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Title:

The relationship between employee motivation and work performance in a manufacturing and retail foodservice organisation

Short title: Motivation and work performance

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Abstract

The interaction between work motivation and work performance has been extensively studied, however, few studies have aimed to analyse the link between the different types of motivation as described by the Self Determination Theory and different forms of work performance. Furthermore, related studies that have been conducted within the foodservice sector appear to be lacking. A cross-sectional survey was thus distributed within a foodservice organisation in Malta (EU). Hierarchical multiple linear regression models demonstrated a clear link between work motivation and work performance. In particular, greater levels of autonomous and controlled motivation were associated with better task performance, contextual work performance, and lower levels of counterproductive work behaviour. In terms of the individual regulations, greater levels of intrinsic, identified, introjected and extrinsic regulation were associated with better task and contextual performance, as well as lower levels of counterproductive work behaviour. The paper thus highlights the potential performance-related benefits of adopting strategies to motivate workers.

Keywords: motivation; work performance; counterproductive work performance; Self-Determination Theory

1. Introduction

Motivation is often described as the impetus to do something. Conversely, those who do not act, or do not have a drive to undertake a behaviour are often considered unmotivated (Ryan & Deci, 2000a). Within a workplace, therefore, motivation can underlie employees' willingness to commit to job tasks, as well as affect the quantity and quality of their outputs (MacRae & Furnham, 2017).

In view of this, motivation has been the subject of much organisational research. Greater levels of motivation have been associated with several desirable work outcomes, including job satisfaction (Breaugh et al., 2018; Tóth-Király et al., 2021), lower levels of burnout (Tóth-Király et al., 2021: Van den Broeck et al., 2021), reduced turnover intention (Van den Broeck et al., 2021), increased organisational citizenship behaviour (Kuvaas & Dysvik, 2009), and greater job performance (Van den Broeck et al., 2021). The impact of motivation on job performance has been found to be similar to that of employees' personal abilities (Van Iddekinge et al., 2018). Furthermore, it has been argued that the relationship between motivation and performance appears to be stronger in blue-collar workers than white-collar workers (Van den Broeck et al., 2021). Within foodservice organisations, motivation has also been shown to promote food safety practices (Ardent et al., 2011; Harris et al., 2019) and retention (Wildes, 2008).

Despite much research on the topic, mixed findings have emerged regarding the impact of the various types of motivation upon work performance. One reason for this may be due to cultural differences. Despite this, limited published research on motivation has been conducted in Malta (EU). Studies conducted in Malta have primarily focused on the antecedents of motivation (Catania & Randall, 2013), or those of related but separate concepts such as public service motivation (Camilleri, 2007) or engagement (Fiorini et al.,

2021). The following study was thus conducted in view of the paucity of research regarding the link between motivation and performance in Malta, as well as mixed international findings on the topic, as described in the sections below. Furthermore, the study was conducted within a foodservice organisation. Globally, few studies appear to have explored the link between worker motivation and work performance within the foodservice sector, and thus the current study addresses this chasm in the literature.

The current study, therefore, had the following overall aim: to investigate the link between various forms of motivation and work performance within a Maltese foodservice organisation.

1.1 Self-Determination Theory

Various psychological theories of motivation have been described (Osabiya, 2015), while studies have indicated that motivators of foodservice workers are numerous and heterogeneous (George & Hancer, 2003; Tesone et al., 2005). The current paper focuses on Self-Determination Theory (SDT; Deci & Ryan, 1985). The theory was selected as it is well-established, ubiquitous in the literature and is backed by much empirical evidence, including those related to work (Breaugh et al., 2018).

Self-Determination Theory (SDT) suggests that workers' performance is impacted by the type of motivation they hold for their work activities. SDT proposes that the impact of work activities on workers' motivation is largely dependent upon the degree to which three psychological needs are supported. These include the need for competence, relatedness, and self-determination. Furthermore, SDT recognises that individuals may differ in both their orientations and aspirations. In terms of their orientations, individuals can be more autonomous or more focused on external factors for guidance. With regard to aspirations,

some workers may be more aspired by intrinsic matters, such as the development of meaningful relationships, whereas others may be more aspired by extrinsic factors, such as the accumulation of wealth (Deci et al., 2017; Ryan & Deci, 2000b).

SDT also distinguishes between autonomous motivation and controlled motivation (Deci et al., 2017; Deci & Ryan, 1985). *Autonomous motivation* refers to situations where individuals have the freedom to choose and are interested and willing to pursue an activity. *Intrinsic motivation*, where individuals are motivated by the behaviour itself, is one form of autonomous motivation (Deci et al., 2017). Under specific conditions, extrinsically motivated behaviour, where activities are undertaken to obtain a separate consequence, can also be autonomously motivated. This would include occasions where workers value their activities and have good degrees of autonomy and ownership over them. Conversely, *controlled motivation* refers to situations where workers are motivated extrinsically via rewards and incentives that are conditional on performing in a specific manner or achieving explicit targets (Deci et al., 2017).

SDT also differentiates between several levels of extrinsic motivation which vary in their degree of autonomy. Amongst them, *external regulation* is the least autonomous and refers to situations where individuals believe that their activities are being directly controlled by others. *Introjected regulation* refers to situations where individuals are influenced by internal pressure to achieve or avoid self-administered rewards or punishments, such as feelings of pride, self-esteem or guilt. In such cases, individuals focus on the approval within their jobs and from their superiors. *Identified regulation* refers to situations where individuals accept and relate to their work behaviours and are more anonymously self-regulated when engaging in them. Finally, *integrated regulation* is the most autonomous form of extrinsic motivation and occurs when individuals embrace activities and these match their own values and needs (Deci et al., 2017). The inclusion of integration in the SDT has however been criticised.

Statistical analysis has previously demonstrated that integration can barely be differentiated from identified and intrinsic regulation. Furthermore, studies of various outcomes have found that integrated regulation does not explain additional variance when paired with identified and intrinsic regulation (Gagné et al., 2015). This has resulted in some scholars arguing that integration adds little to the theory and should be excluded (Van den Broeck et al., 2021). Consequently, studies have frequently studied autonomous motivation, conceptualised as a combination of intrinsic and identified regulation, and controlled motivation, based on introjected and external regulation (Deci et al., 2017). The motivations and regulations described within the SDT are summarised in Table 1.

INSERT TABLE 1 HERE

1.2 Performance and Self-Determination Theory

Work performance is a vast ever-developing topic. Whilst many studies that have investigated individuals' work performance have focused on task performance (Koopmans et al., 2013), which refers to the performance of key work activities that are recognised as part of a worker's job and contribute to an organisation's technical core (Rotundo & Sackett, 2002), several other performance-related constructs feature within published studies (Carpini et al., 2017). Key amongst these are contextual performance, which refers to worker behaviours that contribute to the organisational and psychosocial work environment (Koopmans et al., 2013), and counterproductive work behaviour (Koopmans et al., 2013), which is voluntary worker behaviour that is harmful to the organisations' wellbeing (Rotundo & Sackett, 2002).

A number of studies have analysed the facets of the SDT in relation to work performance. The various manners in which performance was measured make it difficult to draw general

conclusions. The aspects of SDT measured also tend to vary, with some studies focusing on autonomous and controlled motivation, whilst others studied the types of regulation or a selection of these. In line with the current study's overall aim, the study has the following objectives:

O1: To explore if autonomous and controlled motivation are associated with task, contextual and counterproductive work performance.

O2: To determine if intrinsic, identified, introjected and external regulation are associated with task, contextual and counterproductive work performance.

In terms of autonomous and controlled motivation, several authors have identified positive links between autonomous motivation and work performance (Baard et al., 2004; Olafsen & Halvari, 2017; Sandrin et al., 2019; Trépanier et al., 2015), however, these studies did not differ between the different forms of work performance. The link with controlled motivation is less clear. Whilst Trépanier et al. (2015) and Sandrin et al (2019) identified a negative association between controlled motivation and work performance, Ren et al. (2021) determined that both autonomous and controlled motivation were positively associated with work performance. Only autonomous motivation, however, was associated with innovative work behaviour. Mixed findings in this respect are likely to be linked to the type of performance being analysed; with autonomous motivation having been described as beneficial for the performance of interesting and important tasks, whilst controlled motivation may be of benefit in boring and mundane tasks (Gagné & Deci, 2005).

In terms of autonomous and controlled motivation's link with counterproductive work behaviour, little research appears to have been conducted in this respect. Some evidence was

provided by Ronen and Donia (2020), who demonstrated that both forms of motivation were associated with lower levels of counterproductive work behaviour.

Despite the mixed or limited evidence, with respect to controlled and autonomous motivation, the study, therefore, has the following hypotheses:

H1: Autonomous and controlled motivation are positively associated with task and contextual work performance.

H2: Autonomous and controlled motivation are negatively associated with counterproductive work performance.

In terms of the forms of regulation, a number of papers have highlighted the importance of identified regulation, with Zhang et al. (2016), Parker et al. (2017) and Peltea (2020) associating it with various forms of performance. Findings for the other forms of regulation appear to be more mixed. Whilst Peltea (2020) linked intrinsic regulation with work performance, Parker et al. (2017) associated this with proficient and adaptive performance, but not quantitative performance. Zhang et al. (2016) failed to associate intrinsic regulation with various forms of work performance.

Introjected regulation has been positively associated with proficient and adaptive performance, but not quantitative performance by Parker et al. (2017), however, Zhang et al (2016) failed to link introjected regulation with various forms of work performance. In terms of external regulation, Zhang et al. (2016) failed to link this form of regulation with various types of performance. Parker et al. (2017) did not identify a link between external regulation and quantitative performance. Furthermore, when analysing proficient and adaptive performance, a link with external social regulation was not identified, however, external material regulation was weakly associated with both.

Mixed findings within the presented papers may have been due to various factors; whilst all the presented papers took a wide view of performance which included both task and contextual aspects, the findings may have been influenced by the different cultural backgrounds and roles of their participants. Despite the mixed findings, a meta-analysis by Van den Broeck et al. (2021) concluded that general work performance, proactivity, as well as organisational citizenship behaviour were positively associated with introjected, identified and intrinsic regulation. External regulation was also associated with greater performance and proactivity but was associated with poorer levels of organisational citizenship behaviour. The paper however concluded that further research is needed to explore the impact of the different regulations upon different forms of work performance.

Mixed findings may also be related to the interaction between the different regulations. It has been reported that whilst greater levels of identified and intrinsic regulation lead to better work performance, this was also dependent upon their levels being higher than levels of external regulation (Howard et al., 2016). This outcome is likely linked to findings that controlling incentives weaken the impact of intrinsic motivation on the performance of interesting and complex tasks, but may benefit the performance of simple and boring tasks (Cerasoli et al., 2014; Deci et al., 2017; Weibel et al., 2010).

Findings regarding the relationship between the four regulations and counterproductive work behaviour appear to be very limited. One study that focused solely on identified regulation, revealed a negative link between this and counterproductive work behaviour (Bureau et al., 2018). In another study by Rehman et al., (2021), all four regulations were negatively correlated with counterproductive work behaviour during bivariate analysis. However, meta-analytic correlations conducted by Van den Broeck et al. (2021) only identified a negative association between intrinsic regulation and counterproductive work behaviour, with the remaining regulations failing to reach statistical significance. The authors of this paper,

however, noted that very few studies had analysed the link between these four regulations and counterproductive work behaviour, concluding that further studies were needed.

In terms of the four regulations, the paper, therefore, has the following hypotheses:

> H3: Intrinsic, identified, introjected and external regulation will be associated with improved task and contextual performance. Identified regulation is likely to be most strongly associated with such work performance.
>
> H4: Intrinsic, identified, introjected and external regulation will be negatively associated with counterproductive work behaviour. Intrinsic regulation is likely to demonstrate the strongest association.

The study's hypotheses are illustrated in Figure 1.

INSERT FIGURE 1 HERE PLEASE

2. Materials and Methods

In order to test the study's hypotheses, a cross-sectional study using quantitative research methods was adopted. The study was conducted within a foodservice organisation in Malta that includes both food production and meal preparation via a dedicated factory and a chain of food retail outlets. At the time of data gathering, the organisation had 382 full-time employees, working within various departments. The studied organisation has a large percentage of foreign workers; which are believed to make up around half of its workforce. Such workers originate from other EU countries, as well as non-EU countries. In terms of the foodservice industry, the organisation is rather unique in Malta which is dominated by micro and small enterprises, with the other larger organisations in the sector focusing on catering and restaurants. In fact, National Statistics Office (NSO) data show that 97% of employers in

Malta are micro or small organisations, whilst within the accommodation and food service sector, only nine organisations have 250 or more employees (NSO, 2022). Whilst a further breakdown of this data is unavailable, it is likely that most of the other large organisations in this sector focus on accommodation rather than foodservice.

2.1 Measures

Following a brief pilot study (n = 8), which resulted in changes to one of the scales described below, a physical questionnaire was distributed to each full-time employee of the organisation; part-time employees were excluded. Questionnaires were returned anonymously by means of an internal mail system.

Motivation: This was measured by means of the Motivation at Work Scale (MAWS) (Gagné, et al., 2010). This is conceptually based on the SDT and has been used extensively in other studies (Kyndt et al., 2013; Vanovenberghe et al., 2022). Each regulation is measured by means of three items, each of which is scored on a seven-point Likert scale. Intrinsic regulation ($\alpha = 0.94$) and identified regulation ($\alpha = 0.90$) were also combined in order to obtain a score for autonomous motivation ($\alpha = 93$). Similarly, the items of introjected regulation ($\alpha = 0.85$), and extrinsic motivation ($\alpha = 0.81$) were combined to obtain a score for controlled motivation ($\alpha = 88$). For the purpose of analysis, one item was removed from the scale on extrinsic motivation as the Cronbach Alpha score for this scale would otherwise have been below the benchmark of .60 (Taber, 2017).

Performance: The Individual Work Performance Questionnaire (IWPQ) (Koopmans et al., 2014) was used to measure task performance, contextual performance, and counterproductive work behaviour. Typically, the different scales have five, eight and five questions, respectively, to measure these three constructs. However, following the pilot study and a

discussion with management-level workers, three questions were removed from the contextual performance scale, after it emerged that the vast majority of workers did not have the opportunity to participate in meetings, nor was there much scope or opportunity for updating their knowledge and skills. Consequently, all scales consisted of five questions and were found to have the following reliability scores: task performance (α = 66), contextual performance (α = 89), and counterproductive work behaviour (α = 81).

Individual variables: Data were also collected regarding age; gender; education; relationships; role; and years working for the studied organisation.

2.2 Analysis: Obtained data were imputed into SPSS 27. 235 questionnaires were received, however, 34 were discarded due to missing data, thus the final sample (N = 201) represented 53% of the total population and did not include any missing data. Cronbach Alpha scores were computed for each of the scales in order to determine their reliability. All items exceeded the benchmark of 0.6, indicating that they were acceptable. The vast majority exceeded 0.8, indicating a good level of internal consistency (Taber, 2017).

Hierarchical multiple linear regression was used to identify associations between the various types of work performance and motivation, whilst also allowing for the addition of control variables. Hierarchical models were chosen to illustrate the difference the addition of control factors made to the tested associations between work performance and motivation (Leech et al., 2015). Different models were constructed in order to analyse the relationship between each form of work performance and each form of motivation. Thus, six hierarchical multiple regressions were constructed for each form of performance; one for each type of regulation and motivation. This method was chosen due to the strong correlations that existed between the different forms of regulation and motivation, which resulted in multicollinearity when entered into the same model. Control variables (the measured individual factors) were entered

during the second step of each hierarchical multiple linear regression. In order to avoid multicollinearity, only control variables that were significantly associated with the analysed form of performance ($p < .05$) were entered into the model (Field, 2005). Such significant associations were identified by means of conducting Pearson correlation coefficient tests between the studied forms of performance and the other measured variables (Morgan et al., 2013). As no control variables were significantly associated with task performance, control variables were omitted from applicable regressions.

In order to obtain an indication of the amount of unique variance in the studied performance behaviour as predicted by the motivation or regulation being tested in the final model of each regression, the obtained partial correlation values were squared (Leech et al., 2015).

2.3 Ethics: The study received ethical clearance from the Faculty Research Ethics Board at the Faculty of Economics, Management and Accounts at the University of Malta. Informed consent was first obtained from participants, who were then asked to complete an anonymous questionnaire.

3. Results

Descriptive statistics (Table 2) demonstrated that the majority of the sample were female (54.2%), aged between 18 and 34 (53.3%), had not undertaken tertiary education (69.7%), were in a relationship (58.7%) and had been working for the studied company for a period of between one and five years (53.2%).

INSERT TABLE 2 HERE

Bivariate correlations (Table 3) indicated that the measured facets of work performance demonstrated limited significant associations with the measured individual factors. Task performance was not found to be associated with any of the measured individual variables. Greater levels of contextual performance were significantly associated with workers who were older, in a relationship, and held a supervisory or administrative role. Counterproductive work behaviour was associated negatively with age and education, with those who were younger and those who did not have a tertiary education scoring more highly in this variable.

INSERT TABLE 3 HERE

In view of the lack of significant associations between the individual variables and task performance, regressions created to explore the association between motivation and task performance did not include additional control variables. The created regressions (Table 4) revealed that all forms of regulation were positively associated with task performance. These forms of regulation explained between 5% (introjected, extrinsic) and 6% (intrinsic, identified) of the variance. Furthermore, autonomous and controlled motivation were both significantly associated with task performance, with these explaining 7% and 6% of task performance variance, respectively.

INSERT TABLE 4 HERE

Regressions conducted to investigate contextual performance (Table 5) included the three control variables found to be significantly associated with the outcome variable. The final model for each regulation highlighted that each tested regulation was significantly associated with contextual performance, with introjected and identified regulation most strongly associated. Within the final models, introjected explained 11% of the variance, whereas identified regulation explained 10% of the variance. Extrinsic regulation explained 8% of the variance, whilst intrinsic regulation explained 5% of the variance.

Autonomous and controlled motivation were also strongly associated with contextual performance, with the final models indicating that they both explained 9% and 13% of the variance, respectively.

INSERT TABLE 5 HERE

Regressions conducted to explore the predictors of counterproductive work behaviour (Table 6) determined that all of the studied regulations were significantly associated with this behaviour. The final models highlighted that intrinsic regulation explained 3% of the variance, whereas the remaining regulations each explained 2% of the variance. The final models of autonomous and controlled motivation revealed that both were significantly associated with counterproductive work behaviour, with each explaining 3% of the variance.

INSERT TABLE 6 HERE

4. Discussion

The study revealed that in line with the first hypothesis (H1), greater levels of autonomous and controlled motivation were associated with greater task and contextual performance. The second hypothesis (H2) was also supported, with both autonomous and controlled motivation negatively associated with counterproductive work behaviour. In terms of the third hypothesis (H3), all of the studied regulations were positively associated with contextual work performance and task performance. Whilst identification was the regulation most strongly associated with task performance, introjection followed by identification were most strongly associated with work contextual performance. Finally, in terms of the fourth hypothesis (H4), all regulations were negatively associated with counterproductive work behaviour. Consistent with the hypothesis, intrinsic regulation was most strongly associated with this negative work behaviour.

In line with previous studies (Olafsen & Halvari, 2017; Sandrin et al., 2019; Trépanier et al., 2015), autonomous motivation was found to be positively associated with work performance. As several previous studies did not distinguish between various types of work performance, the current study contributes by highlighting that autonomous motivation is positively associated with both task and contextual performance. Furthermore, the study indicates its value amongst foodservice employees. Findings about controlled motivation have been more mixed, and in contrast to some previous studies (Trépanier et al., 2015; Sandrin et al., 2019), but in line with others (Ren et al., 2021) this was also found to contribute positively to both forms of work performance.

Regression analysis indicated that autonomous motivation explained more of the variance in task performance than controlled motivation. The finding is interesting as a large percentage of the studied sample consisted of elementary foodservice workers, and controlled motivation has previously been described as useful in motivating repetitive and potentially boring tasks (Gagné & Deci, 2005). A link between 'role' and task performance, however, was not

identified. The difference can be explained by an analysis of the underlying regulations. Whilst the difference was slight, intrinsic and identified regulation, which were combined to obtain a score for autonomous motivation, each explained a greater percentage of the variance than did introjected and extrinsic regulation, the two components of controlled motivation. Evidence that each of the regulations contributes to general work performance has previously been reported (Van den Broeck et al., 2021), however evidence of their individual contribution to task performance is lacking, with Parker et al. (2017) only linking identified regulation with task performance, whilst others failed to identify relevant significant associations (Zhang et al., 2016).

Work motivation appeared to explain a greater percentage of the variance of contextual performance than task performance. Controlled motivation was more strongly associated with contextual performance than autonomous motivation. Furthermore, introjection was the most strongly associated regulation, followed by identified and extrinsic regulation. The relevance of identified regulation in terms of more contextual forms of work performance has previously been highlighted, whereas findings regarding the relevance of introjected performance are more mixed (Parker et al., 2017; Zhang et al., 2016). The stronger link between identified regulation and work performance than that of intrinsic regulation has previously been the subject of academic discussion, and it has been suggested that workers may be more likely to persist in their performance when the behaviour is considered important and valuable, than because the behaviour is considered enjoyable (Gagné & Deci, 2005; Van den Broeck et al., 2021), this may be particularly relevant in situations where persistence is required in behaviours considered relatively uninteresting (Burton et al., 2006), which may have been relevant to the current sample. This may also have extended to introjected motivation, where workers may have engaged in contextual performance (e.g.,

greeting customers), not because they enjoyed it but because they felt their managers valued it and approved of it.

Whilst all the measured aspects of work motivation were significantly associated with counterproductive work behaviour, all of the tested associations were found to be weak, with no single association explaining more than 3% of the variance. In fact, in all regressions, the control variables, age and education, correlated more strongly with counterproductive work behaviour than the tested regulations. Previous research in this respect is limited and sometimes contradictory, and whilst some have indicated that both forms of motivation (Ronen & Donia, 2020) and all four regulations (Rehman et al., 2021) were negatively associated with counterproductive work behaviour, a meta-analysis determined that only intrinsic regulation was associated with this work behaviour (Van den Broeck et al., 2021). The current study suggests that motivation may have a limited impact on this behaviour.

From a theoretical perspective, the paper appears to be the first to focus on foodservice workers, highlighting how the SDT is applicable to those working in this sector. The study also revealed how both autonomous and controlled motivation, as well as all four regulations were associated with the three measured facets of work performance. This supports the value of the SDT as a theory to study variances in various facets of work performance. The current paper adds to the related literature as few studies have analysed the associations between autonomous and controlled motivation and different types of work performance. Additionally, very few studies have investigated the links between counterproductive work behaviour and aspects of the SDT.

The current study demonstrated the value of considering the different types of motivation and various facets of work performance: whilst autonomous and controlled motivation explained a similar percentage of the variance in task performance and counterproductive work

performance, controlled motivation was associated more strongly with contextual performance than autonomous motivation. Additionally, whilst the strength of association between the various regulations and task performance as well as counterproductive work performance were similar, levels differed when assessing associations with contextual performance. Contrary to previous findings, this indicates that controlled motivation (Trépanier et al., 2015; Sandrin et al., 2019), as well as the related regulations, introjected and extrinsic regulation (Parker et al., 2017; Zhang et al., 2016), may beneficially impact upon work performance.

In practice, the paper highlights the potential link between work motivation and desirable work behaviours within a foodservice organisation. From a practical standpoint, both autonomous and controlled motivation were found to link positively with task performance, with the regulations related to autonomous motivation, identified and intrinsic regulation, showing slightly stronger associations than introjected and extrinsic regulation. This suggests that strategies to enhance workers' inherent satisfaction in their work tasks and fostering beliefs within workers that their tasks are important and contribute to the achievement of the organisation's overall goals may boost task performance. Though to a slightly less degree, managers showing their approval of workers' performance and the provision of rewards may also enhance task performance. As the same motivators and regulations also contributed to contextual performance, such strategies should also aid in this respect. However, as the latter was most strongly associated with introjected and identified regulation, aspects related to employees' need to build self-worth, such as the provision of performance-related feedback and the development of recognition schemes, as well as workers identifying with the values the organisation is trying to create and maintain, may be particularly impactful in enhancing contextual work performance. In terms of reducing counterproductive work behaviour, all

forms of motivation may aid with intrinsic regulation, thus developing interesting work which is inherently satisfying, as the strongest motivator.

Overall the findings indicate that strategies which illustrate the impact workers' behaviours have towards achieving the organisation's goals, providing workers with feedback for behaviours considered important, management themselves undertaking the desired behaviours, re-engineering tasks to provide more opportunities for autonomy and enjoyment, and the introduction of recognition and reward schemes may boost work productivity.

4.1 Limitations and further research

The current study was conducted within a single organisation, and thus the findings cannot be generalised to other organisations and other countries. Despite this, the study investigated a number of under-studied topics, including the link between individual regulations and different forms of performance, including counterproductive work behaviour, as well as focusing on foodservice employees. The sample, whilst representative of the studied organisation, was small and is likely to have influenced the strength of the investigated associations. Furthermore, the study was cross-sectional and thus the direction of the associations could not be ascertained. Finally, the Cronbach's alpha score for task performance whilst acceptable, was lower than desired and may have influenced the findings. In view of the study's limitations, further studies with similar aims and larger samples would be beneficial in both Malta and other countries. Longitudinal studies which analyse changes made to improve individual regulations and their impact on various forms of motivation would also be of benefit.

5. Conclusion

The study demonstrated that within a sample of foodservice employees, a link exists between work motivation and work performance. More specifically, greater levels of autonomous and controlled motivation were associated with better task and contextual work performance, as well as lower levels of counterproductive work behaviour. In terms of the individual regulations, intrinsic, identified, introjected and extrinsic regulations were associated with all the measured work behaviours.

The results thus indicate that work performance may be enhanced by a combination of strategies, including developing work that is inherently interesting and satisfying, fostering organisational goals and values that workers identify with, providing employees with feedback for important tasks and behaviours, and introducing recognition and reward schemes.

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References

Arendt, S. W., Ellis, J. D., Strohbehn, C., & Paez, P. (2011). Development and use of an instrument to measure retail foodservice employees' motivation for following food safety practices. *Journal of Foodservice Business Research*, *14*(1), 68-85. https://doi.org/10.1080/15378020.2011.548227

Baard, P. P., Deci, E. L., & Ryan, R. M. (2004). Intrinsic need satisfaction: a motivational basis of performance and weil-being in two work settings 1. *Journal of Applied Social Psychology*, *34*(10), 2045-2068. https://doi.org/10.1111/j.1559-1816.2004.tb02690.x

Breaugh, J., Ritz, A., & Alfes, K. (2018). Work motivation and public service motivation: disentangling varieties of motivation and job satisfaction. *Public Management Review*, *20*(10), 1423-1443. https://doi.org/10.1080/14719037.2017.1400580

Bureau, J., Mageau, G., Morin, A., Gagné, M., Forest, J., Papachristopoulos, K., ... & Parenteau, C. (2018). Promoting autonomy to reduce employee deviance: The mediating role of identified motivation. *International Journal of Business and Management*, *13*(5), 61-71. https://doi.org/10.5539/ijbm.v13n5p61

Burton, K. D., Lydon, J. E., D'Alessandro, D. U., & Koestner, R. (2006). The differential effects of intrinsic and identified motivation on well-being and performance: prospective, experimental, and implicit approaches to self-determination theory. *Journal of Personality and Social Psychology*, *91*(4), 750. https://doi.org/10.1037/0022-3514.91.4.750

Camilleri, E. (2007). Antecedents affecting public service motivation. *Personnel review*, *36*(3), 356-377. https://doi.org/10.1108/00483480710731329

Carpini, J.A., Parker, S.K., & Griffin, M.A. (2017). A look back and a leap forward: A review and synthesis of the individual work performance literature. *Academy of Management Annals*, *11*(2), 825 – 885. https://doi.org/10.5465/annals.2015.0151

Catania, G., & Randall, R. (2013). The relationship between age and intrinsic and extrinsic motivation in workers in a Maltese cultural context. *International Journal of Arts & Sciences*, *6*(2), 31.

Cerasoli, C. P., Nicklin, J. M., & Ford, M. T. (2014). Intrinsic motivation and extrinsic incentives jointly predict performance: A 40-year meta-analysis. *Psychological Bulletin, 140*(4), 980–1008. https://doi.org/10.1037/a0035661

Deci, E. L., Olafsen, A. H., & Ryan, R. M. (2017). Self-determination theory in work organizations: The state of a science. *Annual Review of Organizational Psychology and Organizational Behavior*, *4*(1), 19-43. https://doi.org/10.1146/annurev-orgpsych-032516-113108

Deci E.L, & Ryan R.M. (1985). *Intrinsic Motivation and Self-Determination in Human Behavior.* NewYork: Plenum Press

Field, A. (2005). Discovering statistics using SPSS. Thousand Oaks, CA: Sage Publications.

Fiorini, L. A., Griffiths, A., & Houdmont, J. (2021). Work engagement among nurses in Malta: associations with psychosocial working conditions. *Malta Journal of Health Sciences*, *8*(1), 30-38. https://doi.org/10.14614/WORKENGAGEMENT/8/21

Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational behavior*, *26*(4), 331-362. https://doi.org/10.1002/job.322

Gagné, M., Forest, J., Gilbert, M. H., Aubé, C., Morin, E., & Malorni, A. (2010). The motivation at work scale: Validation evidence in two languages. *Educational and psychological measurement*, *70*(4), 628-646. https://doi.org/10.1177/0013164409355698

Gagné, M., Forest, J., Vansteenkiste, M., Crevier-Braud, L., Van den Broeck, A., Aspeli, A. K., ... & Westbye, C. (2015). The Multidimensional Work Motivation Scale: Validation evidence in seven languages and nine countries. *European Journal of Work and Organizational Psychology*, *24*(2), 178-196. https://doi.org/10.1080/1359432x.2013.877892

George, R. T., & Hancer, M. (2004). The impact of selected organizational factors on psychological empowerment of non-supervisory employees in full-service restaurants. *Journal of Foodservice Business Research*, *6*(2), 35-47. https://doi.org/10.1300/J369v06n02_04

Harris, K. J., DiPietro, R. B., Line, N. D., & Murphy, K. S. (2019). Restaurant employees and food safety compliance: Motivation comes from within. *Journal of Foodservice Business Research*, *22*(1), 98-115. https://doi.org/10.1080/15378020.2018.1547037

Howard, J., Gagné, M., Morin, A. J., & Van den Broeck, A. (2016). Motivation profiles at work: A self-determination theory approach. *Journal of Vocational Behavior*, *95*, 74-89. https://doi.org/10.1016/j.jvb.2016.07.004

Koopmans, L., Bernaards, C., Hildebrandt, V., Van Buuren, S., Van der Beek, A. J., & De Vet, H. C. (2013). Development of an individual work performance questionnaire. *International journal of productivity and performance management*, 62(1), 6-28. https://doi.org/10.1108/17410401311285273

Koopmans, L., Bernaards, C. M., Hildebrandt, V. H., de Vet, H. C., & van der Beek, A. J. (2014). Construct validity of the individual work performance questionnaire. *Journal of occupational and environmental medicine*, *56*(3), 331-337. https://doi.org/10.1097/jom.0000000000000113

Kuvaas, B., & Dysvik, A. (2009). Perceived investment in employee development, intrinsic motivation and work performance. *Human resource management journal*, *19*(3), 217-236. https://doi.org/10.1111/j.1748-8583.2009.00103.x

Kyndt, E., Raes, E., Dochy, F., & Janssens, E. (2013). Approaches to learning at work: Investigating work motivation, perceived workload, and choice independence. *Journal of Career Development*, *40*(4), 271-291. https://doi.org/10.1177/0894845312450776

Leech, N.L., Barrett, K.C., & Morgan, G.A. (2015). IBM SPSS for intermediate statistics. New York, NY: Routledge.

MacRae, I., & Furnham, A. (2017). *Motivation and performance - A guide to motivating a diverse workforce.* London: Kogan Page limited.

Morgan, G.A., Leech, N.L., Gloeckner, G.W., & Barrett, K.C. (2013). IBM SPSS for introductory statistics. New York, NY: Routledge.

NSO (2022). *Business demography: 2021*. https://nso.gov.mt/en/News_Releases/Documents/2022/08/News2022_136.pdf

Olafsen, A. H., & Halvari, H. (2017). Motivational mechanisms in the relation between job characteristics and employee functioning. *The Spanish Journal of Psychology*, *20*. https://doi.org/10.1017/sjp.2017.34

Osabiya, B. J. (2015). The effect of employees motivation on organizational performance. *Journal of public administration and policy research*, *7*(4), 62-75. https://doi.org/10.5897/jpapr2014.0300

Parker, S. L., Jimmieson, N. L., & Amiot, C. E. (2017). The motivational mechanisms underlying active and high-strain work: consequences for mastery and performance. *Work & Stress*, *31*(3), 233-255. https://doi.org/10.1080/02678373.2017.1303551

Peltea, B. (2020). Predicting work performance and professional satisfaction through different types of motivation and self-esteem. *Journal of Communication and Behavioural Sciences*, *1*(1), 45-56.

Ren, F., Zhang, Q., & Wei, X. (2021). Work Autonomous and Controlled Motivation on Chinese Employees' Work Performance and Innovative Work Behaviour: The Moderating

Role of Financial Stress. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.676063

Rehman, S., Tariq, Z., & Laila, U. (2021). An Empirical Study of Emotional Distress, Motivation, and Work-related Performance among College Teachers. *Clinical and Counselling Psychology Review*, *3*(1). https://doi.org/10.32350/ccpr.31.02

Ronen, S., & Donia, M. B. (2020). Stifling my fire: The impact of abusive supervision on employees' motivation and ensuing outcomes at work. *Revista de Psicología del Trabajo y de las Organizaciones*, *36*(3), 205-214. https://doi.org/10.5093/jwop2020a20

Rotundo, M., & Sackett, P. R. (2002). The relative importance of task, citizenship, and counterproductive performance to global ratings of job performance: A policy-capturing approach. *Journal of applied psychology*, *87*(1), 66. https://doi.org/10.1037/0021-9010.87.1.66

Ryan, R. M., & Deci, E. L. (2000a). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary educational psychology*, *25*(1), 54-67. https://doi.org/10.1006/ceps.1999.1020

Ryan, R. M., & Deci, E. L. (2000b). Self- Determination theory and the facilitation of intrinsic motivation, social development and well-being. *American Psychologist, 55*(1), 68-78. doi: 10.1037110003-066X.55.1.68

Sandrin, É., Gillet, N., Fernet, C., Leloup, M., & Depin-Rouault, C. (2019). Effects of motivation and workload on firefighters' perceived health, stress, and performance. *Stress and Health*, *35*(4), 447-456. https://doi.org/10.1002/smi.2873

Taber, K.S. (2017). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in Science Education*, *48*(6), 1273–1296. https://doi.org/10.1007/s11165-016-9602-2

Tesone, D. V., Ricci, P., & Severt, D. (2006). Workplace motivation and mental development: differences between foodservice managers and younger workers. *Journal of Foodservice Business Research*, *8*(4), 21-36. https://doi.org/10.1300/J369v08n04_03

Tóth-Király, I., Morin, A. J., Bőthe, B., Rigó, A., & Orosz, G. (2021). Toward an improved understanding of work motivation profiles. *Applied Psychology*, *70*(3), 986-1017. https://doi.org/10.1111/apps.12256

Trépanier, S. G., Forest, J., Fernet, C., & Austin, S. (2015). On the psychological and motivational processes linking job characteristics to employee functioning: Insights from self-determination theory. *Work & Stress*, *29*(3), 286-305. https://doi.org/10.1080/02678373.2015.1074957

Van den Broeck, A., Howard, J. L., Van Vaerenbergh, Y., Leroy, H., & Gagné, M. (2021). Beyond intrinsic and extrinsic motivation: A meta-analysis on self-determination theory's multidimensional conceptualization of work motivation. *Organizational Psychology Review*, *11*(3), 240-273. https://doi.org/10.1177/20413866211006173

Van Iddekinge, C. H., Aguinis, H., Mackey, J. D., & DeOrtentiis, P. S. (2018). A meta-analysis of the interactive, additive, and relative effects of cognitive ability and motivation on performance. *Journal of Management*, *44*(1), 249-279. https://doi.org/10.1177%2F0149206317702220

Vanovenberghe, C., Van den Broeck, A., Lauwerier, E., Goorts, K., & Du Bois, M. (2022). Motivation in the return to work process: a self-determination cluster approach. *Disability and Rehabilitation*, *44*(10), 2053-2062. https://doi.org/10.1080/09638288.2020.1826584

Weibel, A., Rost, K., & Osterloh, M. (2010). Pay for performance in the public sector—Benefits and (hidden) costs. *Journal of public administration research and theory*, *20*(2), 387-412. https://doi.org/10.1093/jopart/mup009

Wildes, V. J. (2008). Should I stay or should I go? Motivation to work in foodservice. *Journal of Foodservice Business Research*, *11*(3), 286-294. https://doi.org/10.1080/15378020802316794

Zhang, J., Zhang, Y., Song, Y., & Gong, Z. (2016). The different relations of extrinsic, introjected, identified regulation and intrinsic motivation on employees' performance: Empirical studies following self-determination theory. *Management Decision*, *54*(10), 2393-2412. https://doi.org/10.1108/md-01-2016-0007

Table 1: Summary of motivators and regulations found in the SDT

Type of motivation	**Definition**
Autonomous motivation	Engaging in behaviour due to inherent interest and is perceived to be consistent with personal values, goals.
Controlled Motivation	Behaviour undertaken for external reasons, including to obtain rewards, approval, or positive feelings, or to avoid punishments and negative feelings such as guilt.
Type of regulation	
Intrinsic	Behaviour is undertaken due to inherent interest and satisfaction.
Identification	Behaviour pursued as the meaning or values are in line with those of the individual.
Introjection	Action due to internal pressure to obtain or avoid feelings such as self-worth, pride, guilt.
Extrinsic	The least autonomous, action is performed due to external forces, possibly rewards.

Table 2: Descriptive statistics of individual factors

Variable	Number (%)
Sex	
Male	92 (45.8)
Female	109 (54.2)
Age	
18 – 24	54 (26.9)
25 – 34	53 (26.4)
35 – 44	44 (21.9)
45 – 54	35 (17.4)
55 – 64	15 (7.5)
Education	
Primary / Secondary	140 (69.7)
Tertiary	61 (30.3)
Role	
Elementary	128 (63.7)
Supervisory / administrative	73 (38.3)
Relationship	
Single	83 (41.3)
In a relationship	118 (58.7)
Experience with organisation	
< 1 year	54 (26.9)
1 – 5 years	107 (53.2)
5 – 10 years	29 (14.4)
> 10 years	11 (5.5)

Table 3: Descriptive statistics and correlations between variables

	Mean	*SD*	Range	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Individual factors																	
1. Age	2.52	1.26	1 – 5	-													
2. Gender	-	-	1 – 2	.01	-												
3. Education	-	-	1 – 2	-.20**	-.06	-											
4. Relationship	-	-	1 - 2	.41**	-.02	-.22**	-										
5. Role	-	-	1 – 2	.15	.07	.31***	-.02	-									
6. Time in employment	1.9	.80	1 – 4	.27***	.01	-.12	.11	.03	-								
Motivation																	
7. Intrinsic	4.64	1.17	1 – 7	.06	-.12	.09	.05	.24**	.09	-							
8. Identified	4.22	1.26	1 – 7	.22**	-.08	.12	.16*	.35***	.06	.75***	-						
9. Introjected	3.80	1.34	1 – 7	.16*	-.04	.10	.20**	.19**	.04	.47***	.58***	-					
10. Extrinsic	3.45	1.26	1 – 7	.13	.2	.15*	..00	.30***	.01	.36***	.51***	.69***	-				
11. Autonomous	4.43	1.14	1 – 7	.15*	-.11	.12	.11	.32***	.08	.93***	.94***	.56***	.47***	-			
12. Controlled	3.66	1.21	1 – 7	.16*	-.02	.13	.13	.25**	.03	.47***	.60***	.95***	.87***	.57***	-		
Performance																	
13. Task	2.66	.57	1 – 4	.11	-.04	.11	.09	.07	-.01	.25***	.26***	.24**	.23***	.27***	.26***	-	

14. Contextual	3.03	.89	1 – 4	.26***	.01	.04	.25**	.22**	.08	.31***	.41***	.42***	.34***	.38***	.42***	.49***	-
15. Counterproductive	.82	.75	1 – 4	-.19**	.03	-.15*	-.08	-.03	-.04	-.20**	-.21**	-.20**	-.20**	-.22**	-.22**	-.43***	-.49***

*p < .05; **p < .01; ***p < .001. *SD*, Standard deviation.

Table 4: Regression analyses for Task performance and various forms of motivation

	Model 1		Model 1		Model 1		Model 1
	β		*B*		*β*		*β*
Intrinsic	.25***	Identified	.26***	Introjected	.24***	Extrinsic	.23***
R^2	.06	R^2	.07	R^2	.06	R^2	.06
ΔR^2	.06	ΔR^2	.07	ΔR^2	.06	ΔR^2	.06
Adj. R^2	.06	Adj. R^2	.06	Adj. R^2	.05	Adj. R^2	.05
Autonomous	.27***	Controlled	.26***				
R^2	.07	R^2	.07				
ΔR^2	.07	ΔR^2	.07				
Adj. R^2	.07	Adj. R^2	.06				

*p< .05; **p < .01; ***p < .001;

β, standardized beta coefficient; *N*, number; R^2, explained variance; ΔR^2, change in explained variance; Adj. R^2, adjusted explained variance.

Table 5: Regression analyses for Contextual performance and various forms of motivation

	Model 1	Model 2		Model 1	Model 2		Model 1	Model 2		Model 1	Model 2
	β	β		β	β		β	β		β	β
Intrinsic	.31***	.25***	Identified	.41***	.32***	Introjected	.42***	.34***	Extrinsic	.34***	.28**
Age		.17*	Age		.13	Age		.15*	Age		.14*
Role		.17*	Role		.11	Role		.16*	Role		.14*
Relationship		.17*	Relationship		.15*	Relationship		.12	Relationship		.19**
R^2	.09	.20	R^2	.17	.23	R^2	.18	.25	R^2	.12	.21
ΔR^2	.09	.11	ΔR^2	.17	.06	ΔR^2	.18	.07	ΔR^2	.12	.10
Adj. R^2	.09	.18	Adj. R^2	.16	.21	Adj. R^2	.17	.23	Adj. R^2	.11	.20
Autonomous	.38***	.30***	Controlled	.42***	.35***						
Age		.15*	Age		.14*						
Role		.13	Role		.14*						
Relationship		.16*	Relationship		.15*						
R^2	.15	.22	R^2	.18	.25						

ΔR^2	.15	.08	ΔR^2	.18	.07
Adj. R^2	.14	.21	Adj. R^2	.17	.24

*p< .05; **p < .01; ***p < .001;

β, standardized beta coefficient; N, number; R^2, explained variance; ΔR^2, change in explained variance; Adj. R^2, adjusted explained variance.

Table 6: Regression analyses for Counterproductive work behaviour and various forms of motivation

	Model 1	Model 2		Model 1	Model 2		Model 1	Model 2		Model 1	Model 2
	β	β		β	β		β	β		β	β
Intrinsic	-.20**	-.17*	Identified	-.21**	-.15*	Introjected	-.20**	-.16*	Extrinsic	-.20**	-.15*
Age		-.21**	Age		-.19*	Age		-.20*	Age		-.20**
Education		-.18*	Education		-.17*	Education		-.18*	Education		-.17*
R^2	.04	.10	R^2	.05	.09	R^2	.04	.10	R^2	.04	.09
ΔR^2	.04	.06	ΔR^2	.05	.05	ΔR^2	.04	.05	ΔR^2	.04	.05
Adj. R^2	.03	.09	Adj. R^2	.04	.08	Adj. R^2	.04	.08	Adj. R^2	.04	.08
Autonomous	-.22**	.-.17*	Controlled	-.22**	-.17*						
Age		-.19**	Age		-.19**						
Education		-.17*	Education		-.17*						
R^2	.05	.10	R^2	.05	.10						
ΔR^2	.05	.05	ΔR^2	.05	.05						
Adj. R^2	.04	.09	Adj. R^2	.04	.08						

*p< .05; **p < .01; ***p < .001;

β, standardized beta coefficient; N, number; R^2, explained variance; ΔR^2, change in explained variance; Adj. R^2, adjusted explained variance.

Figure 1: Hypothesised associations between motivation, related regulations and work performance