,000 samples as suggested by Hair et al., 2011. As shown in Table 6, intrinsic motivation was found to have an effect on passion for work ($\beta = 0.29, p < .001$) and loyal boosterism ($\beta = 0.26, p < .001$). The results supported hypothesis 1 and hypothesis 2. Identified regulation was also found to effect loyal boosterism ($\beta = 0.19, p < .01$), but not passion for work. Therefore, hypothesis 3 was rejected while hypothesis 4 was supported. Introjected regulation was found to have an effect on passion for work ($\beta = 0.37, p < .001$), but its relationship with loyal boosterism was not found. The results supported hypotheses 5 and rejected hypothesis 6. As for external regulation, no relationships were found significant. Hypothesis 7 and hypothesis 8 were both rejected. For the total model, see Figure 1.

Effect size (f^2)

The magnitude of the constructs' relationships was evaluated by the effect size. Following Hair et al. (2014), the f^2 values of 0.02, 0.15, and 0.35 represent small, medium, and large effects, accordingly. Results from Table 6 show small to medium strength in relationships between intrinsic motivation, and passion for work ($f^2 = 0.07$) and loyal boosterism ($f^2 = 0.05$). A small effect size of 0.02 between identified regulation

and loyal boosterism, and a medium effect size of 0.13 between introjected regulation and passion for work are also shown.

Discussion

The purpose of this study was to explore how each of the self-determination motivation types contributed to each of the work-level and organization-level behaviors, based on the antecedents of each of the motivation types. The review of past research also led to an examination whether each of the motivation type itself has different effects on work-level and organization-level behaviors. In this study, passion for work was selected to represent work-level behavior and loyal boosterism to organization-level behavior.

Because the intrinsic motivation hypotheses were formed based on the antecedent of intrinsic motivation (which was the association of the self and the work itself, rather than the organization's role), it was hypothesized that intrinsic motivation will have more effect on passion for work than loyal boosterism. Although results confirmed the hypotheses, the effects of intrinsic motivation were almost equally in weight on passion for work ($\beta = 0.29$) and loyal boosterism ($\beta = 0.26$). The effect of intrinsic motivation on loyal boosterism was stronger than anticipated. One explanation could be that management and organization practices can help take part in enhancing intrinsic motivation on employees' work. For example, Niehoff et al. (2001) found that loyalty was influenced by management's empowerment behaviors. When employees experience empowerment, the psychological need for autonomy is fulfilled. This, in turns, could make work more joyful, resulting in the effect found between intrinsic motivation and loyal boosterism to be higher than expected.

For the effect found between identified regulation and loyal boosterism, it is straightforward that the shared values between employees and organization reflected on this relationship. It was more surprisingly that identified regulation was not found to have an effect on passion for work. This may be that, unlike hobbies or a pursuit of person interest, people need to work regardless of whether or not the work itself is meaningful. Further research is recommended, perhaps a comparison study among different types of work (for example, work with social-contribution versus business-contribution) and different types of organizations (for-profit versus non-profit for example), to better understand the role of identified regulation in the work-level perspective.

Introjected regulation was found to have an effect only on passion for work. This finding indicated that this internal pressure is a very personal event. While it was hypothesized that the introjected regulation might have less effect on loyal boosterism, result showed no effect. The absence of this effect on organization-level behavior implied that this controlled behavior may be confined within one's personal pursuit, rather than a shared goal with one's workgroup and organization.

Last, external regulation was found to have an effect on neither passion for work nor loyal boosterism. Because both passion and loyalty come from an individual's innate

attitudes, the absence of internalization in external regulation perhaps helps explain the shortcomings in this relationship.

For the overall model, findings showed intrinsic motivation and introjected regulation significantly contribute to work-level behavior (passion for work), while identified and external regulation did not. The results showed introjected regulation contributed more to passion for work ($\beta = 0.37$) than intrinsic motivation did ($\beta = 0.29$). Because introjected regulation is internalized involving self esteem and ego enhancement, it can be translated into pressure that one puts on him or herself. Although self-determination is not an individual's trait (Ryan & Deci, 2008), Neuroticism (one of the personality traits) was found to be associated with introjected regulation (Ingledeu, Markland, & Shappard, 2004). For this reason, while past research found intrinsic motivation to be a predictor of well-being, a caution should be noted on how introjected regulation can have a negative impact on employees' well being. Future research is recommended in testing the relationships between introjected regulation and different types of work passion (harmonious and obsessive).

With regard to organization-level behavior, both intrinsic motivation and identified regulation contributed to loyal boosterism, while introjected and external regulations did not. Results showed intrinsic motivation contributed more weight ($\beta = 0.26$) to loyal boosterism than identified regulation did ($\beta = 0.19$). One explanation could be that management practices are often focused on help boosting employees' performance. These practices are noticeable and may have a day-to-day immediate impact on employees' experience, which could result in higher contribution from intrinsic motivation. On the other hand, how employees identify themselves with an organization's values is less apparent on day-to-day practices. This could result in less contribution of identified regulation to organization-level behavior. Further examination is recommended to help better understand this differential contribution.

Contributions

Theoretical Contributions

The antecedent of intrinsic motivation, on the surface, is the association between what one likes (the self) and the work he or she performs. Because when comparing to work-level behavior, intrinsic motivation was found to have almost equal effect on organization-level behavior, this indicated that the role of management on work-related (how one performs their tasks) may have gone beyond boosting work behavior and into loyalty behavior. The results confirmed that the manifestation of the antecedent went beyond the connection between the self and the job. This result indicates the possibility that there may be the role of mediating variables to help explain this manifestation which reflects into organization-level behavior.

When approaching the antecedents and the effects of self-determination motivation in view of work and organization perspective, a notion conceived from findings on identified regulation is especially interesting. Because results showed identified regulation to have an effect on organization-level behavior, but not work-level behavior, these particular findings raise the question as to whether identified regulation could be, within itself, a two dimensional construct, at the very least, in work settings. Perhaps the work versus organization perspective could be the first step to pinpoint whether or not the ties between personal value and the value obtained from task identity versus institution identity would yield different outcomes.

Last, findings showed no effect of external regulation on both work-level and organization-level behaviors. The scale measuring this construct was reflective with a focus on monetary reward. Deci and Ryan (2000) defined external regulation as “control of behavior comes from consequences administered by others”, even though monetary reward is often employed by organizations, the consequences of behavior could come in many different forms, e.g. tangible and intangible reward or punishment. Perhaps this regulation could be a formative construct allowing more variety of external consequences to be included.

Practical Implications

Findings from hypotheses testing, intrinsic motivation was the only type of the motivations that had an effect on both work-level and organization-level behaviors. And external regulation, on the other hand, was the only type of the motivation that had no effect on both levels of behavior. From these results, it is more beneficial that organizations focus on innate motivation, rather than employing external forces. Organizations should focus on matching employees with the job they are interested. Because the effects of intrinsic motivation were almost equally in weight on passion for work and loyal boosterism, employing management practices that help enhance employees' experience in work settings is equally important, and especially, rather than using external instrumentality (external regulation) as a mean to motivate them.

The overall model showed intrinsic motivation and introjected regulation contributed to passion for work. With introjected regulation carried more weight, these results suggested that if organizations want employees to work hard, besides assigning employees to the work they enjoy (intrinsic motivation), perhaps the focus should be on recruitment and selection methods in finding potential employees with specific characteristics that portray personal competitiveness and determination (introjected regulation). Results also showed that intrinsic motivation and identified regulation contributed to loyal boosterism with intrinsic motivation carried more weight. Therefore, to encourage organization-level behaviors (loyal boosterism), organizations should put the most effort in enhancing employees' intrinsic motivation. This perhaps could be done through organization-level mechanism in matching employees' interest with the type of job they are most interested (e.g. job rotation to help employees explore their own potential and expand their skill sets) and building enjoyable work environment (e.g.

autonomy). Organizations should also focus on enhancing identified regulation by giving meanings to the tasks, emphasizing on organization's mission statement, and promoting employees' development and perhaps career path to help them reach their personal goals (identified regulation).

Conclusion, Limitations, and Recommendations for Future Research

Findings confirmed the approach to the self-determination motivation as multidimensional construct.

Within each of the motivation type itself, different effects were found on work-level and organization-level behaviors i.e. intrinsic motivation has almost equally effects on work-level and organization-level behaviors, identified regulate only has an effect on organization-level behavior, introjected regulation only has an effect on work-level behavior, and external regulation has an effect on neither work-level and organization-level behaviors.

Different types of motivation also have differential contribution of each of the behaviors. Only intrinsic motivation and introjected regulation have effects on passion for work (with introjected regulation contributed more weight) and only intrinsic motivation and identified regulation have effects on loyal boosterism (with intrinsic motivation contributed more weight).

Because the focus of the study was in work and business settings, the consequences of the motivation was approached in view of work-level and organization-level perspective. This study only selected passion for work to represent work-level behavior and loyal boosterism for organization-level behavior. Future research is recommended to select other variables to represent both levels of behaviors to confirm or extend the self-determination motivation in work versus organization perspective. The participants in this study were employees from various industries and sectors. Future research focusing on comparing various types of participants – e.g. white- and blue-collar workers, for-profit and non-profit organizations, private and public sectors – could contribute greatly to the body of knowledge of the self-determination theory, especially in work and business settings. Last, because of the findings on identified regulation, future research may focus on investigating whether the notion of separating identified regulation into two dimensions is sensible and, essentially, whether the two dimensions yield different effects on outcomes.

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