

WORK FAMILY CONFLICT AND WORK LIFE BALANCE AMONG SOFTWARE DEVELOPERS IN INDONESIA

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Abstract

Software developers face overlapping professional and family demands that may complicate work–life balance. This study examined the relationship between work–family conflict and work–life balance among software developers in Indonesia. A quantitative nonexperimental survey involved 273 respondents recruited through convenience sampling, with eligibility criteria of marriage and at least one year of employment. Questionnaire data were analyzed using simple linear regression, descriptive categorization, standardized dimension scores, and cross-tabulations. The reported regression indicated a significant positive association between work–family conflict and work–life balance ($B = 0.581$, $\beta = 0.767$, $t = 19.707$, $p < .001$), explaining 58.9% of outcome variance ($R^2 = .589$). Most respondents were classified as having low work–family conflict (81.3%) and low work–life balance (78.0%). Behavior-based conflict was the most frequently dominant conflict dimension (34.8%), while resources predominated in work–life balance profiles (81.0%). The positive association requires cautious interpretation because instrument descriptions and scoring information in the source thesis are inconsistent. The findings support further examination of role management and work–nonwork resources, with verification of scoring and statistical assumptions before substantive or practical conclusions are finalized.

Keywords: Indonesia; software developers; work–family conflict; work–life balance.

INTRODUCTION

Software development requires sustained cognitive effort, rapid problem solving, and coordination around project deadlines. Responsibility for maintaining operational systems may also extend beyond regular working hours. These demands can interrupt family activities and reduce opportunities for rest, especially when professional responsibilities overlap with commitments to a spouse or children. Understanding the work–family interface in this occupational setting is therefore relevant to employee well-being and the organization of work. Preliminary interviews reported in the source thesis with three software developers illustrated this overlap. The interviewees described being contacted during holidays or time with family when systems or websites experienced problems. Technical incidents required attention before personal activities could resume. These accounts provide contextual motivation for the study rather than evidence of the prevalence of such experiences throughout the Indonesian software industry. They suggest that availability expectations and the permeability of work boundaries deserve attention when examining balance between work and personal life.

Work–life balance concerns both interference and positive interaction between work and nonwork roles. Fisher et al. (2009) distinguished work interference with personal life, personal life interference with work, work enhancement of personal life, and personal life enhancement of work. This framework recognizes that professional and personal experiences can compete for resources while also supporting one another. An individual may therefore report relatively little direct conflict yet still experience limited balance if positive resources or opportunities for recovery are insufficient.

Work–family conflict represents incompatibility between demands arising from employment and family roles. Greenhaus and Beutell (1985) distinguished conflict related to time, strain, and behavior. These forms are relevant to software development because extended availability may compete with family time, technical pressure may persist after work, and task-oriented behavior may not match the interpersonal expectations of family life. Nevertheless, theoretical relevance does not establish the direction or strength of the empirical relationship in a particular occupational sample. The literature discussed in the thesis addresses balance across different employment and family settings. Gisela and Sumaryono (2024) examined work–life balance in relation to perceived long working hours and psychological safety when working from home. Pongramma and Soetjningsih (2023) considered

psychological well-being and work–life balance among married working women. These perspectives help identify potentially relevant resources and demands, but they do not directly characterize the sample of software developers examined here. The present study adds occupationally specific descriptive and regression evidence from Indonesia. The study aimed to examine whether work–family conflict statistically predicted work–life balance among software developers. It also described respondent characteristics, the distribution of variable categories, and the relative prominence of dimensions. Following the original thesis, the hypothesis was nondirectional: work–family conflict significantly predicts work–life balance. The term prediction refers to the regression relationship; the nonexperimental design does not establish a causal effect.

LITERATURE REVIEW

Work life balance as interference and enhancement

Fisher et al. (2009) conceptualized the work–nonwork interface through four components. Work interference with personal life describes the extent to which work reduces personal time, energy, or functioning. Personal life interference with work captures the reverse direction, in which personal responsibilities make professional functioning more difficult. Work enhancement of personal life and personal life enhancement of work describe positive transfers between the two domains. This distinction provides a broader account than equating balance solely with an absence of conflict. In the thesis, the interference components were grouped as demands, while enhancement components were grouped as resources. The work–life balance total was described as the sum of 17 items, with demand items reverse scored so that a higher overall score indicated better balance. This scoring direction is essential to interpretation: combining unreversed interference items with enhancement items would mix opposite meanings within a single total. Gunawan et al. (2019) supplied the Indonesian psychometric reference cited for the measure, although published validation statistics should not be treated as reliability estimates for the present sample. Wulansari (2023) reviewed factors associated with work–life balance, supporting consideration of individual and contextual conditions rather than a single determinant. Similarly, Veluthan and Valarmathi (2020) considered work–life balance in the Indian information technology industry. These references provide background for considering work schedules, personal circumstances, and available support. The current regression model included only work–family conflict, so it cannot assess the independent contribution of these additional conditions.

Work family conflict and competing role demands

Greenhaus and Beutell (1985) defined work–family conflict as interrole conflict in which demands from work and family are mutually incompatible. Time-based conflict arises when participation in one role limits the time available for another. Strain-based conflict occurs when pressure or fatigue from one domain interferes with functioning in another. Behavior-based conflict concerns incompatibility between behaviors expected across roles. The framework clarifies how conflict may arise even when an individual remains committed to both employment and family life. Conflict also has a direction. Work can interfere with family functioning, and family responsibilities can interfere with work. Frone et al. (1992) examined the work–family interface through these reciprocal processes. The distinction between direction and form matters for measurement: work-to-family and family-to-work conflict are not equivalent to the time, strain, and behavior categories. An instrument developed around one structure requires justification before its items are reassigned to another structure. The source thesis presents both structures in its instrument descriptions. Its operational definition identifies a 10-item Work and Family Conflict Scale with two directions, whereas its item blueprint organizes the items into three forms of conflict. Hartika et al. (2019) is cited for Indonesian instrument evidence. These descriptions need reconciliation to establish which validated structure and scoring procedure were actually used. The dimension findings in this article are accordingly reported as exploratory profiles from the thesis rather than as confirmed measurement factors.

Multiple roles and the study hypothesis

A competing-demand account suggests that incompatible roles can reduce the resources available for balance. However, multiple-role perspectives offer a complementary account. Sieber (1974) discussed potential advantages of accumulating roles, while Marks (1977) considered energy, time, and commitment in relation to multiple roles and strain. Wayne et al. (2007) described work–family facilitation as a process through which experience in one domain may benefit functioning in another. These perspectives permit positive interaction across domains without implying that conflict itself is beneficial. For software developers, skills acquired at work might support planning and problem solving at home, while supportive family relationships might sustain professional functioning. These are plausible mechanisms, not variables measured in this study. The empirical objective was

therefore limited to testing the statistical relationship between reported conflict and balance. A significant result in either direction would support the original nondirectional hypothesis, but explanation of that direction would require reliable scoring and evidence beyond the simple regression model.

METHOD

Design and participants

The study used a quantitative nonexperimental questionnaire design. Although the thesis described its design as causal, no manipulation, random assignment, or temporal ordering was reported. This article consequently treats the analysis as an observational regression study. Participants were recruited through nonprobability convenience sampling, reflecting accessibility and willingness to participate rather than equal selection probabilities (Gravetter & Forzano, 2018). The final analytical sample comprised 273 software developers in Indonesia. The stated inclusion criteria were marriage and at least one year of work experience. The demographic tables nevertheless contain 272 married respondents and one respondent classified as divorced or widowed. The full sample of 273 is retained to match the reported statistical output, with this eligibility discrepancy acknowledged as a limitation. The thesis grouped employment tenure into 0–5, 6–10, 11–15, and 16–20 years; the first category label should not be interpreted as evidence that respondents with less than one year of experience were eligible. The questionnaire appendix included an informed-consent statement describing voluntary participation, confidentiality of respondents' identities and answers, and academic use of the data. The source document did not provide an ethics approval identifier or a precise collection period. These details are therefore not supplied or inferred in this article. Convenience sampling also prevents assuming that the sample represents all Indonesian software developers.

Measures

Work–life balance was measured using the 17-item instrument attributed to Fisher et al. (2009). The thesis assigned five items to work interference with personal life, six to personal life interference with work, three to work enhancement of personal life, and three to personal life enhancement of work. Responses ranged from 1 (never) to 5 (very often). The stated procedure reversed interference items before summing all items, producing higher scores for better balance. The theoretical total range is 17–85.

For the Indonesian validation cited in the thesis, factor loadings were reported as .750–.912, composite reliability as .976, and variance extracted as .707 (Gunawan et al., 2019). These values describe the previous validation as reported in the source and do not demonstrate the reliability or validity of scores from the current respondents. The thesis explains item–total correlation and Cronbach's alpha procedures but does not include an identifiable current-sample reliability output in its results tables.

Work–family conflict was measured using a questionnaire labeled the Work and Family Conflict Scale. The instrument section and appendix contain 10 items with five response options from never to very often. A higher summed score was intended to indicate greater conflict. The thesis cites Greenhaus and Beutell (1985) for the conceptual basis and Hartika et al. (2019) and Febrianti, et al. (2023) for Indonesian instrument evidence, reporting a previous Cronbach's alpha of .745. The item blueprint assigns five items to time-based, four to strain-based, and one to behavior-based conflict.

An unresolved inconsistency concerns the conflict total: the descriptive table gives a range of 9–45, whereas the instrument description and appendix specify 10 items, implying a theoretical range of 10–50. No item-deletion output explains this difference. The exact administered and analyzed version, its attribution, and the retained item set should be verified against the questionnaire and original dataset. This article does not infer that an item was removed or silently alter the reported scores.

Data analysis

The primary analysis was simple linear regression, with work–family conflict as predictor and work–life balance as outcome. Statistical significance was evaluated at .05. The reported unstandardized and standardized coefficients, *t* statistic, R^2 , adjusted R^2 , and standard error of estimate were retained. Values displayed as .000 in the thesis are presented as $p < .001$. R^2 is interpreted as the proportion of observed outcome variance explained by the fitted model, rather than the proportion of balance caused by conflict. The thesis also reported Kolmogorov–Smirnov tests, an ANOVA-based linearity analysis, variable categorization, standardized dimension profiles, and cross-tabulations. Categories used cutoffs of 51 for balance and 27 for conflict. These cutoffs coincide with the midpoints of the ranges reported in the descriptive tables, so the accompanying mean and standard-deviation labels should be verified before treating them as sample statistics. Cross-tabulations are used descriptively; no significant subgroup

differences are claimed without inferential tests. For dimension profiles, each respondent was assigned to the dimension with the highest standardized score. These frequencies describe relative prominence within respondent profiles rather than comparative regression effects or evidence that one dimension causes more difficulty. In particular, the single-item behavior category requires caution. The thesis does not explain tie handling or provide sufficient score distributions to reconstruct the classification independently.

RESULTS AND DISCUSSION

Respondent characteristics and score categories

Most respondents were aged 31–40 years (66.3%), women (56.8%), and employed under a work-from-office arrangement (61.2%). Bachelor's degree holders accounted for 79.1% of the sample, while the largest tenure group was 6–10 years (54.9%). These characteristics describe the participants reached through convenience sampling and provide context for interpreting the findings.

Table 1. Selected respondent characteristics

Characteristic	Category	n	%
Age	31–40 years	181	66.3
Sex	Men	118	43.2
Sex	Women	155	56.8
Work arrangement	Hybrid	70	25.6
Work arrangement	Work from home	36	13.2
Work arrangement	Work from office	167	61.2
Marital status	Married	272	99.6
Marital status	Divorced or widowed	1	0.4
Education	Bachelor's degree	216	79.1
Employment tenure	6–10 years	150	54.9

Using the source cutoffs, 213 respondents (78.0%) were classified as having low work–life balance, while 60 (22.0%) had high balance. For conflict, 222 (81.3%) were classified as low and 51 (18.7%) as high. These classifications are descriptive and are not clinical or population norms. Because the cutoffs and scale range require clarification, the categories should not be interpreted as precise prevalence estimates of problematic balance or conflict.

Table 2. Reported score categories

Variable	Cutoff	Low n (%)	High n (%)
Work–life balance	Low < 51; high ≥ 51	213 (78.0)	60 (22.0)
Work–family conflict	Low < 27; high ≥ 27	222 (81.3)	51 (18.7)

The coexistence of predominantly low conflict and low balance is conceptually possible because the constructs are not identical. The absence of intense incompatibility does not necessarily indicate adequate recovery, positive enhancement, or satisfaction across life domains. However, the present categories alone cannot identify which

mechanism explains the pattern. They also cannot resolve the scoring discrepancies in the source instrument descriptions.

Assumption checks and regression results

The Kolmogorov–Smirnov table reported $p = .050$ for balance and $p = .058$ for conflict. The first value lies at the decision threshold and should not be described as clearly greater than .05. These tests concern the two observed variables; a normality test of regression residuals was not provided. The linearity table reported $F = 53.552$ and $p < .001$ for the linearity component. The narrative called this the deviation-from-linearity result, but the table contained no such row. The linearity component therefore indicates a linear association without establishing that meaningful nonlinear deviation is absent.

Table 3. Reported simple linear regression coefficients

Term	B	SE	β	t	p
Constant	34.413	.690	—	49.862	< .001
Work–family conflict	.581	.029	.767	19.707	< .001

The conflict coefficient was positive and statistically significant ($B = .581$, $\beta = .767$, $t = 19.707$, $p < .001$). The fitted equation was work–life balance = $34.413 + 0.581 \times$ work–family conflict. Within the reported scoring system, a one-point increase in conflict corresponded to a predicted .581-point increase in balance. This result supports the original hypothesis that the predictor is statistically significant, but does not support a negative direction. The direction is retained exactly as recorded in the coefficient table.

Table 4. Reported model summary

R	R ²	Adjusted R ²	Standard error of estimate
.767	.589	.587	4.121

The model explained 58.9% of the observed variation in balance, leaving 41.1% unexplained by this one-predictor model. The unexplained portion may reflect omitted predictors, measurement error, or other variation; it is not a quantified contribution of specific unmeasured factors. The adjusted R^2 was .587 and the standard error of estimate was 4.121. Because the original data were not supplied, these values are transcribed results rather than a new analysis or independent reproduction.

Interpreting the positive association

The positive direction differs from the expectation that greater incompatibility between roles would accompany poorer balance. Multiple-role perspectives offer one possible context for discussing this finding: professional and family engagement may coexist with resources acquired through different roles (Sieber, 1974; Marks, 1977). Facilitation across domains is also theoretically relevant (Wayne et al., 2007). Nevertheless, role accumulation, role engagement, facilitation, and conflict are distinct concepts. A positive coefficient for conflict cannot by itself demonstrate that conflict improves balance (Simatupang, et al. 2026).

A substantive explanation would require evidence that respondents facing competing demands also developed effective coping, received support, or benefited from flexible arrangements. None of these mechanisms was included in the reported model. Consequently, suggestions that conflict stimulates adaptation remain hypotheses for further investigation. The current result should not be used to recommend increasing conflict or exposure to incompatible demands.

Measurement verification is particularly important because the balance scale combines interference and enhancement items with opposite original directions. The thesis states that interference items were reversed, but no item-level scoring output is available to confirm implementation. The conflict scale’s 10-item description and 9-45 range introduce another uncertainty. Checking the item key, reverse scoring, retained items, missing-value handling, and variable labels is necessary to determine whether the positive relationship reflects the intended constructs. The assumptions also limit interpretation. A significant linearity component is not equivalent to a nonsignificant deviation-from-linearity test, and variable normality is not the same as residual normality. Residual plots,

homoscedasticity assessment, and influence diagnostics were not reported. These omissions do not demonstrate that the model is invalid, but they prevent a complete evaluation of its adequacy from the thesis alone.

Exploratory dimension profiles and work arrangements

Table 5. Most prominent standardized dimensions in respondent profiles

Variable	Dimension	n	%
Work–family conflict	Time based	84	30.8
Work–family conflict	Strain based	94	34.4
Work–family conflict	Behavior based	95	34.8
Work–life balance	Demands	52	19.0
Work–life balance	Resources	221	81.0

Behavior-based conflict was the most frequently assigned dominant category, but exceeded strain-based conflict by only one respondent. Its 34.8% frequency should therefore be described as a slight numerical lead rather than decisive dominance. Furthermore, the behavior category contains one item, whereas the other categories contain four or five. Standardization enables relative comparison but does not establish comparable reliability or confirm the three-dimensional structure. The classification warrants exploratory treatment until the instrument structure is verified.

Resources were the dominant balance category for 221 respondents (81.0%), compared with demands for 52 (19.0%). This is a within-profile classification based on standardized scores. It does not mean that 81.0% of participants had high overall balance or that resources explained 81.0% of balance variance. The predominance of resources can therefore coexist with the separate finding that most participants were below the total-score cutoff.

Table 6. High score categories by work arrangement

Arrangement	n	High conflict n (%)	High balance n (%)
Hybrid	70	12 (17.1)	10 (14.3)
Work from home	36	3 (8.3)	3 (8.3)
Work from office	167	36 (21.6)	47 (28.1)

Work-from-office respondents showed the largest within-group percentages of both high conflict (21.6%) and high balance (28.1%). The corresponding percentages were 17.1% and 14.3% for hybrid respondents, and 8.3% for both categories among respondents working from home. These parallel descriptive patterns are consistent with the possibility that different arrangements involve different mixtures of demands and resources. They do not establish superiority of one arrangement or demonstrate statistically significant differences.

The groups differed substantially in size, and their composition may vary in tenure, family responsibilities, workload, or organizational support. No adjustment for these factors was reported. Work arrangement may also reflect selection processes rather than an externally assigned condition. Gisela and Sumaryono (2024) provide a useful basis for future investigation of working hours and psychological safety, but the present cross-tabulations do not test either mechanism.

Implications and limitations

A practical implication is to examine how software developers move between professional and family responsibilities. Organizations may review after-hours incident expectations, clarify response responsibilities, and

create predictable opportunities for recovery. At the individual and family level, explicit discussion of availability and shared responsibilities may help identify situations in which roles collide. These proposals follow the conceptual framework and occupational context; their effectiveness was not tested in this survey.

The nearly equal frequencies across conflict forms favor attention to time, strain, and behavioral adjustment together. A narrow intervention focused only on behavior would overstate the exploratory dimension result. Likewise, the resources profile suggests a reason to assess positive work–nonwork experiences alongside interference, without assuming that the present classification identifies an effective intervention. Future research could measure support, coping, and boundary management directly and test their relationships with balance.

The study is limited by convenience sampling, self-report measurement, and a nonexperimental design without reported temporal ordering. It includes a respondent whose marital status differs from the stated criterion, and the instrument documentation contains unresolved inconsistencies. Current-sample reliability, complete residual diagnostics, and an independently reproducible dataset are unavailable. These limitations constrain generalization and causal interpretation, particularly given the unexpected positive coefficient. Future analyses should first reconcile the administered scales with the item-level dataset and reproduce the regression using a documented scoring key. Subsequent studies may use broader recruitment, validated multidimensional measures, and longitudinal designs to distinguish conflict from facilitation and examine changes over time. Mediation or moderation models involving social support, flexibility, or coping would be informative only after the measurement and basic model have been established.

CONCLUSION

The reported analysis of 273 Indonesian software developers showed a significant positive association between work–family conflict and work–life balance ($B = .581$, $\beta = .767$, $p < .001$), with $R^2 = .589$. Most participants were classified as having low conflict and low balance under the thesis cutoffs. Behavior-based conflict had a small numerical lead among exploratory conflict profiles, while resources were most frequently prominent in balance profiles. These findings describe the source results and do not demonstrate that conflict improves balance. The occupational contribution lies in examining the work–family interface in a software developer sample and showing that total-score categories and dimension profiles provide different information. Before the findings guide firm substantive conclusions or journal submission, the conflict item count, balance reverse scoring, eligibility discrepancy, and linearity reporting require verification. Research with clearer measurement documentation and more complete model diagnostics can determine whether the positive association persists and identify the resources through which professional and family roles interact.

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