

The Effect of Intrinsic Motivation and Work Engagement on Work Productivity of Employees at the Department of Education of Mamuju Regency

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Abstract

This research was undertaken to examine how intrinsic motivation and work engagement, both separately and jointly, shape the work productivity of employees at the Department of Education of Mamuju Regency. Employee productivity in public sector organizations remains a fundamental concern within the agenda of bureaucratic reform, particularly in regional agencies that are expected to deliver educational services that are prompt, accurate, and accountable. Adopting a quantitative associative research design executed through a survey, the study treated the entire body of civil servants serving at the agency, numbering sixty-nine persons, as its target population, and enrolled all of them as respondents by means of a total sampling or census technique, thereby eliminating sampling error altogether. Primary information was gathered through a questionnaire comprising eighteen statement items scored on a five-point Likert scale, and was supplemented by non-participant observation, library research, and documentary review. The material so obtained was subsequently processed through Pearson Product Moment validity testing, Cronbach's Alpha reliability testing, multiple linear regression, partial (t) testing, simultaneous (F) testing, and the coefficient of determination, with the aid of IBM SPSS Statistics version 23. The analysis reveals that intrinsic motivation exerts a positive and statistically significant partial influence upon work productivity ($b = 0.428$; $t = 4.250$; sig. 0.000), while work engagement likewise produces a positive and significant partial influence ($b = 0.353$; $t = 3.148$; sig. 0.002). Taken together, the two variables significantly determine work productivity ($F = 18.031 > 3.136$; sig. 0.000), accounting for 35.3 percent of its variation, with the residual 64.7 percent attributable to determinants lying beyond the model. Judged by standardized beta coefficients, intrinsic motivation (0.432) emerges as the more dominant predictor relative to work engagement (0.320). These results imply that efforts to strengthen productivity within the public sector are more effectively initiated through the satisfaction of employees' basic psychological needs, and most particularly the need for competence, which this study identifies as the weakest indicator in the entire measurement model.

Keywords: *intrinsic motivation; work engagement; work productivity; public sector human resource management; self-determination theory.*

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PENDAHULUAN

Within the architecture of contemporary organizations, human resources occupy a position of considerable strategic weight, functioning simultaneously as the

agent through which every other resource is mobilized and as the ultimate determinant of institutional performance. In the setting of government, this proposition acquires an additional layer of significance, since the quality and productivity of public employees translate directly into the standard of service that citizens receive. Improving the productivity of civil servants is therefore not merely a matter of administrative efficiency; it is a meaningful barometer of how successfully the machinery of governance is being managed, and it is intimately connected to public trust in the state itself.

The urgency of this concern is by no means confined to the Indonesian context. The Gallup State of the Global Workplace report records that employees who are not engaged, together with those who are actively disengaged, are estimated to occasion productivity losses on the order of 7.8 trillion United States dollars, a figure equivalent to roughly eleven percent of global gross domestic product (Gallup, 2022). Evidence of this magnitude establishes that the problem of productivity cannot be reduced to the technical properties of work processes. Its roots reach instead into the psychological dimension of the workforce, and specifically into the twin domains of motivation and engagement, which determine whether an employee merely occupies a position or actually invests effort in it.

A comparable emphasis is discernible within the framework of Islamic values, in which work is understood as a form of worship demanding earnestness, professionalism, and an orientation toward outcomes. The declaration in Surah An-Najm, verses thirty-nine and forty, that a human being obtains nothing save that for which he has striven, and that his striving will in due course be brought before him, aligns closely with the modern managerial conception of productivity as the ratio between results achieved and the resources expended in achieving them. Efforts to strengthen employee productivity thus rest upon a normative foundation as much as upon a managerial one, a convergence that carries particular resonance in a regional administration whose population is predominantly Muslim.

Two psychological constructs have attracted sustained scholarly attention as determinants of productivity. The first is intrinsic motivation, understood as the impulse that arises from within the individual and that operates without requiring stimulation from external sources (Pamungkas et al., 2024; Rahmawati, 2023). Its theoretical foundation lies in Self-Determination Theory, which holds that intrinsic motivation flourishes to the extent that three basic psychological needs are satisfied, namely autonomy, competence, and relatedness (Deci & Ryan, 2000; Tarumingkeng, 2025). The second is work engagement, denoting the condition in which an individual becomes actively involved in and devotes himself fully to the interests of the organization for which he works (Safariningsih et al., 2024), and conventionally operationalized through the dimensions of vigor, dedication, and absorption (Schaufeli et al., 2002; Kosim et al., 2023).

Although both constructs are theoretically expected to support productivity, the empirical record is far from unanimous, and this inconsistency constitutes a genuine research gap. With respect to intrinsic motivation, Hermin (2024) reports that intrinsic and extrinsic motivation alike exert a positive and significant influence upon employee productivity, a conclusion reinforced by Mahani and Risal (2025) and by Cahyani et al. (2025). Adriyanto and Prasetyo (2021), by contrast, conclude that intrinsic motivation bears no significant relation to productivity. With respect to work engagement, Grisela and Sirait (2023) as well as Nurrahman and Faris (2026)

demonstrate a significant association with productivity, whereas Sopian and Ningsih (2024) find the effect to be positive yet statistically insignificant. The persistence of such divergence suggests that the influence of these variables is conditioned by organizational context, by the design of the work itself, and by the structure of the reward system within which employees operate.

Two further observations follow from a survey of the existing literature. First, the majority of prior investigations have examined intrinsic motivation and work engagement in isolation, or have paired each with unrelated variables such as extrinsic motivation, work discipline, working environment, or coaching, with the consequence that the relative contribution of the two constructs when tested concurrently within a single model remains largely unknown. Second, studies situated within regional government agencies in eastern Indonesia, and more particularly within technical departments responsible for education, are conspicuously scarce.

The present research is situated at the Department of Education of Mamuju Regency, a regional apparatus that assists the Regent in administering governmental affairs in the field of education. The agency is charged with formulating and implementing educational policy, supervising educational units, managing teaching and educational personnel, and evaluating the delivery of education, in pursuit of a vision of a Mamuju society that is creative, educative, hospitable, energetic, and comfortable. Preliminary observation and interviews with a number of employees disclosed several symptoms indicating that productivity has yet to reach an optimal level. Programs and activities were in several instances completed later than scheduled; work was submitted in a form requiring revision or repeated follow-up; targets in certain divisions were not fully attained; and a portion of the staff experienced difficulty completing assignments punctually whenever the volume of work increased.

Parallel symptoms were apparent in respect of the two independent variables. On the side of intrinsic motivation, a segment of employees was observed to await instruction from superiors before undertaking particular tasks, to show little initiative in proposing ideas or work innovations, and to orient themselves toward the discharge of duty as a formal obligation rather than toward the attainment of superior results. On the side of work engagement, the field encountered limited enthusiasm for organizational activities, modest participation in discussion and problem solving, and a tendency to avoid additional responsibility whenever the work demanded greater exertion. Taken as a whole, these observations indicate that the dimensions of vigor, dedication, and absorption are not yet uniformly reflected across the workforce.

The originality of this study resides in three respects. It tests intrinsic motivation and work engagement simultaneously within a single regression model, drawing upon a census of a regional education agency that has hitherto received little scholarly attention. It operationalizes intrinsic motivation through the framework of Self-Determination Theory, an approach less commonly employed in comparable Indonesian research than the conventional hierarchy-of-needs perspective. And it addresses the inconsistency of earlier findings by comparing the relative contribution of the two constructs through standardized beta coefficients, thereby yielding policy recommendations of a more measurable and better prioritized character.

Accordingly, this study is directed toward three intertwined objectives: to analyze the effect of intrinsic motivation upon the work productivity of employees at the Department of Education of Mamuju Regency; to analyze the effect of work

engagement upon that same productivity; and to analyze the joint effect of both variables considered simultaneously. Theoretically, the research aspires to enrich the discourse of public sector human resource management and to extend the empirical base for Self-Determination Theory and the work engagement construct within the setting of regional bureaucracy. Practically, it is intended to furnish the leadership of the agency with an evidentiary foundation upon which priorities in personnel management may be established, so that both employee productivity and the quality of educational services may be meaningfully strengthened.

LITERATURE REVIEW

Work Productivity

In its most general sense, productivity denotes the capacity of an individual or a group of individuals to generate goods and services within a specified interval of time and in conformity with a plan previously established (Noranisa & Rijali, 2025). A complementary formulation conceives of productivity as the ratio between output and input, such that productivity is said to have risen whenever efficiency improves in respect of time, materials, equipment, or labor along the workflow that the organization has prescribed (Saputra et al., 2024). The two formulations are mutually reinforcing: the former directs attention to the volume and timeliness of what is produced, whereas the latter foregrounds the economy with which resources are converted into results.

When the concept is transposed into the domain of public administration, its meaning requires further refinement. Government agencies do not generate revenue in the commercial sense, and the value of their output is registered instead in the quality, accuracy, and punctuality of the services they render. Productivity in this setting is therefore best assessed through indicators that capture the volume of work discharged, the soundness of the administrative product, and the speed with which service is delivered. Following Mainake et al. (2024), the present study operationalizes work productivity through three indicators, namely quantity of work, quality of work, and time and speed of work, each of which is directly observable in the routine of a regional education office.

A substantial literature has sought to identify the factors that regulate the level of employee productivity. Rahmawati (2024) enumerates ability and expertise, the capability of leadership, the working environment, compensation, relations among colleagues, organizational culture, education and work experience, occupational health and safety, work climate, and personnel maintenance as determinants that jointly govern how productive an employee ultimately becomes. Because the present study concentrates upon the psychological dimension, it treats the remaining determinants as contextual factors operating outside the boundary of the estimated model, a delimitation whose consequences are considered explicitly in the discussion of the coefficient of determination.

Intrinsic Motivation

Intrinsic motivation is understood as a motive that is active and functional without requiring stimulation from without, for the reason that within every individual there already subsists an impulse to undertake action (Pamungkas et al., 2024). It is likewise conceived as an impulse originating within the individual that prompts activity on the basis of self-awareness and free of compulsion by any external party (Rahmawati, 2023). What distinguishes intrinsic from extrinsic motivation is thus not the intensity of the drive but its locus: the intrinsically motivated employee works because the work itself is experienced as satisfying, meaningful, or worthy of mastery, rather than because a reward is contingent upon its completion.

The theoretical foundation of the construct rests upon Self-Determination Theory, which maintains that intrinsic motivation develops optimally where three basic psychological needs are satisfied (Deci & Ryan, 2000; Tarumingkeng, 2025). The need for autonomy concerns the experience of volition and of being the origin of one's own conduct. The need for competence concerns the sense of effectiveness and mastery in dealing with the demands of the task. The need for relatedness concerns the experience of connection with, and acceptance by, significant others in the working environment. Individuals in whom all three needs are met tend to exhibit persistence, creativity, and superior performance, whereas the frustration of any one of them tends to displace autonomous motivation toward more controlled and less durable forms.

This perspective converges with Herzberg's Two-Factor Theory, which locates motivators such as achievement, recognition, responsibility, and personal growth as the principal sources of job satisfaction and the drive to excel, while assigning to hygiene factors the more limited function of preventing dissatisfaction (Aurellia et al., 2025). The convergence carries a specific implication for the public sector. Because remuneration in government service is relatively uniform and closely regulated, the scope for extrinsic differentiation is narrow; variation in productivity among employees is consequently more likely to originate in the intrinsic domain. Consistent with this reasoning, Syara (2021) and Aswar (2023) observe that internal drive shapes work morale and persistence more durably than externally administered inducement.

Work Engagement

Work engagement denotes the phenomenon in which an individual becomes actively involved and devotes himself in full measure to the best interests of the organization in which he serves (Safariningsih et al., 2024). It has alternatively been characterized as the condition in which an employee discovers his identity in an integral manner, is motivated in his work, is able to receive support in a positive spirit, and executes his duties effectively and efficiently (Rahmadani & Kurniawati, 2022), or more simply as the involvement, satisfaction, and enthusiasm that an individual displays toward the work he performs (Fadilla, 2022).

The construct is conventionally operationalized through three dimensions introduced by Schaufeli et al. (2002). Vigor describes high levels of energy and mental resilience while working, together with a willingness to invest effort and to persist in the face of difficulty. Dedication describes a sense of significance, enthusiasm, inspiration, pride, and challenge in relation to one's work. Absorption describes full concentration and deep engrossment, whereby time passes quickly and the individual finds it difficult to detach himself from the task. Employees who are psychologically engaged do not confine themselves to the discharge of formal obligation but endeavor to contribute their best toward the attainment of organizational objectives (Fauzya & Chaniago, 2022; Kosim et al., 2023).

Within the framework of job demands and resources, engagement functions as the motivational pathway through which job resources are converted into performance, with the consequence that engaged employees are better able to sustain their output even under conditions of pressure. Santri et al. (2023) note, in relation to public sector personnel specifically, that engagement is shaped by the clarity of the task, the support of superiors, and the perceived meaningfulness of the work, all of which are amenable to managerial intervention.

Previous Studies and Research Gap

A review of prior empirical work reveals a pattern of partial convergence punctuated by notable disagreement. On one side, Hermin (2024) demonstrates that intrinsic and extrinsic motivation exert a positive and significant influence upon the productivity of employees at an integrated service office; Mahani and Risal (2025) identify intrinsic motivation, work discipline, and the working environment as determinants of productivity in a manufacturing setting; and Cahyani et al. (2025) report a positive and significant effect of intrinsic motivation upon the productivity of banking personnel. In respect of engagement, Grisela and Sirait (2023) establish a significant influence of coaching and work engagement upon employee productivity, and Nurrahman and Faris (2026) show that increases in work engagement are accompanied by increases in the productivity of remote workers.

On the other side, Adriyanto and Prasetyo (2021) conclude that intrinsic motivation, taken partially, does not significantly affect work productivity, while Sopian and Ningsih (2024) find employee engagement to be positively but insignificantly related to productivity within the creative industry. These discrepancies are plausibly rooted in differences of organizational setting, work design, sampling technique, and reward structure. Where work is highly standardized and its rhythm dictated by machinery or by system, the scope for the expression of intrinsic motivation contracts, and its measurable influence upon output correspondingly weakens.

Two conclusions follow. First, the literature has not settled the question of whether, and how strongly, intrinsic motivation and work engagement shape

productivity, leaving a substantive gap that invites further testing. Second, studies that model the two determinants jointly remain uncommon, and those situated within regional government agencies in West Sulawesi, and specifically in Mamuju, are scarcer still. The present research addresses both shortcomings by modeling the two constructs concurrently as predictors of productivity within a locality whose empirical record has hitherto been thin.

Conceptual Framework and Hypotheses

Building upon the theoretical exposition and the review of earlier findings, this study advances a conceptual framework in which intrinsic motivation and work engagement function as independent variables acting upon the work productivity of employees. Intrinsic motivation is expected to supply the internal impulse that explains why an employee is willing to exert himself in earnest, whereas work engagement is expected to furnish the behavioral and affective manifestation through which that impulse is sustained across the duration of the work process. The two determinants are further presumed to operate not only in isolation but also in concert.

On the basis of this reasoning, three hypotheses are proposed:

H1: Intrinsic motivation exerts a positive and significant effect upon the work productivity of employees at the Department of Education of Mamuju Regency.

H2: Work engagement exerts a positive and significant effect upon the work productivity of employees at the Department of Education of Mamuju Regency.

H3: Intrinsic motivation and work engagement, taken simultaneously, exert a positive and significant effect upon the work productivity of employees at the Department of Education of Mamuju Regency.

METHODOLOGY

This investigation was conducted using a quantitative approach paired with a causal associative design grounded in the positivist paradigm, a combination chosen because the central aim is to establish the direction and to measure the magnitude of the influence exerted by the independent variables upon the dependent variable, rather than merely to describe the relationships that obtain among them (Sugiyono, 2022). The fieldwork was situated at the Department of Education of Mamuju Regency, in the Province of West Sulawesi, and was organized in successive phases extending from preliminary observation through instrument construction and data collection to the final reporting of results. The location was selected purposively, on the ground that the agency carries a heavy administrative and coordinative workload while simultaneously exhibiting the preliminary symptoms of productivity difficulty described above. Data collection was carried out between May and July 2026.

The population of the study encompassed the whole body of civil servants actively serving at the agency at the time the research was conducted, numbering sixty-nine persons. Because the population was comparatively small and wholly accessible, the sample was determined by means of a total sampling or census

technique, whereby every member of the population was enrolled as a respondent (Sugiyono, 2022). The adoption of a census in a population of this size eliminates sampling error altogether and furnishes a more faithful representation of the condition of the object under study than any probabilistic subset could provide. The rate of questionnaire return reached one hundred percent, so that the full complement of sixty-nine instruments proved fit for analysis.

Primary data were gathered through a questionnaire serving as the principal instrument, a choice justified by its capacity to reach the entire respondent body within a comparatively short interval while yielding data of a standardized form. The instrument was distributed both in person and through Google Form. Collection was supplemented by three complementary techniques: non-participant observation of employee activity, of the dynamics of the working environment, and of patterns in the completion of assigned tasks; library research through the examination of books, scholarly journals, and relevant prior findings; and documentation in the form of the institutional profile, the organizational structure, and personnel records, which together constituted the secondary data of the study.

Every item in the questionnaire was scored on a five-point Likert scale ranging from one (strongly disagree) to five (strongly agree). The instrument comprised eighteen statement items distributed across three variables, with six items assigned to intrinsic motivation, six to work engagement, and six to work productivity. The operational definitions and indicators of each variable are set out in Table 1.

Table 1. Operational Definition of Variables

Variable	Conceptual Definition	Indicators
Intrinsic Motivation (X1)	The impulse originating within the employee to perform work by reason of enjoyment, satisfaction, responsibility, and the desire to achieve, uninfluenced by external reward or pressure.	Need for autonomy (X1.1, X1.2); need for competence (X1.3, X1.4); need for relatedness (X1.5, X1.6).
Work Engagement (X2)	The positive psychological condition displayed by an employee through energy, dedication, and full involvement in the work, enabling him to render his best contribution.	Vigor (X2.1, X2.2); dedication (X2.3, X2.4); absorption (X2.5, X2.6).
Work Productivity (Y)	The capacity of the employee to generate work output effectively and efficiently in conformity with the targets of the organization.	Quantity of work (Y.1, Y.2); quality of work (Y.3, Y.4); time and speed of work (Y.5, Y.6).

Source: Adapted from Deci and Ryan (2000), Schaufeli et al. (2002), and Mainake et al. (2024).

Analysis commenced with an examination of the quality of the measuring instrument. Validity was assessed through Pearson Product Moment correlation, an item being retained as valid where its calculated correlation exceeded the tabulated critical value at the five percent level of significance (Ghozali, 2021). With sixty-nine respondents and degrees of freedom of sixty-seven, the critical value employed was 0.2352. Reliability was assessed through Cronbach's Alpha, a variable being judged reliable where the coefficient exceeded the conventional threshold of 0.60 (Ghozali, 2021).

Descriptive statistics were then used to map the tendency of respondent answers on each item through frequency distribution, weighted score, and mean value. The interpretation of mean values proceeded by reference to a class interval of 0.80, whereby a mean between 1.00 and 1.80 was classified as very low, between 1.81 and 2.60 as low, between 2.61 and 3.40 as moderate, between 3.41 and 4.20 as high, and between 4.21 and 5.00 as very high.

Hypothesis testing was conducted by means of multiple linear regression, expressed through the model $Y = a + b_1X_1 + b_2X_2 + e$, in which Y denotes work productivity, a the constant, b1 and b2 the regression coefficients of the two predictors, X1 intrinsic motivation, X2 work engagement, and e the error term. The estimated model was interrogated through the partial t-test, which gauges the individual contribution of each independent variable and which accepts the hypothesis where the calculated t exceeds the tabulated value or where the significance falls below 0.05; through the simultaneous F-test, which evaluates the joint contribution of the predictors and the fitness of the model as a whole; and through the coefficient of determination, which quantifies the proportion of variance in productivity explained by the model (Ghozali, 2021). The tabulated t value was obtained by setting half of alpha at 0.025 with degrees of freedom of sixty-six, yielding 1.997, while the tabulated F value was obtained with degrees of freedom of two and sixty-six, yielding 3.136. All computations were performed with the assistance of IBM SPSS Statistics version 23.

RESULTS AND DISCUSSION

Results

General Overview of the Research Location

The Department of Education of Mamuju Regency is a regional apparatus charged with assisting the Regent in the administration of governmental affairs in the field of education. Its functions extend to the formulation and implementation of educational policy, the guidance and supervision of educational units, the management of teaching and educational personnel, and the evaluation of educational delivery throughout the regency. The agency operates in service of a vision of a Mamuju society that is creative, educative, hospitable, energetic, and comfortable, a

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formulation that places the quality of human resources at the center of regional development. Its organizational structure comprises a Secretariat together with several technical divisions responsible respectively for early childhood and non-formal education, primary education, junior secondary education, and the management of educators and educational personnel, each of which carries a substantial burden of administrative and coordinative work.

Respondent Characteristics

The sixty-nine respondents enrolled in the study were profiled according to gender and level of education in order to convey a clear picture of the population from which the data were drawn. The distribution of these characteristics is presented in Table 2.

Table 2. Respondent Characteristics

Characteristic	Category	Frequency (People)	Percentage (%)
Gender	Male	35	50.7
	Female	34	49.3
Level of Education	Senior High School or equivalent	19	27.5
	Diploma (D1/D3)	1	1.4
	Bachelor's degree (S1)	43	62.3
	Master's degree (S2)	6	8.7
Total		69	100

Source: Primary data after processing, 2026.

As Table 2 discloses, the composition of respondents by gender is very nearly balanced, with thirty-five men constituting 50.7 percent and thirty-four women constituting 49.3 percent. This equilibrium is methodologically advantageous, since it reduces the likelihood that patterns in the responses are attributable to gender composition rather than to the constructs under examination.

With respect to education, the largest cohort by a considerable margin holds a bachelor's degree, numbering forty-three persons or 62.3 percent, followed by those educated to senior high school level at nineteen persons or 27.5 percent, holders of a master's degree at six persons or 8.7 percent, and a single diploma holder representing 1.4 percent. The predominance of graduate and postgraduate qualification, which together account for 71.0 percent of the workforce, indicates that the agency possesses an academic endowment sufficient to sustain a mode of working founded upon initiative and analysis. The presence of a further 27.5 percent educated to secondary level nonetheless signals a gap in capacity that warrants bridging through technical

training and workplace mentoring, a consideration that assumes particular weight in view of the finding, reported below, that the competence indicator is the weakest element within the intrinsic motivation construct.

Validity was examined by comparing the calculated correlation of each item against the critical value of 0.2352 at the five percent level of significance with degrees of freedom of sixty-seven. The recapitulation of results is presented in Table 3.

Table 3. Validity Test Results

Variable	Item	Calculated r	Critical r	Sig. (2-tailed)	Description
Intrinsic Motivation (X1)	X1.1	0.629	0.2352	0.000	Valid
	X1.2	0.475	0.2352	0.000	Valid
	X1.3	0.815	0.2352	0.000	Valid
	X1.4	0.756	0.2352	0.000	Valid
	X1.5	0.545	0.2352	0.000	Valid
	X1.6	0.366	0.2352	0.002	Valid
Work Engagement (X2)	X2.1	0.623	0.2352	0.000	Valid
	X2.2	0.718	0.2352	0.000	Valid
	X2.3	0.607	0.2352	0.000	Valid
	X2.4	0.647	0.2352	0.000	Valid
	X2.5	0.508	0.2352	0.000	Valid
	X2.6	0.440	0.2352	0.000	Valid
Work Productivity (Y)	Y.1	0.706	0.2352	0.000	Valid
	Y.2	0.678	0.2352	0.000	Valid
	Y.3	0.550	0.2352	0.000	Valid
	Y.4	0.472	0.2352	0.000	Valid
	Y.5	0.740	0.2352	0.000	Valid
	Y.6	0.754	0.2352	0.000	Valid

Source: Primary data processed with IBM SPSS Statistics version 23, 2026

Table 3 establishes that all eighteen statement items record a calculated correlation greater than the critical value of 0.2352 with a significance below 0.05, so that every

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item is retained as valid. The range of correlations extends from 0.366 to 0.815 for intrinsic motivation, from 0.440 to 0.718 for work engagement, and from 0.472 to 0.754 for work productivity.

The item exhibiting the strongest correlation is X1.3 at 0.815, which represents the need for competence, signifying that the perception of one's own capability constitutes the most powerful marker of the intrinsic motivation construct among this respondent body. Item X1.6, by contrast, records the weakest correlation at 0.366. Although it satisfies the threshold of validity, a value of this order indicates a comparatively limited contribution to the construct and warrants reconsideration in subsequent research, whether through the reformulation of the statement or through the addition of further items to the relatedness indicator.

Reliability was examined through Cronbach's Alpha, the results of which are presented in Table 4.

Table 4. Reliability Test Results

Variable	Cronbach's Alpha	Number of Items	Critical Value	Description
Intrinsic Motivation (X1)	0.651	6	0.60	Reliable
Work Engagement (X2)	0.616	6	0.60	Reliable
Work Productivity (Y)	0.729	6	0.60	Reliable

Source: Primary data processed with IBM SPSS Statistics version 23, 2026

Table 4 shows that every variable attains a Cronbach's Alpha above the minimum threshold of 0.60, namely 0.651 for intrinsic motivation, 0.616 for work engagement, and 0.729 for work productivity. The instrument is accordingly declared reliable and possessed of adequate internal consistency. It merits methodological note that the coefficients for work engagement and intrinsic motivation, while acceptable, lie relatively close to the threshold, a circumstance commonly encountered in instruments composed of a limited number of items, since Cronbach's Alpha is by construction sensitive to scale length. Subsequent research would be well advised to increase the number of items per indicator to a minimum of three, so that the estimation of internal consistency may become more stable.

Multiple Linear Regression and Partial Test Results

Multiple linear regression was employed to quantify the influence of intrinsic motivation and work engagement upon work productivity, and the outcome of this estimation, together with the partial test, is displayed in Table 5.

Table 5. Results of Multiple Linear Regression and the Partial t-Test

Variable	Coefficient (B)	Std. Error	Beta	t-count	t-table	Sig.	Description
(Constant)	5.800	3.037	-	1.910	1.997	0.061	Not significant

Intrinsic Motivation (X1)	0.428	0.101	0.432	4.250	1.997	0.000	Significant
Work Engagement (X2)	0.353	0.112	0.320	3.148	1.997	0.002	Significant

Source: Primary data processed with IBM SPSS Statistics version 23, 2026. Dependent variable: Work Productivity (Y); t -table = 1.997 with $df = 66$.

On the strength of Table 5, the estimated regression equation may be written as $Y = 5.800 + 0.428X_1 + 0.353X_2 + e$. The constant of 5.800 signifies that were intrinsic motivation and work engagement both reduced to zero, work productivity would still register a baseline value of 5.800 units. This constant is not statistically significant, its significance of 0.061 exceeding the 0.05 threshold, and it is therefore more properly construed as a mathematical intercept than as an estimate of any attainable level of productivity, given that the lowest score obtainable on the productivity scale is six.

The regression coefficient for intrinsic motivation of 0.428 carries a positive sign, signifying that each increment of one unit in the intrinsic motivation score is accompanied by an increase of 0.428 units in work productivity, holding work engagement constant. The coefficient for work engagement of 0.353 likewise carries a positive sign, signifying an increase of 0.353 units in productivity for each unit increment in engagement, holding intrinsic motivation constant. The standardized beta coefficients establish that intrinsic motivation, at 0.432, contributes more substantially to the explanation of productivity than does work engagement, at 0.320, and it accordingly emerges as the dominant predictor within the model.

A check upon the internal consistency of the model may be performed by substituting the empirical means of the two predictors into the equation. With a mean total score of 22.33 for intrinsic motivation and 23.15 for work engagement, the model predicts a productivity score of 5.800 plus 9.557 plus 8.172, or 23.53. The empirical mean total score for work productivity is 23.54. The near identity of these figures indicates that the regression model is well calibrated at the center of the data distribution.

The partial test lends statistical support to both relationships. Intrinsic motivation returns a calculated t of 4.250, comfortably exceeding the critical value of 1.997, at a significance of 0.000, well below the 0.05 threshold; the first hypothesis is therefore accepted. Work engagement produces a calculated t of 3.148, again surpassing the critical value, at a significance of 0.002, likewise below 0.05, so that the second hypothesis is accepted as well.

Simultaneous Test and Coefficient of Determination Results

To ascertain whether the two predictors act jointly upon productivity and to evaluate the fitness of the model as a whole, a simultaneous test was carried out, the results of which are set out in Table 6.

Table 6. Results of the Simultaneous F-Test (ANOVA)

Model	Sum of Squares	df	Mean Square	F-count	F-table	Sig.
Regression	287.315	2	143.657	18.031	3.136	0.000
Residual	525.845	66	7.967	–	–	–
Total	813.159	68	–	–	–	–

Source: Primary data processed with IBM SPSS Statistics version 23, 2026. Dependent variable: Work Productivity (Y); predictors: Work Engagement (X2) and Intrinsic Motivation (X1); F-table = 3.136 with $df_1 = 2$ and $df_2 = 66$.

Table 6 shows that the calculated F of 18.031 exceeds the tabulated value of 3.136 by a margin of more than fivefold, at a significance of 0.000 lying well below 0.05. Intrinsic motivation and work engagement therefore exert a positive and significant joint influence upon work productivity, and the regression model is declared fit for the purpose of prediction. The third hypothesis is accordingly accepted.

The coefficient of determination is presented in Table 7.

Table 7. Coefficient of Determination (Model Summary)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.594	0.353	0.334	2.823

Source: Primary data processed with IBM SPSS Statistics version 23, 2026

The multiple correlation coefficient of 0.594 falls within the moderate to strong band, indicating a reasonably close association between the two predictors taken together and the productivity of employees. The R Square value of 0.353 reveals that intrinsic motivation and work engagement jointly account for 35.3 percent of the variation in work productivity, while the residual 64.7 percent is attributable to variables situated beyond the model.

The Adjusted R Square of 0.334, only marginally below R Square, indicates that the model incurs no excessive penalty for the number of predictors it carries and thus remains parsimonious. The standard error of the estimate of 2.823 is comparatively modest when set against the standard deviation of the total productivity score of 3.458, signifying that the model reduces predictive error by approximately 18.4 percent relative to prediction without a model. Converted into Cohen's measure of effect size, the value of f squared, obtained as R Square divided by one minus R Square, amounts to 0.546, which falls within the large category. Although the proportion of variance explained is not dominant, the practical strength of the model is therefore substantial.

The variables likely to account for the residual 64.7 percent include employee ability and expertise, the capability of leadership, the working environment, compensation, relations with colleagues, organizational culture, education and work experience,

occupational health and safety, work climate, and personnel maintenance (Rahmawati, 2024). A residual of this magnitude is unsurprising in a governmental setting, where productivity is additionally conditioned by structural factors such as budgetary availability, the clarity of procedure, and the adequacy of information system support.

Discussion

The Effect of Intrinsic Motivation on Work Productivity

The results of the partial test demonstrate that intrinsic motivation exerts a positive and significant effect on the work productivity of employees at the Education Office of Mamuju Regency, as indicated by a t-value of 4.250, which exceeds the critical t-value of 1.996, with a significance level of 0.000 ($p < 0.05$). Accordingly, the first hypothesis (H1) is accepted. The positive regression coefficient signifies a unidirectional relationship, whereby higher levels of intrinsic motivation among employees correspond to higher levels of work productivity, and conversely, a decline in intrinsic motivation tends to be followed by a decline in productivity. This finding is reinforced by the descriptive analysis, which places the intrinsic motivation variable within the high category. Such a result illustrates that the majority of employees possess an internal drive to complete their assignments effectively, a strong sense of responsibility toward their work, and a willingness to deliver optimal performance without relying entirely on external stimuli.

From a theoretical standpoint, this finding is consistent with Self-Determination Theory, which posits that motivation originating from within the individual, manifested through enjoyment, satisfaction, and a sense of responsibility in performing work, fosters work behavior that is more persistent, creative, and quality-oriented (Deci & Ryan, 2000). Employees with strong intrinsic motivation tend to perceive their work as a medium of self-actualization and are therefore willing to invest greater effort in task completion, which ultimately translates into improved work productivity. The present findings are congruent with a number of prior studies reporting that intrinsic motivation constitutes a significant predictor of employee productivity and performance within the public sector. The practical implication is that the organization should cultivate and sustain employees' intrinsic motivation through the delegation of trust and job autonomy, the provision of competency development opportunities, recognition of work achievements, and the establishment of a work climate conducive to job satisfaction and enthusiasm.

The Effect of Work Engagement on Work Productivity

The partial test of the work engagement variable yields a t-value of 3.148, exceeding the critical t-value of 1.996, with a significance level of 0.002 ($p < 0.05$). It can therefore be concluded that work engagement has a positive and significant effect on the work productivity of employees at the Education Office of Mamuju Regency, and the second hypothesis (H2) is accepted. The positive direction of the regression

coefficient indicates that an increase in employees' engagement with their work is accompanied by an increase in work productivity, whereas diminished engagement has the potential to reduce productivity outcomes. The descriptive analysis, which situates the work engagement variable within the high category, corroborates this finding and suggests that most employees exhibit commendable levels of vigor, dedication, and involvement in carrying out the duties and responsibilities attached to their positions.

This finding may be explained through the conceptualization of work engagement as a positive psychological state reflected in the dimensions of vigor, dedication, and absorption (Schaufeli & Bakker, 2004). Employees who are psychologically engaged with their work display high levels of energy, resilience in confronting task-related obstacles, and full concentration during task execution, thereby producing outputs of superior quality and quantity. The Job Demands-Resources perspective further asserts that the availability of job resources strengthens work engagement, which subsequently enhances performance and productivity (Bakker & Demerouti, 2017). The present results are therefore in line with prior studies documenting the significant contribution of work engagement to employee productivity. Consequently, the institution should strengthen employee engagement through the creation of a conducive working environment, supportive leadership, effective organizational communication, career development opportunities, and the provision of recognition for employee performance.

The Simultaneous Effect of Intrinsic Motivation and Work Engagement on Work Productivity

The results of the simultaneous test reveal an F-value of 18.031, which exceeds the critical F-value of 3.13, with a significance level of 0.000 ($p < 0.05$). Intrinsic motivation and work engagement therefore jointly exert a positive and significant effect on the work productivity of employees at the Education Office of Mamuju Regency, and the third hypothesis (H3) is accepted. The coefficient of determination (R Square) of 0.353 indicates that 35.3% of the variance in employee work productivity is explained by the two independent variables, while the remaining 64.7% is attributable to factors beyond the research model, such as leadership, work environment, compensation, work discipline, organizational culture, training, competence, and job satisfaction. This finding affirms that both variables make a meaningful contribution, yet it also underscores that work productivity is a multidimensional construct shaped by a range of organizational and individual determinants.

Conceptually, intrinsic motivation functions as an internal driver that fosters diligence and accountability in the execution of work, whereas work engagement represents the intensity of employees' vigor, dedication, and involvement throughout the work process. When both conditions are present simultaneously, a psychological

synergy emerges that encourages employees to work more effectively, efficiently, and with a stronger results orientation, thereby generating sustained improvements in productivity. Accordingly, the integrated reinforcement of motivational and engagement dimensions constitutes a pertinent strategy for enhancing employee productivity within government institutions. From a managerial perspective, the Education Office of Mamuju Regency is advised to formulate human resource management policies that combine opportunities for self-development, recognition of achievement, two-way communication, supportive leadership, and the cultivation of a comfortable and conducive work environment. Future research is recommended to incorporate additional variables beyond the present model in order to obtain a more comprehensive explanation of the determinants of employee work productivity.

Research Limitations

Several limitations attend this study and should be borne in mind in interpreting its results. The research was conducted within a single agency with sixty-nine respondents, so that the generalization of its findings to other institutions requires caution. It employed a cross-sectional design, with the consequence that causality cannot be established definitively and the relationships observed are more properly construed as predictive influence. All data were gathered through respondent self-report at a single point of measurement, which admits the possibility of common method bias and of socially desirable responding. The limited number of items per variable yielded reliability coefficients that are adequate yet close to the threshold on two of the three variables. And the model incorporated only two independent variables, leaving a substantial proportion of variance unexplained.

CONCLUSION

Drawing together the evidence presented above, three conclusions may be stated concerning the work productivity of employees at the Department of Education of Mamuju Regency.

First, intrinsic motivation exerts a positive and significant partial effect upon work productivity, as evidenced by a regression coefficient of 0.428, a calculated *t* of 4.250 exceeding the tabulated value of 1.997, and a significance of 0.000 below the 0.05 threshold. The stronger the internal impulse arising from the satisfaction of the needs for autonomy, competence, and relatedness, the greater the quantity, quality, and punctuality of the work an employee produces. By reference to a standardized beta of 0.432, intrinsic motivation constitutes the dominant predictor within the model.

Second, work engagement likewise exerts a positive and significant partial effect upon work productivity, as evidenced by a regression coefficient of 0.353, a calculated *t* of 3.148 exceeding the tabulated value of 1.997, and a significance of 0.002 below the 0.05 threshold. The greater the energy, dedication, and engrossment an employee brings to his work, the better the productivity he achieves.

Third, intrinsic motivation and work engagement, acting simultaneously, exert a positive and significant effect upon work productivity, as evidenced by a calculated F of 18.031 exceeding the tabulated value of 3.136 at a significance of 0.000, so that the regression model is declared fit for purpose. The coefficient of determination of 0.353 establishes that the two variables jointly account for 35.3 percent of the variation in productivity, the residual 64.7 percent being attributable to factors beyond the model, among them technical competence, leadership, compensation, working environment, and organizational culture.

The descriptive analysis supplements these conclusions with three observations of consequence. The need for competence stands as the weakest indicator within intrinsic motivation at a mean of 3.49, notwithstanding that its constituent items exhibit the strongest correlations with the construct. The absorption dimension of work engagement displays the widest internal variation, indicating an engagement that remains episodic in character. And time and speed of work stands as the weakest facet of productivity at a mean of 3.77. All three observations converge upon a single principal recommendation, namely that efforts to raise employee productivity at this agency should commence with the strengthening of competence and task mastery, proceed through the management of workload and the reinforcement of work meaningfulness, and thereby enable the internal impulse of employees to be realized in output that is sound in quality and timely in delivery.

Recommendations

In light of these findings, the leadership of the Department of Education of Mamuju Regency is advised to accord first priority to the strengthening of employee competence, through position-based training needs analysis, technical training in the management of documents and planning, structured mentoring by senior personnel, and the provision of standardized working guidelines, since competence carries the heaviest construct weight while registering the lowest perceptual score. It is further advised to expand responsible autonomy by delegating authority with clarity, by setting targets defined in terms of outcome rather than process, and by opening channels through which employees may propose improvements to working procedure.

Attention should additionally be directed to the management of workload and to the reinforcement of sustained concentration during periods of peak demand, through more equitable distribution of tasks, realistic scheduling, and the curtailment of inessential administrative interruption, so that the absorption dimension may be rendered more stable. The meaningfulness of work merits parallel reinforcement through regular communication concerning the contribution of each unit to the institutional vision, through recognition of good performance, and through the involvement of employees in forums convened to resolve organizational problems. Punctuality in the completion of work, the weakest facet of productivity recorded in

this study, should be addressed through deadline-based monitoring of activity progress, the establishment of service time standards, and periodic evaluation of the causes of delay.

Researchers who pursue this line of inquiry in future would do well to widen the respondent base across several regional agencies so as to enhance the generalizability of findings, to increase the number of items per indicator so as to strengthen the internal consistency of the instrument, and to introduce additional explanatory variables such as leadership, technical competence, workload, organizational culture, and perceived organizational support in order to illuminate the 64.7 percent of variance that the present model leaves unexplained. The testing of work engagement as a mediating variable in the relationship between intrinsic motivation and work productivity represents a particularly promising theoretical agenda, given that both constructs proved significant and that they occupy conceptually distinct stages of the motivational process. The use of objective performance data, such as the attainment of employee performance targets or the punctuality of document completion, is likewise recommended as a complement to the perceptual data on which the present study relies.

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